

Hypertext marks in L^AT_EX

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1 Documentation overview for hyperref

The documentation for package hyperref consists of several files:

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

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

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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

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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 \LaTeX definition (number of arguments).

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

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

```

```

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

```

```

231 \Hy@SetCatcodes

```

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

```

232 \RequirePackage{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 ISOLatin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

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

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

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

```
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\textP\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 T_EX's argument parsing. With this method we must take the following item into account, that makes things a little more complicated:

- T_EX does not accept a space as an undelimited argument, it cancels space tokens while looking for an undelimited argument. Therefore we must protect the spaces now.
- An argument can be a single token or a group of many tokens. And within curly braces tokens aren't found by T_EX's argument scanning process. Third curly braces as grouping characters cannot be expanded further, so they don't vanish by the string expansion above. So these characters with catcode 1 and 2 are removed in the following and replaced by a marker for the xspace support.
- T_EX silently removes the outermost pair of braces of an argument. To prevent this in 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{pdlenc.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 T_EX'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 L^AT_EX 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\Greeknatural\HyPsd@Greeknatural
939 }%
940 }

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

944 \def\HyPsd@Greeknatural#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@DecimalToOctalSecond{#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@DecimalToOctalSecond{#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@DecimalToOctalSecond#1{%
1249 \ifcase #1 %
1250 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1251 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1252 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1253 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1254 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1255 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1256 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1257 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1258 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1259 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1260 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1261 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1262 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1263 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1264 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1265 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1266 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1267 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1268 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1269 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1270 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1271 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1272 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1273 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1274 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1275 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1276 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1277 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1278 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1279 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1280 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1281 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1282 \fi
1283 }
1284 \def\HyPsd@CJKnumber#1{%
1285 \ifnum#1<\z@
1286 \CJK@minus
1287 \expandafter\HyPsd@@CJKnumber\expandafter{\number-\number#1}%
1288 \else
1289 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1290 \fi
1291 }
1292 \def\HyPsd@@CJKnumber#1{%
1293 \ifcase#1 %
1294 \CJK@zero\or \CJK@one\or \CJK@two\or \CJK@three\or \CJK@four\or
1295 \CJK@five\or \CJK@six\or \CJK@seven\or \CJK@eight\or \CJK@nine\or
1296 \CJK@ten\or \CJK@ten\CJK@one\or \CJK@ten\CJK@two\or

```



```

1297 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1298 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1299 \CJK@ten\CJK@nine
1300 \else
1301 \ifnum#1<10000 %
1302 \HyPsd@CJKnumberFour#1!\@empty{20}%
1303 \@empty
1304 \else
1305 \ifnum#1<100000000 %
1306 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1307 \IntCalcDiv#1!10000!%
1308 !{}{20}%
1309 \CJK@tenthousand
1310 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1311 \IntCalcMod#1!10000!%
1312 !\CJK@zero{10}%
1313 \@empty
1314 \else
1315 \expandafter\HyPsd@CJKnumberLarge
1316 \number\IntCalcDiv#1!100000000!\expandafter!%
1317 \number\IntCalcMod#1!100000000!!%
1318 \fi
1319 \fi
1320 \fi
1321 }
1322 \def\HyPsd@CJKnumberLarge#1!#2!{%
1323 \HyPsd@CJKnumberFour#1!{}{20}%
1324 \CJK@hundredmillion
1325 \ifnum#2=\z@
1326 \else
1327 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1328 \IntCalcDiv#2!10000!%
1329 !\CJK@zero{10}%
1330 \CJK@tenthousand
1331 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1332 \IntCalcMod#2!10000!%
1333 !\CJK@zero{10}%
1334 \@empty
1335 \fi
1336 }
1337 \def\HyPsd@CJKnumberFour#1!#2#3{%
1338 \ifnum#1=\z@
1339 \expandafter\@gobble
1340 \else
1341 \ifnum#1<1000 %
1342 #2%
1343 \HyPsd@CJKnumberThree#1!{}{#3}%
1344 \else
1345 \HyPsd@@@CJKnumber{\IntCalcDiv#1!1000!}%
1346 \CJK@thousand
1347 \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1348 \IntCalcMod#1!1000!%
1349 !\CJK@zero{10}%
1350 \fi
1351 \fi
1352 }
1353 \def\HyPsd@CJKnumberThree#1!#2#3{%

```

```

1354 \ifnum#1=\z@
1355 \else
1356 \ifnum#1<100 %
1357   #2%
1358   \HyPsd@CJKnumberTwo#1!#{#3}%
1359 \else
1360 \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1361 \CJK@hundred
1362 \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1363 \IntCalcMod#1!100!%
1364 !\CJK@zero{10}%
1365 \fi
1366 \fi
1367 }
1368 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1369 \ifnum#1=\z@
1370 \else
1371 \ifnum#1<#3 %
1372   #2%
1373   \HyPsd@@CJKnumber{#1}%
1374 \else
1375 \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1376 \CJK@ten
1377 \ifnum\IntCalcMod#1!10!=\z@
1378 \else
1379 \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1380 \fi
1381 \fi
1382 \fi
1383 }
1384 \def\HyPsd@CJKdigits#1{%
1385 \ifx*#1\relax
1386 \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1387 \else
1388 \HyPsd@@CJKdigits\CJK@null{#1}%
1389 \fi
1390 }
1391 \def\HyPsd@@CJKdigits#1#2{%
1392 \ifx\\#2\\%
1393 \else
1394 \HyPsd@@@CJKdigits#1#2\@nil
1395 \fi
1396 }%
1397 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1398 \HyPsd@CJKdigit#1{#2}%
1399 \ifx\\#3\\%
1400 \expandafter\@gobble
1401 \else
1402 \expandafter\@firstofone
1403 \fi
1404 {#3}%
1405 \HyPsd@@@CJKdigits#1#3\@nil
1406 }%
1407 }
1408 \def\HyPsd@CJKdigit#1#2{%
1409 \ifcase#2 %
1410   #1\or

```

```

1411 \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1412 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1413 \fi
1414 }

```

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 L^AT_EX 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 (L^AT_EX 2_ε release [1998/12/01]). In the normal case \pdfstringdef is executed in a context where \protect has the meaning of \@typesetprotect (= \relax).

```

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

1415 \def\HyPsd@inmathwarn#1#2{%
1416   \ifx#2\expandafter
1417     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1418       \HyPsd@GLYPHERR
1419       \expandafter\@gobble\string#1%
1420     >%
1421     \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1422   \else
1423     \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1424   \fi

```

```

1425 \else
1426 \expandafter#2%
1427 \fi
1428 }
1429 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1430 \def\HyPsd@EndWithElse#1\else{\else}

```

\HyPsd@add@accent

```

1431 \def\HyPsd@add@accent#1#2{%
1432 \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1433 #2%
1434 }%

```

6.5.7 Unexpandable spaces

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

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

These properties are used in \HyPsd@CheckCatcodes.

```

1435 \def\HyPsd@LetUnexpandableSpace#1{%
1436 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1437 }

```

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

```

1438 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.8 Marker for commands

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

```

1439 \edef\HyPsd@XSPACE{\string#\string X}
1440 \edef\HyPsd@ITALCORR{\string#\string I}
1441 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.9 \hspace fix

\HyPsd@hspace

```

1442 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}

```

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

```

1443 \def\HyPsd@@hspace#1*#2\END{%
1444 \ifx\#2\%
1445 \HyPsd@hspacetest{#1}%
1446 \else
1447 \expandafter\HyPsd@hspacetest
1448 \fi
1449 }

```

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

```
1450 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1451 \@ifundefined{tocsection}{%
1452   \let\HyPsd@AMSclassfix\relax
1453 }{%
1454   \def\HyPsd@AMSclassfix{%
1455     \let\tocpart\HyPsd@tocsection
1456     \let\tocchapter\HyPsd@tocsection
1457     \let\tocappendix\HyPsd@tocsection
1458     \let\tocsection\HyPsd@tocsection
1459     \let\tocsubsection\HyPsd@tocsection
1460     \let\tocsubsubsection\HyPsd@tocsection
1461     \let\tocparagraph\HyPsd@tocsection
1462   }%
1463   \def\HyPsd@tocsection#1#2#3{%
1464     \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1465     #3%
1466   }%
1467 }
```

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.

```
1468 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```
1469 \def\HyPsd@@ref#1*#2\END{%
1470   \ifx\#2\%
1471     \HyPsd@@@ref{#1}%
1472   \else
1473     \expandafter\HyPsd@@@ref
1474   \fi
1475 }
```

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

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

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

```
1484 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}
```

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

```
1485 \def\HyPsd@@pageref#1*#2\END{%
1486   \ifx\#2\%
```

```

1487 \HyPsd@@@pageref{#1}%
1488 \else
1489 \expandafter\HyPsd@@@pageref
1490 \fi
1491 }

```

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

```

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

```

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

```

1502 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1503 \def\HyPsd@@nameref#1*#2\END{%
1504 \ifx\#2\%
1505 \HyPsd@@@nameref{#1}%
1506 \else
1507 \expandafter\HyPsd@@@nameref
1508 \fi
1509 }

```

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

```

1510 \def\HyPsd@@@nameref#1{%
1511 \expandafter\ifx\csname r@#1\endcsname\relax
1512 ??%
1513 \else
1514 \expandafter\expandafter\expandafter\expandafter
1515 \expandafter\expandafter\expandafter\@car
1516 \expandafter\expandafter\expandafter\@gobbletwo
1517 \csname r@#1\endcsname{}\}\@nil
1518 \fi
1519 }

```

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

```

1520 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1521 \def\HyPsd@@autoref#1*#2\END{%
1522 \ifx\#2\%
1523 \HyPsd@@@autoref{#1}%
1524 \else
1525 \expandafter\HyPsd@@@autoref
1526 \fi
1527 }

```

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

```

1528 \def\HyPsd@@@autoref#1{%
1529   \expandafter\ifx\csname r@#1\endcsname\relax
1530     ??%
1531   \else
1532     \expandafter\expandafter\expandafter\HyPsd@autorefname
1533       \csname r@#1\endcsname{}{}{}{}@nil
1534     \expandafter\expandafter\expandafter
1535       \@car\csname r@#1\endcsname@nil
1536   \fi
1537 }

```

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

```

1538 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1539   \ifx\\#4\\%
1540   \else
1541     \HyPsd@@autorefname#4.\@nil
1542   \fi
1543 }

```

\HyPsd@@autorefname

```

1544 \def\HyPsd@@autorefname#1.#2\@nil{%
1545   \ifundefined{#1autorefname}{%
1546     \ifundefined{#1name}{%
1547       }{%
1548         \csname#1name\endcsname\space
1549       }%
1550     }{%
1551       \csname#1autorefname\endcsname\space
1552     }%
1553   }

```

6.5.12 Redefining the defining commands

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

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

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

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

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

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

```
\HyPsd@DefCommand
\HyPsd@LetCommand
1554 \begingroup
1555   \def\x#1#2{%
1556     \endgroup
1557     \let#1\def
1558     \def\HyPsd@DefCommand##1##2###{%
1559       #1%
1560       \expandafter\noexpand
1561       \csname\expandafter\@gobble\string##1\@empty\endcsname
1562       \@gobble
1563     }%
1564     \let#2\let
1565     \def\HyPsd@@LetCommand##1{%
1566       \expandafter\ifx\csname##1\expandafter\endcsname
1567         \csname iftrue\endcsname
1568         \pdfstringdefWarn\let
1569         \expandafter\@gobble
1570       \else
1571         \expandafter\ifx\csname##1\expandafter\endcsname
1572           \csname iffalse\endcsname
1573           \pdfstringdefWarn\let
1574           \expandafter\expandafter\expandafter\@gobble
1575         \else
1576           #2%
1577           \expandafter\noexpand
1578           \csname##1\expandafter\expandafter\expandafter\endcsname
1579         \fi
1580       \fi
1581     }%
1582   }%
1583   \expandafter\x\csname <def>-command\expandafter\endcsname
1584     \csname <let>-command\endcsname
1585   \def\HyPsd@LetCommand#1{%
1586     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1587     \expandafter\expandafter\expandafter{%
1588       \expandafter\@gobble\string#1\@empty
1589     }%
1590   }
```

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).

```
1591 \def\HyPsd@ifnextchar#1{%
1592   \pdfstringdefWarn#1%
1593   \expandafter\@gobbletwo\@gobble
1594 }
```

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`.

```
1595 \def\HyPsd@protected@testopt#1{%
1596   \pdfstringdefWarn#1%
1597   \@gobbletwo
1598 }
```

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:

```
1599 \def\HyPsd@Warning#1{%
1600   \begingroup
1601   \def\space{ }%
1602   \Hy@Warning{#1}%
1603   \endgroup
1604 }
```

6.6.2 Protecting spaces

```
1605 \RequirePackage{etexcmds}[2007/09/09]
1606 \ifetex@unexpanded
1607   \expandafter\@secondoftwo
1608 \else
1609   \expandafter\@firstoftwo
1610 \fi
1611 {%
```

`\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`.

```
1612 \def\HyPsd@ProtectSpaces#1{%
1613   \iftrue
1614     \expandafter\HyPsd@@ProtectSpacesFi
1615     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1616   \fi
1617   }%
```

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

```
1618 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1619   \fi
```

```

1620 \ifx\scrollmode#2\scrollmode
1621 \HyPsd@RemoveMask#1\HyPsd@End#3%
1622 \else
1623 \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1624 \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1625 \fi
1626 }%

```

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.

```

1627 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1628 \toks@\expandafter{#1}%
1629 \xdef#2{\the\toks@}%
1630 }%

1631 }{%
1632 \let\HyPsd@fi\fi
1633 \def\HyPsd@ProtectSpaces#1{%
1634 \xdef#1{%
1635 \iftrue
1636 \expandafter\HyPsd@@ProtectSpacesFi
1637 \expandafter|\expandafter\@empty#1| %
1638 \HyPsd@fi
1639 }%
1640 \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1641 }%
1642 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1643 \fi
1644 \etex@unexpanded{#1}%
1645 \ifx\scrollmode#2\scrollmode
1646 \else
1647 \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1648 \HyPsd@fi
1649 }%
1650 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1651 \xdef#2{\etex@unexpanded\expandafter{#1}}%
1652 }%
1653 }

```

6.6.3 Remove grouping braces

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

```

1654 \def\HyPsd@RemoveBraces#1{%
1655 \ifx\scrollmode#1\scrollmode
1656 \else
1657 \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1658 \fi
1659 }

```

`\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`.

```

1660 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1661   \fi
1662   \def\Hy@temp@A{#1#2}%
1663   \def\Hy@temp@B{#3}%
1664   \ifx\Hy@temp@A\Hy@temp@B
1665     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1666       \HyPsd@String#1%
1667     }%
1668     \ifx\scrollmode#2\scrollmode
1669     \else
1670       \Hy@ReturnAfterFiFiEnd{%
1671         \HyPsd@RemoveBraces{#2}%
1672       }%
1673     \fi
1674   \else
1675     \def\Hy@temp@A{#1}%
1676     \HyPsd@AppendItalcorr\HyPsd@String
1677     \ifx\Hy@temp@A\@empty
1678       \Hy@ReturnAfterElseFiFiEnd{%
1679         \HyPsd@RemoveBraces{#2}%
1680       }%
1681     \else
1682       \HyPsd@ProtectSpaces\Hy@temp@A
1683       \HyPsd@AppendItalcorr\Hy@temp@A
1684       \Hy@ReturnAfterFiFiEnd{%
1685         \expandafter\HyPsd@RemoveBraces\expandafter
1686           {\Hy@temp@A#2}%
1687       }%
1688     \fi
1689   \fi
1690   \Hy@ReturnEnd
1691 }

```

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

```

1692 \def\HyPsd@AppendItalcorr#1{%
1693   \expandafter\HyPsd@@AppendItalcorr\expandafter{/}#1%
1694 }
1695 \def\HyPsd@@AppendItalcorr#1#2{%
1696   \expandafter\def\expandafter#2\expandafter{#2#1}%
1697 }

```

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).

```

1698 \def\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1699   \global\let\HyPsd@Rest\relax
1700   \ifcat\relax\noexpand#1\relax
1701     \ifx#1\protect
1702       \else
1703         \ifx#1\penalty
1704           \setbox\z@=\hbox{%
1705             \afterassignment\HyPsd@AfterCountRemove
1706             \count@=#2\HyPsd@end
1707           }%
1708         \else
1709           \ifx#1\kern
1710             \setbox\z@=\hbox{%
1711               \afterassignment\HyPsd@AfterDimenRemove
1712               \dimen@=#2\HyPsd@end
1713             }%
1714           \else
1715             \ifx#1\hskip
1716               \setbox\z@=\hbox{%
1717                 \afterassignment\HyPsd@AfterSkipRemove
1718                 \skip@=#2\HyPsd@end
1719               }%
1720             \else
1721               \HyPsd@CatcodeWarning{#1}%
1722             \fi
1723           \fi
1724         \fi
1725       \fi
1726     \else
1727       \ifcat#1A% letter
1728         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1729           \HyPsd@String#1%
1730         }%
1731       \else
1732         \ifcat#1 % SPACE
1733           \expandafter\def\expandafter\HyPsd@String\expandafter{%
1734             \HyPsd@String\HyPsd@SPACEOPTI
1735           }%
1736         \else
1737           \ifcat$#1%
1738             \HyPsd@CatcodeWarning{math shift}%
1739           \else
1740             \ifcat&#1%
1741               \HyPsd@CatcodeWarning{alignment tab}%
1742             \else
1743               \ifcat^#1%
1744                 \HyPsd@CatcodeWarning{superscript}%
1745               \else
1746                 \ifcat_#1%
1747                   \HyPsd@CatcodeWarning{subscript}%
1748                 \else
1749                   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1750                     \HyPsd@String#1%
1751                   }%
1752                 \fi

```

```

1753         \fi
1754     \fi
1755 \fi
1756 \fi
1757 \fi
1758 \fi
1759 \ifx\HyPsd@Rest\relax
1760 \ifx\scrollmode#2\scrollmode
1761 \else
1762 \Hy@ReturnAfterFiFiEnd{%
1763 \HyPsd@CheckCatcodes#2\HyPsd@End
1764 }%
1765 \fi
1766 \else
1767 \ifx\HyPsd@Rest\@empty
1768 \else
1769 \Hy@ReturnAfterFiFiEnd{%
1770 \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1771 }%
1772 \fi
1773 \fi
1774 \Hy@ReturnEnd
1775 }

```

Remove counts, dimens, skips.

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

```

1776 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1777 \gdef\HyPsd@Rest{#1}%
1778 }

```

\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.

```

1779 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1780 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1781 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1782 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1783 \else
1784 \ifdim\dimen@=\z@
1785 \else
1786 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1787 \fi
1788 \gdef\HyPsd@Rest{#1}%
1789 \fi
1790 }

```

\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).

```

1791 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1792 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
1793 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1794 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1795 \else
1796 \ifdim\skip@=\z@

```

```

1797 \else
1798 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1799 \fi
1800 \gdef\HyPsd@Rest{#1}%
1801 \fi
1802 }

```

Catcode warnings.

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

```

1803 \def\HyPsd@CatcodeWarning#1{%
1804 \HyPsd@Warning{%
1805 Token not allowed in a PDF string (%)
1806 \ifHy@unicode
1807 Unicode%
1808 \else
1809 PDFDocEncoding%
1810 \fi
1811 }:%
1812 \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
1813 }%
1814 }
1815 \begingroup
1816 \catcode'\|=0 %
1817 \catcode'\|=12 %
1818 \gdef\HyPsd@RemoveCmdPrefix#1{%
1819 |expandafter\HyPsd@@RemoveCmdPrefix
1820 |string#1|@empty\<-|@empty|@empty
1821 }%
1822 \gdef\HyPsd@@RemoveCmdPrefix#1\<-#2|@empty#3|@empty{#1#2}%
1823 |endgroup

```

\HyPsd@RemoveSpaceWarning

```

1824 \def\HyPsd@RemoveSpaceWarning#1{%
1825 \HyPsd@Warning{%
1826 Token not allowed in a PDF string (%)
1827 \ifHy@unicode
1828 Unicode%
1829 \else
1830 PDFDocEncoding%
1831 \fi
1832 }:%
1833 \MessageBreak #1\MessageBreak
1834 removed%
1835 }%
1836 }

```

\HyPsd@ReplaceSpaceWarning

```

1837 \def\HyPsd@ReplaceSpaceWarning#1{%
1838 \HyPsd@Warning{%
1839 Token not allowed in a PDF string (%)
1840 \ifHy@unicode
1841 Unicode%
1842 \else
1843 PDFDocEncoding%
1844 \fi
1845 }:%

```

```

1846 \MessageBreak #1\MessageBreak
1847 replaced by space%
1848 }%
1849 }

```

6.6.5 Check for wrong glyphs

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

```

1850 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1851 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1852 \HyPsd@String#1%
1853 }%
1854 \ifx\#2\%
1855 \else
1856 \Hy@ReturnAfterFi{%
1857 \HyPsd@GlyphProcessWarning#2\@empty
1858 }%
1859 \fi
1860 }
1861 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1862 \HyPsd@@GlyphProcessWarning#1++>%
1863 \HyPsd@GlyphProcess#2\@empty
1864 }
1865 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1866 \ifx\#2\%
1867 \HyPsd@Warning{%
1868 Glyph not defined in %
1869 P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1870 removing '@backslashchar#1'%
1871 }%
1872 \else
1873 \HyPsd@Warning{%
1874 Composite letter '@backslashchar#1+#2'\MessageBreak
1875 not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1876 \MessageBreak
1877 removing '@backslashchar#1'%
1878 }%
1879 \fi
1880 }

```

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.

```

1881 \def\HyPsd@spaceopti#1{ % first space
1882 \ifx\HyPsd@spaceopti#1%
1883 \040%
1884 \else
1885 #1%
1886 \fi
1887 }%

```

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.

1888 \def\HyPsd@Subst#1#2#3{%
1889   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1890     \fi
1891     ##1%
1892     \ifx\scrollmode##2\scrollmode
1893     \else
1894       #2%
1895       \HyPsd@@ReplaceFi##2\END
1896     \fi
1897   }%
1898   \xdef#3{%
1899     \iftrue
1900       \expandafter\HyPsd@@ReplaceFi#3#1\END
1901     \fi
1902   }%
1903 }
```

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

```
1904 \def\HyPsd@StringSubst#1{%
1905   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1906 }
```

6.6.7 Support for package `xspace`

`\HyPsd@doxspace` `\xspace` does not work, because it uses a `\futurelet` that cannot be executed in $\mathrm{T}_{\mathrm{E}}\mathrm{X}$'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.

```
1907 \def\HyPsd@doxspace#1{%
1908   \ifx#1\relax\else
1909     \ifx#1.\else
1910       \ifx#1:\else
1911         \ifx#1,\else
1912           \ifx#1;\else
1913             \ifx#1'\else
1914               \ifx#1?\else
1915                 \ifx#1/\else
1916                   \ifx#1-\else
1917                     \ifx#1'\else
1918                       \HyPsd@SPACEOPTI
1919                     \fi
1920                   \fi
1921                 \fi
1922               \fi
1923             \fi
1924           \fi
1925         \fi
1926       \fi
```



```

1927 \fi
1928 \fi
1929 #1%
1930 }%

```

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.

```

1931 \begingroup
1932 \catcode'\|=0 %
1933 \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1934 |gdef|HyPsd@ConvertToUnicode#1{%
1935 |xdef#1{%
1936 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1937 }%
1938 |ifx#1|@empty
1939 |else
1940 |xdef#1{%
1941 \376\377%
1942 #1%
1943 }%
1944 |fi
1945 }%

```

\HyPsd@DoConvert

```

1946 |gdef|HyPsd@DoConvert#1{%
1947 |ifx#1|@empty
1948 |else
1949 |Hy@ReturnAfterFi{%
1950 |ifx#1\%%
1951 \%%
1952 |expandafter|HyPsd@DoEscape
1953 |else
1954 |HyPsd@Char{#1}%
1955 |expandafter|HyPsd@DoConvert
1956 |fi
1957 }%
1958 |fi
1959 }%

```

\HyPsd@DoEscape

```

1960 |gdef|HyPsd@DoEscape#1{%
1961 |ifx#19%
1962 |expandafter|HyPsd@GetTwoBytes
1963 |else
1964 |Hy@ReturnAfterFi{%
1965 |ifx#18%
1966 00%
1967 |expandafter|HyPsd@GetTwoBytes
1968 |else
1969 #1%
1970 |expandafter|HyPsd@GetOneByte

```

```

1971     |fi
1972   }%
1973   |fi
1974 }%

```

`\HyPsd@GetTwoBytes`

```

1975 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1976   #1\#2#3#4%
1977   |HyPsd@DoConvert
1978 }%

```

`\HyPsd@GetOneByte`

```

1979 |gdef|HyPsd@GetOneByte#1#2{%
1980   #1#2%
1981   |HyPsd@DoConvert
1982 }%
1983 |endgroup

```

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

```

1984 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1985   \xdef#4{#4#1#2}%
1986   \HyPsd@@ConvertToUnicode#3\END#4%
1987 }

```

`\HyPsd@Char`

```

1988 \begingroup
1989   \catcode0=9 %
1990   \catcode'\^=7 %
1991   \catcode'\^^=12 %
1992   \def\x{^^^0000}%
1993 \expandafter\endgroup
1994 \ifx\x\@empty
1995   \def\HyPsd@Char#1{%
1996     \ifnum'#1<128 %
1997       \@backslashchar 000#1%
1998     \else
1999       \ifnum'#1<65536 %
2000         \expandafter\HyPsd@CharTwoByte\number'#1!%
2001       \else
2002         \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2003         \intcalcSub{'#1}{65536}!%
2004       \fi
2005     \fi
2006   }%
2007 \def\HyPsd@CharTwoByte#1!{%
2008   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2009   \IntCalcDiv#1!256!!%
2010   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2011   \IntCalcMod#1!256!!%
2012 }%
2013 \def\HyPsd@CharOctByte#1!{%
2014   \@backslashchar
2015   \IntCalcDiv#1!64!%
2016   \intcalcDiv{\IntCalcMod#1!64!}{8}%
2017   \IntCalcMod#1!8!%
2018 }%
2019 \def\HyPsd@CharSurrogate#1!{%

```

```

2020 \@backslashchar 33%
2021 \IntCalcDiv#1!262144!%
2022 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2023 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2024 \@backslashchar 33%
2025 \expandafter\expandafter\expandafter\IntCalcAdd
2026 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2027 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2028 \IntCalcMod#1!256!!%
2029 }%
2030 \else
2031 \def\HyPsd@Char#1{%
2032 \@backslashchar 000#1%
2033 }%
2034 \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

2035 \begingroup\expandafter\expandafter\expandafter\endgroup
2036 \expandafter\ifx\csname numexpr\endcsname\relax
2037 \let\HyPsd@UTFviii\relax
2038 \else
2039 \begingroup
2040 \lccode'\~='^f4\relax
2041 \lowercase{\endgroup
2042 \def\HyPsd@UTFviii{%
2043 \let\UTFviii@two@octets\HyPsd@UTFviii@two
2044 \let\UTFviii@three@octets\HyPsd@UTFviii@three
2045 \let\UTFviii@four@octets\HyPsd@UTFviii@four
2046 \ifx~\HyPsd@UTFviii@ccxliv@undef
2047 \let~\HyPsd@UTFviii@ccxliv@def
2048 \fi
2049 \let\unichar\HyPsd@unichar
2050 }%
2051 }%
2052 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2053 \edef\HyPsd@UTFviii@ccxliv@def{%
2054 \noexpand\UTFviii@four@octets\string ^f4%
2055 }%

```

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.

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

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

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

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

$$(5)$$

```

2056 \def\HyPsd@UTFviii@two#1#2{%
2057 \expandafter\HyPsd@UTFviii@@two
2058 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2059 \number'#1\expandafter| %
2060 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2061 \number'#2 \@nil
2062 }%
2063 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
2064 \expandafter\8%
2065 \number\numexpr #1-48\expandafter\relax
2066 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
2067 \number\numexpr #3-8*%
2068 \number\dimexpr.125\dimexpr'#3sp\relax\relax\expandafter\relax
2069 \number\numexpr #4-8*#3\relax
2070 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

2071 \def\HyPsd@UTFviii@three#1#2#3{%
2072 \expandafter\HyPsd@UTFviii@@three
2073 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2074 \number'#1\expandafter| %
2075 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2076 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2077 \number'#2\expandafter| %
2078 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2079 \number'#3 \@nil
2080 }%
2081 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2082 \expandafter\9%
2083 \number\numexpr #1-56\expandafter\relax
2084 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
2085 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2086 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
2087 \number\numexpr #6-16\expandafter\relax
2088 \number\numexpr #7-8*#6\relax
2089 }%

```

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 = uuuuu - 1

UTF-16: 110110ww wwzzzzyy 110111yy yyxxxxxx
 octal: 011 011 0ww 0ww zzz zyy 011 011 1yy 0yy xxx xxx

```

2090 \def\HyPsd@UTFviii@four#1#2{%
2091 \expandafter\HyPsd@@UTFviii@four\number
2092 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2093 \expandafter|\number
2094 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2095 }%
2096 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2097 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
2098 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2099 \ifodd#2 %
2100 \number\dimexpr(#2-1)/2\relax
2101 \else
2102 \number\dimexpr#2/2\relax
2103 \fi
2104 \number\dimexpr\ifodd#2 4+\fi
2105 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2106 \933%
2107 \expandafter\HyPsd@@@UTFviii@four\number
2108 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2109 }%
2110 \def\HyPsd@@@UTFviii@four#1|#2{%
2111 \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2112 \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2113 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2114 \number\dimexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2115 }%

```

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

```

2116 \def\HyPsd@unichar#1{%
2117 \ifHy@unicode
2118 \ifnum#1>"10FFFF %
2119 \HyPsd@UnicodeReplacementCharacter % illegal
2120 \else
2121 \ifnum#1>"FFFF %

```

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

```

2122 \expandafter\HyPsd@unichar\expandafter{%
2123 \number\dimexpr 55296+%
2124 \dimexpr.0009765625\dimexpr\number#1sp-\p@
2125 \relax\relax\relax
2126 }%

```

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

```

2127 \expandafter\HyPsd@unichar\expandafter{%
2128 \number\dimexpr#1-9216%
2129 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2130 \relax\relax\relax
2131 }%
2132 \else
2133 \ifnum#1>"7FF %
2134 \9%
2135 \expandafter\HyPsd@unichar@first@byte\expandafter{%
2136 \number
2137 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2138 }%

```

```

2139     \else
2140     \8%
2141     \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2142     \fi
2143     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2144     \number
2145     \numexpr#1-256*\number
2146     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2147     }%
2148     \fi
2149     \fi
2150     \else
2151     .% unsupported (Unicode -> PDF Doc Encoding)
2152     \fi
2153 }%
2154 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2155 \def\HyPsd@unichar@first@byte#1{%
2156 \number\dimexpr.015625\dimexpr#1sp\relax\relax
2157 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2158 \number
2159 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2160 \relax\relax\relax
2161 }%
2162 }%
2163 \def\HyPsd@unichar@second@byte#1{%
2164 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2165 \expandafter\HyPsd@unichar@octtwo\expandafter{%
2166 \number
2167 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2168 \relax\relax\relax
2169 }%
2170 }%
2171 \def\HyPsd@unichar@octtwo#1{%
2172 \number\dimexpr.125\dimexpr#1sp\relax\relax
2173 \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2174 \relax\relax\relax
2175 }%
2176 \fi

```

7 Support of other packages

7.1 Class memoir

```

2177 \ifclassloaded{memoir}{%
2178 \AtEndOfPackage{\RequirePackage{memhfixc}}}%
2179 }{}

```

7.2 Package subfigure

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

```

2180 \ifpackageloaded{subfigure}{%
2181 \ifundefined{sub@label}{%
2182 \Hy@hypertextnamesfalse
2183 }{%
2184 \renewcommand*{\sub@label}[1]{%
2185 \@bsphack
2186 \subfig@oldlabel{#1}%

```

```

2187 \if@filesw
2188 \begingroup
2189 \edef\@currentlabstr{%
2190 \expandafter\strip@prefix\meaning\@currentlabelname
2191 }%
2192 \protected@write\@auxout{}\@auxout{%
2193 \string\newlabel{sub@#1}{%
2194 {\@nameuse{@@thesub\@capttype}}%
2195 {\thepage}%
2196 }%
2197 \expandafter\strip@period\@currentlabstr
2198 \relax.\relax\@@@%
2199 }%
2200 {\@currentHref}%
2201 }%
2202 }%
2203 }%
2204 \endgroup
2205 \fi
2206 \@esphack
2207 }%
2208 \ifpackagelater{subfigure}{2002/03/26}{\@auxout}{%
2209 \providecommand*\toclevel@subfigure{1}%
2210 \providecommand*\toclevel@subtable{1}%
2211 }%
2212 }%
2213 }{}

```

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:

```

2214 \@ifundefined{XR@addURL}{%
2215 }%

```

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

```

2216 \def\XR@addURL#1{\XR@dURL#1{}{}{}\\}%
2217 \def\XR@dURL#1#2#3#4#5\\{%
2218 {#1}{#2}%
2219 \if!#4!%
2220 \else
2221 {#3}{#4}{\XR@URL}%
2222 \fi
2223 }%
2224 }

2225 \def\Hy@true{true}
2226 \def\Hy@false{false}

```

Providing dummy definitions.

```

2227 \let\literalps@out\@gobble
2228 \newcommand\pdfbookmark[3]{}
2229 \def\Acrobatmenu#1#2{\leavevmode#2}
2230 \def\Hy@writebookmark#1#2#3#4#5{}%

```

8 Help macros for links

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

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

```
2231 \let\HyperRaiseLinkHook\@empty
2232 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
2233 \def\Hy@raisedlink#1{%
2234   \ifvmode
2235     #1%
2236   \else
2237     \penalty\@M
2238     \smash{%
2239       \begingroup
2240         \let\HyperRaiseLinkLength\@tempdima
2241         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2242         \HyperRaiseLinkHook
2243       \expandafter\endgroup
2244       \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
2245     }%
2246   \fi
2247 }
```

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

```
2248 \def\Hy@SaveLastskip{%
2249   \let\Hy@RestoreLastskip\relax
2250   \ifvmode
2251     \ifdim\lastskip=\z@
2252       \let\Hy@RestoreLastskip\nobreak
2253     \else
2254       \begingroup
2255         \skip@=-\lastskip
2256         \edef\x{%
2257           \endgroup
2258           \def\noexpand\Hy@RestoreLastskip{%
2259             \noexpand\ifvmode
2260               \noexpand\nobreak
2261               \vskip\the\skip@
2262               \vskip\the\lastskip\relax
2263             \noexpand\fi
2264           }%
2265         }%
2266       \x
2267     \fi
2268   \else
2269     \ifhmode
2270       \ifdim\lastskip=\z@
```



```

2271 \let\Hy@RestoreLastskip\nobreak
2272 \else
2273 \begingroup
2274 \skip@=-\lastskip
2275 \edef\x{%
2276 \endgroup
2277 \def\noexpand\Hy@RestoreLastskip{%
2278 \noexpand\ifhmode
2279 \noexpand\nobreak
2280 \hskip\the\skip@
2281 \hskip\the\lastskip\relax
2282 \noexpand\fi
2283 }%
2284 }%
2285 \x
2286 \fi
2287 \fi
2288 \fi
2289 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

2290 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2291 \def\Hy@@boolkey[#1]#2#3{%
2292 \edef\Hy@tempa{#3}%
2293 \lowercase\expandafter{%
2294 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2295 }%
2296 \ifx\Hy@tempa\@empty
2297 \let\Hy@tempa\Hy@true
2298 \fi
2299 \ifx\Hy@tempa\Hy@true
2300 \else
2301 \ifx\Hy@tempa\Hy@false
2302 \else
2303 \let\Hy@tempa\relax
2304 \fi
2305 \fi
2306 \ifx\Hy@tempa\relax
2307 \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2308 \else
2309 \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2310 \csname Hy@#2\Hy@tempa\endcsname
2311 \fi
2312 }

```

\Hy@WarnOptionValue

```

2313 \def\Hy@WarnOptionValue#1#2#3{%
2314 \Hy@Warning{%
2315 Unexpected value ‘#1’\MessageBreak
2316 of option ‘#2’ instead of\MessageBreak
2317 #3%
2318 }%

```

2319 }

\Hy@DisableOption

```
2320 \def\Hy@DisableOption#1{%
2321   \ifundefined{KV@Hyp@#1@default}{%
2322     \define@key{Hyp}{#1}%
2323   }{%
2324     \define@key{Hyp}{#1}[]%
2325   }%
2326   {\Hy@WarnOptionDisabled{#1}}}%
2327 }
```

\Hy@WarnOptionDisabled

```
2328 \def\Hy@WarnOptionDisabled#1{%
2329   \Hy@Warning{%
2330     Option '#1' has already been used,\MessageBreak
2331     setting the option has no effect%
2332   }%
2333 }
```

\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.

```
2334 \def\Hy@CheckOptionValue#1#2#3{%
2335   \begingroup
2336   \edef\x{#1}%
2337   \@onelevel@sanitize\x
2338   \let\y=y%
2339   \def\do##1##2{%
2340     \def\z{##1}%
2341     \@onelevel@sanitize\z
2342     \ifx\x\z
2343       \let\y=n%
2344       \let\do\@gobbletwo
2345     \fi
2346   }%
2347   #3%
2348   \ifx\y y%
2349     \def\do##1##2{%
2350       * '#1'%
2351       \ifx\##2\\else\space(##2)\fi
2352       \MessageBreak
2353     }%
2354     \Hy@Warning{%
2355       Values of option '#2':\MessageBreak
2356       #3%
2357       * An empty value disables the option.\MessageBreak
2358       Unknown value '\x'%
2359     }%
2360   \fi
2361   \endgroup
2362 }
```

\Hy@DefNameKey #1: option name

 #2: \do list with known values, first argument of \do is value, second argument is a comment.

```
2363 \def\Hy@DefNameKey#1{%
```

```

2364 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2365 }

```

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

```

2366 \def\Hy@@DefNameKey#1#2#3{%
2367   \define@key{Hyp}{#2}{%
2368     \edef#1{##1}%
2369     \ifx#1\@empty
2370     \else
2371       \Hy@CheckOptionValue{##1}{#2}{#3}%
2372     \fi
2373   }%
2374   \let#1\@empty
2375 }

```

\Hy@UseNameKey

```

2376 \def\Hy@UseNameKey#1#2{%
2377   \ifx#2\@empty
2378   \else
2379     /#1/#2%
2380   \fi
2381 }

```

9.2 Defining the options

```

2382 \define@key{Hyp}{implicit}[true]{%
2383   \Hy@boolkey{implicit}{#1}%
2384 }
2385 \define@key{Hyp}{draft}[true]{%
2386   \Hy@boolkey{draft}{#1}%
2387 }
2388 \define@key{Hyp}{final}[true]{%
2389   \Hy@boolkey{final}{#1}%
2390 }
2391 \let\KV@Hyp@nolinks\KV@Hyp@draft
2392 \def\Hy@ObsoletePaperOption#1{%
2393   \Hy@WarningNoLine{%
2394     Option ‘#1’ is no longer used%
2395   }%
2396   \define@key{Hyp}{#1}[true]{}%
2397 }
2398 \def\Hy@temp#1{%
2399   \define@key{Hyp}{#1}[true]{%
2400     \Hy@ObsoletePaperOption{#1}%
2401   }%
2402 }
2403 \Hy@temp{a4paper}
2404 \Hy@temp{a5paper}
2405 \Hy@temp{b5paper}
2406 \Hy@temp{letterpaper}
2407 \Hy@temp{legalpaper}
2408 \Hy@temp{executivepaper}
2409 \define@key{Hyp}{setpagesize}[true]{%
2410   \Hy@boolkey{setpagesize}{#1}%

```

```

2411 }
2412 \define@key{Hyp}{debug}[true]{%
2413   \Hy@boolkey[debug]{verbose}{#1}%
2414 }
2415 \define@key{Hyp}{linktocpage}[true]{%
2416   \Hy@boolkey[linktocpage]{#1}%
2417   \ifHy@linktocpage
2418     \let\Hy@linktoc\Hy@linktoc@page
2419   \else
2420     \let\Hy@linktoc\Hy@linktoc@section
2421   \fi
2422 }
2423 \chardef\Hy@linktoc@none=0 %
2424 \chardef\Hy@linktoc@section=1 %
2425 \chardef\Hy@linktoc@page=2 %
2426 \chardef\Hy@linktoc@all=3 %
2427 \ifHy@linktocpage
2428   \let\Hy@linktoc\Hy@linktoc@page
2429 \else
2430   \let\Hy@linktoc\Hy@linktoc@section
2431 \fi
2432 \define@key{Hyp}{linktoc}{%
2433   \@ifundefined{Hy@linktoc@#1}{%
2434     \Hy@Warning{%
2435       Unexpected value ‘#1’ of\MessageBreak
2436       option ‘linktoc’ instead of ‘none’,\MessageBreak
2437       ‘section’, ‘page’ or ‘all’%
2438     }%
2439   }{%
2440     \expandafter\let\expandafter\Hy@linktoc
2441     \csname Hy@linktoc@#1\endcsname
2442   }%
2443 }
2444 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2445 \let\XR@ext\relax
2446 \define@key{Hyp}{verbose}[true]{%
2447   \Hy@boolkey[verbose]{#1}%
2448 }
2449 \define@key{Hyp}{typexml}[true]{%
2450   \Hy@boolkey[typexml]{#1}%
2451 }

```

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.

```

2452 \define@key{Hyp}{raiselinks}[true]{%
2453   \Hy@boolkey[raiselinks]{#1}%
2454 }

```

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

```

2455 \def\Hy@setbreaklinks#1{%
2456   \csname breaklinks#1\endcsname
2457 }
2458 \def\Hy@breaklinks@unsupported{%
2459   \ifx\Hy@setbreaklinks\@gobble
2460     \ifHy@breaklinks
2461       \Hy@WarningNoLine{%

```

```

2462     You have enabled option 'breaklinks'.\MessageBreak
2463     But driver '\Hy@driver.def' does not support this.\MessageBreak
2464     Expect trouble with the link areas of broken links%
2465   }%
2466   \fi
2467 \fi
2468 }

2469 \define@key{Hyp}{breaklinks}[true]{%
2470   \Hy@boolkey{breaklinks}{#1}%
2471   \let\Hy@setbreaklinks\@gobble
2472 }

```

Determines whether an automatic anchor is put on each page

```

2473 \define@key{Hyp}{pageanchor}[true]{%
2474   \Hy@boolkey{pageanchor}{#1}%
2475 }

```

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.

```

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

```

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

```

2479 \define@key{Hyp}{naturalnames}[true]{%
2480   \Hy@boolkey{naturalnames}{#1}%
2481 }

```

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

```

2482 \define@key{Hyp}{hypertexnames}[true]{%
2483   \Hy@boolkey{hypertexnames}{#1}%
2484 }

```

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

```

2485 \define@key{Hyp}{nesting}[true]{%
2486   \Hy@boolkey{nesting}{#1}%
2487 }

2488 \define@key{Hyp}{unicode}[true]{%
2489   \Hy@boolkey{unicode}{#1}%
2490   \ifHy@unicode
2491     \def\HyPsd@pdfencoding{unicode}%
2492     \HyPsd@LoadUnicode
2493   \else
2494     \def\HyPsd@pdfencoding{pdfdoc}%
2495   \fi
2496 }

2497 \def\HyPsd@LoadUnicode{%
2498   \@ifundefined{T@PU}{%
2499     \input{puenc.def}%
2500     \HyLinguex@Restore
2501   }{}%
2502   \DeclareFontFamily{PU}{pdf}{}%
2503   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
2504   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2505   \global\let\HyPsd@LoadUnicode\relax
2506 }

2507 \AtBeginDocument{%
2508   \ifx\HyPsd@LoadUnicode\relax

```

```

2509 \else
2510 \def\HyPsd@LoadUnicode{%
2511 \PackageError{hyperref}{%
2512 Unicode support for bookmarks is not available.\MessageBreak
2513 Activate unicode support by using one of the options\MessageBreak
2514 'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2515 in the preamble%
2516 } \@ehc
2517 \global\let\HyPsd@LoadUnicode\relax
2518 \global\Hy@unicodedefalse
2519 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2520 }%
2521 \fi
2522 }

2523 \define@key{Hyp}{pdfencoding}{%
2524 \edef\HyPsd@temp{#1}%
2525 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2526 \let\HyPsd@pdfencoding\HyPsd@temp
2527 \Hy@unicodedefalse
2528 \else
2529 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2530 \z@
2531 \else
2532 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2533 \z@
2534 \else
2535 \@ne
2536 \fi
2537 \fi
2538 \let\HyPsd@pdfencoding\HyPsd@temp
2539 \hypersetup{unicode}%
2540 \ifHy@unicode
2541 \def\HyPsd@pdfencoding{#1}%
2542 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2543 \HyPsd@LoadStringEnc
2544 \fi
2545 \else
2546 \Hy@Warning{Cannot switch to unicode bookmarks}%
2547 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2548 \fi
2549 \else
2550 \@onelevel@sanitize\HyPsd@temp
2551 \Hy@Warning{%
2552 Values of option 'pdfencoding':\MessageBreak
2553 'pdfdoc', 'unicode', 'auto'.\MessageBreak
2554 Ignoring unknown value '\HyPsd@temp'%
2555 }%
2556 \fi
2557 \fi
2558 }

2559 \def\HyPsd@pdfencoding@auto{auto}
2560 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2561 \def\HyPsd@pdfencoding@unicode{unicode}
2562 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2563 \def\HyPsd@LoadStringEnc{%
2564 \RequirePackage{stringenc}[2009/12/15]%
2565 \let\HyPsd@LoadStringEnc\relax

```

```

2566 }
2567 \AtBeginDocument{%
2568   \ifpackageloaded{stringenc}{%
2569     \let\HyPsd@LoadStringEnc\relax
2570   }{%
2571     \def\HyPsd@LoadStringEnc{%
2572       \Hy@WarningNoLine{%
2573         Missing package ‘stringenc’. Use ‘pdfencoding=auto’\MessageBreak
2574         in the preamble or load the package there%
2575       }%
2576     }%
2577   }%
2578 }

2579 \newif\ifHy@setpdfversion
2580 \define@key{Hyp}{pdfversion}{%
2581   \ifundefined{Hy@pdfversion@#1}{%
2582     \PackageWarning{hyperref}{%
2583       Unsupported PDF version ‘#1’.\MessageBreak
2584       Valid values: 1.2 until 1.9%
2585     }%
2586   }{%
2587     \Hy@setpdfversiontrue
2588     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2589   }%
2590 }
2591 \@namedef{Hy@pdfversion@1.2}{2}%
2592 \@namedef{Hy@pdfversion@1.3}{3}%
2593 \@namedef{Hy@pdfversion@1.4}{4}%
2594 \@namedef{Hy@pdfversion@1.5}{5}%
2595 \@namedef{Hy@pdfversion@1.6}{6}%
2596 \@namedef{Hy@pdfversion@1.7}{7}%
2597 \@namedef{Hy@pdfversion@1.8}{8}%
2598 \@namedef{Hy@pdfversion@1.9}{9}%
2599 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2600 \define@key{Hyp}{hyperref}[true]{}
2601 \define@key{Hyp}{tex4ht}[true]{}
2602 \Hy@texhttrue
2603 \setkeys{Hyp}{colorlinks=true}%
2604 \def\BeforeTeXIVht{\usepackage{color}}%
2605 \def\Hy@driver{htex4ht}%
2606 \def\MaybeStopEarly{%
2607   \typeout{Hyperref stopped early}%
2608   \AfterBeginDocument{%
2609     \PDF@FinishDoc
2610     \gdef\PDF@FinishDoc{}%
2611   }%
2612   \endinput
2613 }%
2614 }
2615 \define@key{Hyp}{pdftex}[true]{}
2616 \def\Hy@driver{hpdftex}%
2617 }
2618 \define@key{Hyp}{nativepdf}[true]{}
2619 \def\Hy@driver{hdvips}%

```

```

2620 }
2621 \define@key{Hyp}{dvipdfm}[true]{%
2622   \def\Hy@driver{hdvipdfm}%
2623 }
2624 \define@key{Hyp}{dvipdfmx}[true]{%
2625   \def\Hy@driver{hdvipdfm}%
2626 }
2627 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2628   \expandafter\ifx\csname if#1\expandafter\endcsname
2629     \csname iftrue\endcsname
2630     \chardef\SpecialDvipdfmxOutlineOpen\@ne
2631   \else
2632     \chardef\SpecialDvipdfmxOutlineOpen\z@
2633   \fi
2634 }
2635 \define@key{Hyp}{xetex}[true]{%
2636   \def\Hy@driver{hxetex}%
2637 }
2638 \define@key{Hyp}{pdfmark}[true]{%
2639   \def\Hy@driver{hdvips}%
2640 }
2641 \define@key{Hyp}{dvips}[true]{%
2642   \def\Hy@driver{hdvips}%
2643 }
2644 \define@key{Hyp}{hypertex}[true]{%
2645   \def\Hy@driver{hypertex}%
2646 }
2647 \let\Hy@MaybeStopNow\relax
2648 \define@key{Hyp}{vtex}[true]{%
2649   \begingroup\expandafter\expandafter\expandafter\endgroup
2650   \expandafter\ifx\csname OpMode\endcsname\relax
2651     \@latex@error{Non-VTeX processor}{}%
2652     \global\let\Hy@MaybeStopNow\endinginput
2653   \endinginput
2654   \else
2655     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2656     \def\Hy@driver{hvtex}%
2657   \else
2658     \ifnum\OpMode=10\relax
2659     \def\Hy@driver{hvtexhtm}%
2660     \def\MaybeStopEarly{%
2661       \typeout{Hyperref stopped early}%
2662       \AfterBeginDocument{%
2663         \PDF@FinishDoc
2664         \gdef\PDF@FinishDoc{}}%
2665       }%
2666     \endinginput
2667   }%
2668   \else
2669     \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2670     \global\let\Hy@MaybeStopNow\endinginput
2671   \endinginput
2672   \fi
2673 \fi
2674 \fi
2675 }
2676 \define@key{Hyp}{vtexpdfmark}[true]{%

```



```

2677 \begingroup\expandafter\expandafter\expandafter\endgroup
2678 \expandafter\ifx\csname OpMode\endcsname\relax
2679 \latex@error{Non-VTeX processor}{}%
2680 \let\Hy@MaybeStopNow\endinput
2681 \endinput
2682 \else
2683 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2684 \def\Hy@driver{hvtexmrk}%
2685 \else
2686 \latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2687 \let\Hy@MaybeStopNow\endinput
2688 \endinput
2689 \fi
2690 \fi
2691 }
2692 \define@key{Hyp}{dviwindo}[true]{%
2693 \def\Hy@driver{hdviwind}%
2694 \setkeys{Hyp}{colorlinks}%
2695 \ifpdf
2696 \else
2697 \ifxetex
2698 \else
2699 \PassOptionsToPackage{dviwindo}{color}%
2700 \fi
2701 \fi
2702 }
2703 \define@key{Hyp}{dvipsone}[true]{%
2704 \def\Hy@driver{hdvipson}%
2705 }
2706 \define@key{Hyp}{textures}[true]{%
2707 \def\Hy@driver{htexture}%
2708 }
2709 \define@key{Hyp}{latex2html}[true]{%
2710 \AtBeginDocument{\@@latextohtmlX}%
2711 }

```

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

```

2712 \define@key{Hyp}{ps2pdf}[true]{%
2713 \def\Hy@driver{hdvips}%
2714 \providecommand*\@pdfborder{0 0 1}%
2715 }

```

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.

```

2716 \define@key{Hyp}{hyperfigures}[true]{%
2717 \Hy@boolkey[hyperfigures]{figures}{#1}%
2718 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2719 \define@key{Hyp}{hyperfootnotes}[true]{%
2720 \Hy@boolkey[hyperfootnotes]{#1}%
2721 }

```

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

```

2722 \def\back@none{none}
2723 \def\back@section{section}

```

```

2724 \def\back@page{page}
2725 \def\back@slide{slide}
2726 \define@key{Hyp}{backref}[section]{%
2727   \lowercase{\def\Hy@tempa{#1}}%
2728   \ifx\Hy@tempa\@empty
2729     \let\Hy@tempa\back@section
2730   \fi
2731   \ifx\Hy@tempa\Hy@false
2732     \let\Hy@tempa\back@none
2733   \fi
2734   \ifx\Hy@tempa\back@slide
2735     \let\Hy@tempa\back@section
2736   \fi
2737   \ifx\Hy@tempa\back@page
2738     \PassOptionsToPackage{hyperpageref}{backref}%
2739     \Hy@backreftrue
2740   \else
2741     \ifx\Hy@tempa\back@section
2742       \PassOptionsToPackage{hyperref}{backref}%
2743       \Hy@backreftrue
2744     \else
2745       \ifx\Hy@tempa\back@none
2746         \Hy@backreffalse
2747       \else
2748         \Hy@WarnOptionValue{#1}{backref}{%
2749           'section', 'slide', 'page', 'none',\MessageBreak
2750           or 'false'}%
2751       \fi
2752     \fi
2753   \fi
2754 }
2755 \define@key{Hyp}{pagebackref}[true]{%
2756   \edef\Hy@tempa{#1}%
2757   \lowercase\expandafter{%
2758     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2759   }%
2760   \ifx\Hy@tempa\@empty
2761     \let\Hy@tempa\Hy@true
2762   \fi
2763   \ifx\Hy@tempa\Hy@true
2764     \PassOptionsToPackage{hyperpageref}{backref}%
2765     \Hy@backreftrue
2766   \else
2767     \ifx\Hy@tempa\Hy@false
2768       \Hy@backreffalse
2769     \else
2770       \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2771     \fi
2772   \fi
2773 }

```

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

```

2774 \define@key{Hyp}{hyperindex}[true]{%
2775   \Hy@boolkey{hyperindex}{#1}%
2776 }

```

Configuration of encap char.

```

2777 \define@key{Hyp}{encap}{\|}{%
2778   \def\HyInd@EncapChar{#1}%
2779 }

```

12 Language options

The `\autoref` feature depends on the language.

```

2780 \def\HyLang@afrikaans{%
2781   \def\equationautorefname{Vergelyking}%
2782   \def\footnoteautorefname{Voetnota}%
2783   \def\itemautorefname{Item}%
2784   \def\figureautorefname{Figuur}%
2785   \def\tableautorefname{Tabel}%
2786   \def\partautorefname{Deel}%
2787   \def\appendixautorefname{Bylae}%
2788   \def\chapterautorefname{Hoofstuk}%
2789   \def\sectionautorefname{Afdeling}%
2790   \def\subsectionautorefname{Subafdeling}%
2791   \def\subsubsectionautorefname{Subsubafdeling}%
2792   \def\paragraphautorefname{Paragraaf}%
2793   \def\subparagraphautorefname{Subparagraaf}%
2794   \def\FancyVerbLineautorefname{Lyn}%
2795   \def\theoremautorefname{Teorema}%
2796   \def\pageautorefname{Bladsy}%
2797 }
2798 \def\HyLang@english{%
2799   \def\equationautorefname{Equation}%
2800   \def\footnoteautorefname{footnote}%
2801   \def\itemautorefname{item}%
2802   \def\figureautorefname{Figure}%
2803   \def\tableautorefname{Table}%
2804   \def\partautorefname{Part}%
2805   \def\appendixautorefname{Appendix}%
2806   \def\chapterautorefname{chapter}%
2807   \def\sectionautorefname{section}%
2808   \def\subsectionautorefname{subsection}%
2809   \def\subsubsectionautorefname{subsubsection}%
2810   \def\paragraphautorefname{paragraph}%
2811   \def\subparagraphautorefname{subparagraph}%
2812   \def\FancyVerbLineautorefname{line}%
2813   \def\theoremautorefname{Theorem}%
2814   \def\pageautorefname{page}%
2815 }
2816 \def\HyLang@french{%
2817   \def\equationautorefname{'Equation}%
2818   \def\footnoteautorefname{note}%
2819   \def\itemautorefname{item}%
2820   \def\figureautorefname{Figure}%
2821   \def\tableautorefname{Tableau}%
2822   \def\partautorefname{Partie}%
2823   \def\appendixautorefname{Appendice}%
2824   \def\chapterautorefname{chapitre}%
2825   \def\sectionautorefname{section}%
2826   \def\subsectionautorefname{sous-section}%
2827   \def\subsubsectionautorefname{sous-sous-section}%
2828   \def\paragraphautorefname{paragraphe}%

```

```

2829 \def\subparagraphautorefname{sous-paragraphe}%
2830 \def\FancyVerbLineautorefname{ligne}%
2831 \def\theoremautorefname{Th\'eor\`eme}%
2832 \def\pageautorefname{page}%
2833 }
2834 \def\HyLang@german{%
2835 \def\equationautorefname{Gleichung}%
2836 \def\footnoteautorefname{Fu\ss note}%
2837 \def\itemautorefname{Punkt}%
2838 \def\figureautorefname{Abbildung}%
2839 \def\tableautorefname{Tabelle}%
2840 \def\partautorefname{Teil}%
2841 \def\appendixautorefname{Anhang}%
2842 \def\chapterautorefname{Kapitel}%
2843 \def\sectionautorefname{Abschnitt}%
2844 \def\subsectionautorefname{Unterabschnitt}%
2845 \def\subsubsectionautorefname{Unterunterabschnitt}%
2846 \def\paragraphautorefname{Absatz}%
2847 \def\subparagraphautorefname{Unterabsatz}%
2848 \def\FancyVerbLineautorefname{Zeile}%
2849 \def\theoremautorefname{Theorem}%
2850 \def\pageautorefname{Seite}%
2851 }
2852 \def\HyLang@italian{%
2853 \def\equationautorefname{Equazione}%
2854 \def\footnoteautorefname{nota}%
2855 \def\itemautorefname{punto}%
2856 \def\figureautorefname{Figura}%
2857 \def\tableautorefname{Tabella}%
2858 \def\partautorefname{Parte}%
2859 \def\appendixautorefname{Appendice}%
2860 \def\chapterautorefname{Capitolo}%
2861 \def\sectionautorefname{sezione}%
2862 \def\subsectionautorefname{sottosezione}%
2863 \def\subsubsectionautorefname{sottosottosezione}%
2864 \def\paragraphautorefname{paragrafo}%
2865 \def\subparagraphautorefname{sottoparagrafo}%
2866 \def\FancyVerbLineautorefname{linea}%
2867 \def\theoremautorefname{Teorema}%
2868 \def\pageautorefname{Pag.\@}%
2869 }
2870 \def\HyLang@magyar{%
2871 \def\equationautorefname{Egyenlet}%
2872 \def\footnoteautorefname{l\'abjegyzet}%
2873 \def\itemautorefname{Elem}%
2874 \def\figureautorefname{\`Abra}%
2875 \def\tableautorefname{T\'abl\'azat}%
2876 \def\partautorefname{R\'esz}%
2877 \def\appendixautorefname{F\'uggel\'ek}%
2878 \def\chapterautorefname{fejezet}%
2879 \def\sectionautorefname{szakasz}%
2880 \def\subsectionautorefname{alszakasz}%
2881 \def\subsubsectionautorefname{alalszakasz}%
2882 \def\paragraphautorefname{bekezd\'es}%
2883 \def\subparagraphautorefname{albekezd\'es}%
2884 \def\FancyVerbLineautorefname{sor}%
2885 \def\theoremautorefname{T\'etel}%

```

```

2886 \def\pageautorefname{oldal}%
2887 }
2888 \def\HyLang@portuges{%
2889 \def\equationautorefname{Equa\c c\~ao}%
2890 \def\footnoteautorefname{Nota de rodap\`e}%
2891 \def\itemautorefname{Item}%
2892 \def\figureautorefname{Figura}%
2893 \def\tableautorefname{Tabela}%
2894 \def\partautorefname{Parte}%
2895 \def\appendixautorefname{Ap\`endice}%
2896 \def\chapterautorefname{Cap\`itulo}%
2897 \def\sectionautorefname{Se\c c\~ao}%
2898 \def\subsectionautorefname{Subse\c c\~ao}%
2899 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
2900 \def\paragraphautorefname{par\`agrafo}%
2901 \def\subparagraphautorefname{subpar\`agrafo}%
2902 \def\FancyVerbLineautorefname{linha}%
2903 \def\theoremautorefname{Teorema}%
2904 \def\pageautorefname{P\`agina}%
2905 }

```

2906 \def\HyLang@russian{%

```
2907 \def\equationautorefname{\cyr\cyrv\cyrery\cyrr.}%
```

```

2908 % \def\equationautorefname{%
2909 % \cyr\cyrv\cyrery\cyr\cyrz\cyrh\cyr\cyrn\cyr\cyr
2910 % }%

```

```

2911 \def\footnoteautorefname{%
2912   \cyr\cyrp\cyro\cyrd\cysr\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
2913 }%

```

```

2914 % \def\footnoteautorefname{%
2915 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
2916 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
2917 % }%

```

```
2918 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2919 % \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.

```
2920 \def\itemautorefname{\cyr\cyrp.}%
2921 % \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.

```
2922 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2923 \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.

```
2924 \def\partautorefname{\cyr\cyrch.}%
2925 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2926 \def\sectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

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

```
2927 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2928 % \def\appendixautorefname{%
2929 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
2930 % }%
```

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.

```
2931 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2932 \def\subsubsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
```

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

```
2933 \def\paragraphautorefname{\cyr\cyrp.}%
2934 \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.

```
2935 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2936 % \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.

```
2937 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
2938 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
2939 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2940 % \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 ...

```
2941 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2942 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cym\cyr\cyra}%
```

```
2943 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cym\cyr\cyru}%
```

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

```
2944 \def\pageautorefname{\cyr\cyrs.}%
```

```
2945 }
```

```
2946 \def\HyLang@spanish{%
```

```
2947 \def\equationautorefname{Ecuaci\on}%
```

```
2948 \def\footnoteautorefname{Nota a pie de p\agina}%
```

```
2949 \def\itemautorefname{Elemento}%
```

```
2950 \def\figureautorefname{Figura}%
```

```
2951 \def\tableautorefname{Tabla}%
```

```
2952 \def\partautorefname{Parte}%
```

```
2953 \def\appendixautorefname{Ap\endice}%
```

```
2954 \def\chapterautorefname{Cap\itulo}%
```

```
2955 \def\sectionautorefname{Secci\on}%
```

```
2956 \def\subsectionautorefname{Subsecci\on}%
```

```
2957 \def\subsubsectionautorefname{Subsubsecci\on}%
```

```
2958 \def\paragraphautorefname{P\arrafo}%
```

```
2959 \def\subparagraphautorefname{Subp\arrafo}%
```

```
2960 \def\FancyVerbLineautorefname{L\inea}%
```

```
2961 \def\theoremautorefname{Teorema}%
```

```
2962 \def\pageautorefname{P\agina}%
```

```
2963 }
```

```
2964 \def\HyLang@vietnamese{%
```

```
2965 \def\equationautorefname{Ph\uhorn{ }ohorn{ }ng tr\inh}%
```

```
2966 \def\footnoteautorefname{Ch\u th\ich}%
```

```
2967 \def\itemautorefname{m\du{c}%
```

```
2968 \def\figureautorefname{H\inh}%
```

```
2969 \def\tableautorefname{B\h{a}ng}%
```

```
2970 \def\partautorefname{Ph\acircumflex{n}%
```

```
2971 \def\appendixautorefname{Ph\du{ }l\du{c}%
```

```
2972 \def\chapterautorefname{ch\uhorn{ }ohorn{ }ng}%
```

```
2973 \def\sectionautorefname{m\du{c}%
```

```
2974 \def\subsectionautorefname{m\du{c}%
```

```
2975 \def\subsubsectionautorefname{m\du{c}%
```

```
2976 \def\paragraphautorefname{\dj{ }o\da{n}%
```

```
2977 \def\subparagraphautorefname{\dj{ }o\da{n}%
```

```
2978 \def\FancyVerbLineautorefname{d\ong}%
```

```
2979 \def\theoremautorefname{DJ{\di{ }nh l\y}%
```

```
2980 \def\pageautorefname{Trang}%
```

```
2981 }
```

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

```
2982 \def\HyLang@addto#1#2{%
```

```
2983 #2%
```

```
2984 \@temptokena{#2}%
```

```
2985 \ifx#1\relax
```

```
2986 \let#1\@empty
```

```
2987 \fi
```

```
2988 \ifx#1\@undefined
```

```

2989 \edef#1{\the\@temptokena}%
2990 \else
2991 \toks@\expandafter{#1}%
2992 \edef#1{\the\toks@\the\@temptokena}%
2993 \fi
2994 \@temptokena{}\toks@\@temptokena
2995 }

2996 \def\HyLang@DeclareLang#1#2#3{%
2997 \begingroup
2998 \edef\x##1##2{%
2999 \noexpand\ifx##2\relax
3000 \errmessage{No definitions for language #2' found!}%
3001 \noexpand\fi
3002 \endgroup
3003 \noexpand\define@key{Hyp}{#1}[]{%
3004 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3005 #3%
3006 }%
3007 }%
3008 \expandafter\x\csname extras#1\expandafter\endcsname
3009 \csname HyLang@#2\endcsname
3010 }
3011 \HyLang@DeclareLang{english}{english}{}
3012 \HyLang@DeclareLang{UKenglish}{english}{}
3013 \HyLang@DeclareLang{british}{english}{}
3014 \HyLang@DeclareLang{USenglish}{english}{}
3015 \HyLang@DeclareLang{american}{english}{}
3016 \HyLang@DeclareLang{german}{german}{}
3017 \HyLang@DeclareLang{austrian}{german}{}
3018 \HyLang@DeclareLang{ngerman}{german}{}
3019 \HyLang@DeclareLang{naustrian}{german}{}
3020 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3021 \HyLang@DeclareLang{brazil}{portuges}{}
3022 \HyLang@DeclareLang{brazilian}{portuges}{}
3023 \HyLang@DeclareLang{portuguese}{portuges}{}
3024 \HyLang@DeclareLang{spanish}{spanish}{}
3025 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3026 \HyLang@DeclareLang{french}{french}{}
3027 \HyLang@DeclareLang{frenchb}{french}{}
3028 \HyLang@DeclareLang{francais}{french}{}
3029 \HyLang@DeclareLang{acadian}{french}{}
3030 \HyLang@DeclareLang{canadien}{french}{}
3031 \HyLang@DeclareLang{italian}{italian}{}
3032 \HyLang@DeclareLang{magyar}{magyar}{}
3033 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3034 \define@key{Hyp}{vietnamese}[]{}%
3035 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
3036 \AtEndOfPackage{%
3037 \@ifundefined{T@PU}{}{}%
3038 \input{pvnenc.def}%
3039 }%
3040 }%
3041 }
3042 \define@key{Hyp}{vietnam}[]{}%
3043 \HyLang@addto\extravietnam\HyLang@vietnamese

```



```

3044 \AtEndOfPackage{%
3045   \ifundefined{T@PU}{-}{%
3046     \input{puvnenc.def}%
3047   }%
3048 }%
3049 }

```

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

```

3050 \define@key{Hyp}{arabic}[]{%
3051   \AtEndOfPackage{%
3052     \ifundefined{T@PU}{-}{%
3053       \input{puarenc.def}%
3054     }%
3055   }%
3056 }

```

13 Options to change appearance of links

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

```

3057 \define@key{Hyp}{colorlinks}[true]{%
3058   \Hy@boolkey{colorlinks}{#1}%
3059 }
3060 \define@key{Hyp}{ocgcolorlinks}[true]{%
3061   \Hy@boolkey{ocgcolorlinks}{#1}%
3062 }
3063 \AtBeginDocument{%
3064   \begingroup
3065     \ifundefined{OBJ@OCG@view}{%
3066       \ifHy@ocgcolorlinks
3067         \Hy@Warning{%
3068           Driver does not support ‘ocgcolorlinks’,\MessageBreak
3069           using ‘colorlinks’ instead%
3070         }%
3071       \fi
3072     }{}%
3073   \endgroup
3074 }
3075 \define@key{Hyp}{frenchlinks}[true]{%
3076   \Hy@boolkey{frenchlinks}{#1}%
3077 }

```

14 Bookmarking

```

3078 \begingroup\expandafter\expandafter\expandafter\endgroup
3079 \expandafter\ifx\csname chapter\endcsname\relax
3080   \def\toclevel@part{0}%
3081 \else
3082   \def\toclevel@part{-1}%
3083 \fi
3084 \def\toclevel@chapter{0}
3085 \def\toclevel@section{1}
3086 \def\toclevel@subsection{2}
3087 \def\toclevel@subsubsection{3}
3088 \def\toclevel@paragraph{4}
3089 \def\toclevel@subparagraph{5}

```

```

3090 \def\toclevel@figure{0}
3091 \def\toclevel@table{0}
3092 \@ifpackageloaded{listings}{%
3093   \providecommand*\theHlstlisting{\thelstlisting}%
3094   \providecommand*\toclevel@lstlisting{0}%
3095 }{}
3096 \@ifpackageloaded{listing}{%
3097   \providecommand*\theHlisting{\thelisting}%
3098   \providecommand*\toclevel@listing{0}%
3099 }{}

3100 \define@key{Hyp}{bookmarks}[true]{%
3101   \Hy@boolkey{bookmarks}{#1}%
3102 }

3103 \define@key{Hyp}{bookmarksopen}[true]{%
3104   \Hy@boolkey{bookmarksopen}{#1}%
3105 }

```

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.

```

3106 \let\Hy@bookmarksdepth\c@tocdepth
3107 \define@key{Hyp}{bookmarksdepth}[]{%
3108   \begingroup
3109     \edef\x{#1}%
3110     \ifx\x\empty
3111       \global\let\Hy@bookmarksdepth\c@tocdepth
3112     \else
3113       \@ifundefined{toclevel@\x}{%
3114         \@onelevel@sanitize\x
3115         \edef\y{\expandafter\@car\x\@nil}%
3116         \ifcase 0\expandafter\ifx\y-1\fi
3117           \expandafter\ifnum\expandafter'\y>47 %
3118             \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3119           \Hy@Warning{Unknown document division name (\x)}%
3120         \else
3121           \setbox\z@=\hbox{%
3122             \count@=\x
3123             \xdef\Hy@bookmarksdepth{\the\count@}%
3124           }%
3125         \fi
3126       }{%
3127         \setbox\z@=\hbox{%
3128           \count@=\csname toclevel@\x\endcsname
3129           \xdef\Hy@bookmarksdepth{\the\count@}%
3130         }%
3131       }%
3132     \fi
3133   \endgroup
3134 }

```

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

```

3135 \define@key{Hyp}{bookmarksopenlevel}{%
3136   \def\@bookmarksopenlevel{#1}%
3137 }
3138 \def\@bookmarksopenlevel{\maxdimen}
3139 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3140 \define@key{Hyp}{bookmarkstype}{%
3141   \def\Hy@bookmarkstype{#1}%
3142 }
3143 \def\Hy@bookmarkstype{toc}

```

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

```

3144 \define@key{Hyp}{bookmarksnumbered}[true]{%
3145   \Hy@boolkey{bookmarksnumbered}{#1}%
3146 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

3147 \define@key{Hyp}{CJKbookmarks}[true]{%
3148   \Hy@boolkey{CJKbookmarks}{#1}%
3149 }

3150 \def\Hy@temp#1{%
3151   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3152 }
3153 \def\Hy@@temp#1#2#3{%
3154   \define@key{Hyp}{#2color}{%
3155     \HyColor@HyperrefColor{##1}#1%
3156   }%
3157   \def#1{#3}%
3158 }
3159 \Hy@temp{link}{red}
3160 \Hy@temp{anchor}{black}
3161 \Hy@temp{cite}{green}
3162 \Hy@temp{file}{cyan}
3163 \Hy@temp{url}{magenta}
3164 \Hy@temp{menu}{red}
3165 \Hy@temp{run}{\@filecolor}
3166 \define@key{Hyp}{pagecolor}{%
3167   \Hy@WarningPageColor
3168 }
3169 \def\Hy@WarningPageColor{%
3170   \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
3171   \global\let\Hy@WarningPageColor\relax
3172 }

3173 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3174 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3175 \let\@baseurl\@empty
3176 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3177 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3178 \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.

```

3179 \let\@pdfpagetransition\relax
3180 \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.

```

3181 \let\@pdfpageduration\relax
3182 \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.

```

3183 \newif\ifHy@useHidKey
3184 \Hy@useHidKeyfalse
3185 \define@key{Hyp}{pdfpagehidden}[true]{%
3186   \Hy@boolkey{pdfpagehidden}{#1}%
3187   \ifHy@pdfpagehidden
3188     \global\Hy@useHidKeytrue
3189   \fi
3190 }

```

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).

```

3191 \def\Hy@ColorList{cite,file,link,menu,run,url}
3192 \@for\Hy@temp:=\Hy@ColorList\do{%
3193   \edef\Hy@temp{%
3194     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3195       \noexpand\Hy@Color@HyperrefBorderColor
3196       {##1}%
3197       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3198       {hyperref}%
3199       {\Hy@temp bordercolor}%
3200     }%
3201   }%
3202   \Hy@temp
3203 }
3204 \define@key{Hyp}{pagebordercolor}{%
3205   \Hy@WarningPageBorderColor
3206 }
3207 \def\Hy@WarningPageBorderColor{%
3208   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3209   \global\let\Hy@WarningPageBorderColor\relax
3210 }
3211 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3212 \Hy@DefNameKey{pdfhighlight}{%
3213   \do{/I}{Invert}%
3214   \do{/N}{None}%
3215   \do{/O}{Outline}%
3216   \do{/P}{Push}%
3217 }
3218 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}

```

```

3219 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
3220 \def\Hy@setpdfborder{%
3221   \ifx\@pdfborder\@empty
3222   \else
3223     /Border[\@pdfborder]%
3224   \fi
3225   \ifx\@pdfborderstyle\@empty
3226   \else
3227     /BS<<\@pdfborderstyle>>%
3228   \fi
3229 }
3230 \Hy@DefNameKey{pdfpagemode}{%
3231   \do{UseNone}{}%
3232   \do{UseOutlines}{}%
3233   \do{UseThumbs}{}%
3234   \do{FullScreen}{}%
3235   \do{UseOC}{PDF 1.5}%
3236   \do{UseAttachments}{PDF 1.6}%
3237 }
3238 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3239   \do{UseNone}{}%
3240   \do{UseOutlines}{}%
3241   \do{UseThumbs}{}%
3242   \do{FullScreen}{}%
3243   \do{UseOC}{PDF 1.5}%
3244   \do{UseAttachments}{PDF 1.6}%
3245 }
3246 \Hy@DefNameKey{pdfdirection}{%
3247   \do{L2R}{Left to right}%
3248   \do{R2L}{Right to left}%
3249 }
3250 \Hy@DefNameKey{pdfviewarea}{%
3251   \do{MediaBox}{}%
3252   \do{CropBox}{}%
3253   \do{BleedBox}{}%
3254   \do{TrimBox}{}%
3255   \do{ArtBox}{}%
3256 }
3257 \Hy@DefNameKey{pdfviewclip}{%
3258   \do{MediaBox}{}%
3259   \do{CropBox}{}%
3260   \do{BleedBox}{}%
3261   \do{TrimBox}{}%
3262   \do{ArtBox}{}%
3263 }
3264 \Hy@DefNameKey{pdfprintarea}{%
3265   \do{MediaBox}{}%
3266   \do{CropBox}{}%
3267   \do{BleedBox}{}%
3268   \do{TrimBox}{}%
3269   \do{ArtBox}{}%
3270 }
3271 \Hy@DefNameKey{pdfprintclip}{%
3272   \do{MediaBox}{}%
3273   \do{CropBox}{}%
3274   \do{BleedBox}{}%
3275   \do{TrimBox}{}%

```

```

3276 \do{ArtBox}{}%
3277 }
3278 \Hy@DefNameKey{pdfprintscaling}{%
3279 \do{AppDefault}{}%
3280 \do{None}{}%
3281 }
3282 \Hy@DefNameKey{pdfduplex}{%
3283 \do{Simplex}{}%
3284 \do{DuplexFlipShortEdge}{}%
3285 \do{DuplexFlipLongEdge}{}%
3286 }
3287 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3288 \do{true}{}%
3289 \do{false}{}%
3290 }
3291 \define@key{Hyp}{pdfprintpagerange}{%
3292 \def\@pdfprintpagerange{#1}%
3293 }
3294 \Hy@DefNameKey{pdfnumcopies}{%
3295 \do{2}{two copies}%
3296 \do{3}{three copies}%
3297 \do{4}{four copies}%
3298 \do{5}{five copies}%
3299 }
3300 \define@key{Hyp}{pdfusetitle}[true]{%
3301 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3302 }
3303 \def\HyXeTeX@CheckUnicode{%
3304 \ifxetex
3305 \ifHy@unicode
3306 \else
3307 \Hy@WarningNoLine{%
3308 XeTeX driver only supports unicode.\MessageBreak
3309 Enabling option 'unicode'%
3310 }%
3311 \setkeys{Hyp}{unicode}%
3312 \fi
3313 \else
3314 \let\HyXeTeX@CheckUnicode\relax
3315 \fi
3316 }
3317 \def\HyPsd@PrerenderUnicode#1{%
3318 \begingroup
3319 \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3320 \else
3321 \sbox0{%
3322 \let\GenericInfo\@gobbletwo
3323 \let\GenericWarning\@gobbletwo
3324 \let\GenericError\@gobblefour
3325 \PrerenderUnicode{#1}%
3326 }%
3327 \fi
3328 \endgroup
3329 }
3330 \define@key{Hyp}{pdftitle}{%
3331 \HyXeTeX@CheckUnicode
3332 \HyPsd@XeTeXBigCharstrue

```

```

3333 \HyPsd@PrerenderUnicode{#1}%
3334 \pdfstringdef\@pdftitle{#1}%
3335 }
3336 \define@key{Hyp}{pdfauthor}{%
3337 \HyXeTeX@CheckUnicode
3338 \HyPsd@XeTeXBigCharstrue
3339 \HyPsd@PrerenderUnicode{#1}%
3340 \pdfstringdef\@pdfauthor{#1}%
3341 }
3342 \define@key{Hyp}{pdfproducer}{%
3343 \HyXeTeX@CheckUnicode
3344 \HyPsd@XeTeXBigCharstrue
3345 \HyPsd@PrerenderUnicode{#1}%
3346 \pdfstringdef\@pdfproducer{#1}%
3347 }
3348 \define@key{Hyp}{pdfcreator}{%
3349 \HyXeTeX@CheckUnicode
3350 \HyPsd@XeTeXBigCharstrue
3351 \HyPsd@PrerenderUnicode{#1}%
3352 \pdfstringdef\@pdfcreator{#1}%
3353 }
3354 \define@key{Hyp}{pdfcreationdate}{%
3355 \begingroup
3356 \Hy@unicodedefalse
3357 \pdfstringdef\@pdfcreationdate{#1}%
3358 \endgroup
3359 }
3360 \define@key{Hyp}{pdfmoddate}{%
3361 \begingroup
3362 \Hy@unicodedefalse
3363 \pdfstringdef\@pdfmoddate{#1}%
3364 \endgroup
3365 }
3366 \define@key{Hyp}{pdfsubject}{%
3367 \HyXeTeX@CheckUnicode
3368 \HyPsd@XeTeXBigCharstrue
3369 \HyPsd@PrerenderUnicode{#1}%
3370 \pdfstringdef\@pdfsubject{#1}%
3371 }
3372 \define@key{Hyp}{pdfkeywords}{%
3373 \HyXeTeX@CheckUnicode
3374 \HyPsd@XeTeXBigCharstrue
3375 \HyPsd@PrerenderUnicode{#1}%
3376 \pdfstringdef\@pdfkeywords{#1}%
3377 }
3378 \define@key{Hyp}{pdftrapped}{%
3379 \lowercase{\edef\Hy@temp{#1}}%
3380 \ifx\Hy@temp\HyInfo@trapped@true
3381 \def\@pdftrapped{True}%
3382 \else
3383 \ifx\Hy@temp\HyInfo@trapped@false
3384 \def\@pdftrapped{False}%
3385 \else
3386 \ifx\Hy@temp\HyInfo@trapped@unknown
3387 \def\@pdftrapped{Unknown}%
3388 \else
3389 \ifx\Hy@temp\@empty

```

```

3390     \else
3391         \Hy@Warning{%
3392             Unsupported value '#1'\MessageBreak
3393             for option 'pdftrapped'%
3394         }%
3395     \fi
3396     \def\@pdftrapped{}%
3397 \fi
3398 \fi
3399 \fi
3400 }
3401 \def\HyInfo@trapped@true{true}
3402 \def\HyInfo@trapped@false{false}
3403 \def\HyInfo@trapped@unknown{unknown}
3404 \def\HyInfo@TrappedUnsupported{%
3405     \ifx\@pdftrapped\empty
3406     \else
3407         \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3408         \gdef\HyInfo@TrappedUnsupported{}%
3409     \fi
3410 }
3411 \define@key{Hyp}{pdfinfo}{%
3412     \kvsetkeys{pdfinfo}{#1}%
3413 }
3414 \def\Hy@temp#1{%
3415     \lowercase{\Hy@temp@A{#1}}{#1}%
3416 }
3417 \def\Hy@temp@A#1#2{%
3418     \define@key{pdfinfo}{#2}{%
3419         \hypersetup{pdf#1={##1}}%
3420     }%
3421 }
3422 \Hy@temp{Title}
3423 \Hy@temp{Author}
3424 \Hy@temp{Keywords}
3425 \Hy@temp{Subject}
3426 \Hy@temp{Creator}
3427 \Hy@temp{Producer}
3428 \Hy@temp{CreationDate}
3429 \Hy@temp{ModDate}
3430 \Hy@temp{Trapped}
3431 \newif\ifHyInfo@AddonUnsupported
3432 \kv@set@family@handler{pdfinfo}{%
3433     \HyInfo@AddonHandler{#1}{#2}%
3434 }
3435 \let\HyInfo@do\relax
3436 \def\HyInfo@AddonHandler#1#2{%
3437     \ifx\kv@value\relax
3438         \Hy@Warning{%
3439             Option 'pdfinfo': ignoring key '\kv@key' without value%
3440         }%
3441     \else
3442         \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3443         \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3444         \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3445             \ifHyInfo@AddonUnsupported
3446                 \Hy@Warning{%

```



```

3447     This driver does not support additional\MessageBreak
3448     information entries, therefore\MessageBreak
3449     ‘\kv@key’ is ignored%
3450 }%
3451 \else
3452 \define@key{pdfinfo}{\HyInfo@Key}{%
3453   \HyXeTeX@CheckUnicode
3454   \HyPsd@XeTeXBigCharstrue
3455   \HyPsd@PrerenderUnicode{##1}%
3456   \pdfstringdef\HyInfo@Value{##1}%
3457   \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3458   \HyInfo@Value
3459 }%
3460 \edef\HyInfo@AddonList{%
3461   \HyInfo@AddonList
3462   \HyInfo@do{\HyInfo@Key}%
3463 }%
3464 \kv@parse@normalized{%
3465   \HyInfo@Key={#2}%
3466 }{%
3467   \kv@processor@default{pdfinfo}%
3468 }%
3469 \fi
3470 \else
3471 \kv@parse@normalized{%
3472   \HyInfo@Key={#2}%
3473 }{%
3474   \kv@processor@default{pdfinfo}%
3475 }%
3476 \fi
3477 \fi
3478 }
3479 \def\HyInfo@GenerateAddons{%
3480   \ifHyInfo@AddonUnsupported
3481     \def\HyInfo@Addons{}%
3482   \else
3483     \begingroup
3484     \toks@{}%
3485     \def\HyInfo@do##1{%
3486       \EdefEscapeName\HyInfo@Key{##1}%
3487       \edef\x{%
3488         \toks@{%
3489           \the\toks@
3490           /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3491         }%
3492       }%
3493       \x
3494     }%
3495     \HyInfo@AddonList
3496     \edef\x{\endgroup
3497       \def\noexpand\HyInfo@Addons{\the\toks@}%
3498     }%
3499     \x
3500   \fi
3501 }
3502 \def\HyInfo@AddonList{}
3503 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}

```

```

3504 \define@key{Hyp}{pdflinkmargin}{\setpdfinkmargin{#1}}
3505 \let\setpdfinkmargin\@gobble
3506 \def\calculate@pdfview#1 #2\{\%
3507 \def\@pdfview{#1}%
3508 \ifx\#2\%
3509 \def\@pdfviewparams{ -32768}%
3510 \else
3511 \def\@pdfviewparams{ #2}%
3512 \fi
3513 }
3514 \begingroup\expandafter\expandafter\expandafter\endgroup
3515 \expandafter\ifx\csname numexpr\endcsname\relax
3516 \def\Hy@number#1{%
3517 \expandafter\@firstofone\expandafter{\number#1}%
3518 }%
3519 \else
3520 \def\Hy@number#1{%
3521 \the\numexpr#1\relax
3522 }%
3523 \fi
3524 \define@key{Hyp}{pdfstartpage}{%
3525 \ifx\#1\%
3526 \def\@pdfstartpage{}%
3527 \else
3528 \edef\@pdfstartpage{\Hy@number{#1}}%
3529 \fi
3530 }%
3531 \define@key{Hyp}{pdfstartview}{%
3532 \ifx\#1\%
3533 \def\@pdfstartview{}%
3534 \else
3535 \hypercalcbpdef\@pdfstartview{ /#1 }%
3536 \fi
3537 }
3538 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3539 \define@key{Hyp}{pdftoolbar}[true]{%
3540 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3541 }
3542 \define@key{Hyp}{pdfmenubar}[true]{%
3543 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3544 }
3545 \define@key{Hyp}{pdfwindowui}[true]{%
3546 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3547 }
3548 \define@key{Hyp}{pdffitwindow}[true]{%
3549 \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3550 }
3551 \define@key{Hyp}{pdfcenterwindow}[true]{%
3552 \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3553 }
3554 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3555 \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3556 }
3557 \define@key{Hyp}{pdfa}[true]{%
3558 \Hy@boolkey{pdfa}{#1}%
3559 }
3560 \define@key{Hyp}{pdfnewwindow}[true]{%

```

```

3561 \def\Hy@temp{#1}%
3562 \ifx\Hy@temp\@empty
3563   \Hy@newwindowsetfalse
3564 \else
3565   \Hy@newwindowsettrue
3566   \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3567 \fi
3568 }
3569 \def\Hy@SetNewWindow{%
3570   \ifHy@newwindowset
3571     /NewWindow %
3572   \ifHy@newwindow true\else false\fi
3573 \fi
3574 }
3575 \Hy@DefNameKey{pdfpagelayout}{%
3576   \do{SinglePage}{}%
3577   \do{OneColumn}{}%
3578   \do{TwoColumnLeft}{}%
3579   \do{TwoColumnRight}{}%
3580   \do{TwoPageLeft}{PDF 1.5}%
3581   \do{TwoPageRight}{PDF 1.5}%
3582 }
3583 \define@key{Hyp}{pdflang}{%
3584   \def\@pdflang{#1}%
3585 }
3586 \define@key{Hyp}{pdfpagelabels}[true]{%
3587   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3588 }
3589 \define@key{Hyp}{pdfescapeform}[true]{%
3590   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3591 }

```

Default values:

```

3592 \def\@linkbordercolor{1 0 0}
3593 \def\@urlbordercolor{0 1 1}
3594 \def\@menubordercolor{1 0 0}
3595 \def\@filebordercolor{0 .5 .5}
3596 \def\@runbordercolor{0 .7 .7}
3597 \def\@citebordercolor{0 1 0}
3598 \def\@pdfhighlight{/I}
3599 \def\@pdftitle{}
3600 \def\@pdfauthor{}
3601 \let\@pdfproducer\relax
3602 \def\@pdfcreator{LaTeX with hyperref package}
3603 \def\@pdfcreationdate{}
3604 \def\@pdfmoddate{}
3605 \def\@pdfsubject{}
3606 \def\@pdfkeywords{}
3607 \def\@pdftrapped{}
3608 \def\@pdfpagescrop{}
3609 \def\@pdfstartview{ /Fit }
3610 \def\@pdfstartpage{1}
3611 \def\@pdfprintpagerange{}
3612 \def\@pdflang{}
3613 \let\PDF@SetupDoc\@empty
3614 \let\PDF@FinishDoc\@empty
3615 \let\phantomsection\@empty
3616 \let\special@paper\@empty

```

```

3617 \def\HyperDestNameFilter#1{#1}
3618 \AtBeginDocument{%
3619   \begingroup
3620   \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3621   \dimen@=\x\relax
3622   \ifdim\dimen@>\z@
3623   \else
3624     \dimen@=11in\relax
3625     \Hy@WarningNoLine{%
3626       Height of page (\expandafter\string\x) %
3627       is invalid (\the\x),\MessageBreak
3628       using 11in%
3629     }%
3630   \fi
3631   \dimen@=0.99626401\dimen@
3632   \xdef\Hy@pageheight{\strip@pt\dimen@}%
3633 \endgroup
3634 }
3635 \def\HyInd@EncapChar{\|}
3636 \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.

```

3637 \let\hyper@normalise\ExecuteOptions
3638 \let\ExecuteOptions\hypersetup
3639 \Hy@RestoreCatcodes
3640 \InputIfFileExists{hyperref.cfg}{-}{}
3641 \Hy@SetCatcodes
3642 \let\ExecuteOptions\hyper@normalise
3643 \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`.

```

3644 \RequirePackage{kvoptions}[2009/07/21]
3645 \SetupKeyvalOptions{family=Hyp}
3646 \DeclareLocalOptions{%
3647   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3648 }

```

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

```

3649 \@ifpackageloaded{tex4ht}{%
3650   \@ifpackagewith{hyperref}{tex4ht}{-}{}%
3651   \PassOptionsToPackage{tex4ht}{hyperref}%
3652 }%
3653 {}

3654 \let\ReadBookmarks\relax
3655 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3656 \AtBeginDocument{%
3657   \ifHy@draft
3658     \let\hyper@@anchor\@gobble
3659     \gdef\hyper@link#1#2#3{#3}%
3660     \let\hyper@anchorstart\@gobble

```

```

3661 \let\hyper@anchorend\@empty
3662 \let\hyper@linkstart\@gobbletwo
3663 \let\hyper@linkend\@empty
3664 \def\hyper@linkurl#1#2{#1}%
3665 \def\hyper@linkfile#1#2#3{#1}%
3666 \def\hyper@link@{#1}#2#3{}%
3667 \def\Acrobatmenu#1#2{\leavevmode#2}%
3668 \let\PDF@SetupDoc\@empty
3669 \let\PDF@FinishDoc\@empty
3670 \let\@fifthoffive\@secondoftwo
3671 \let\@secondoffive\@secondoftwo
3672 \let\ReadBookmarks\relax
3673 \let\WriteBookmarks\relax
3674 \Hy@WarningNoLine{ draft mode on}%
3675 \fi
3676 \Hy@DisableOption{draft}%
3677 \Hy@DisableOption{nolinks}%
3678 \Hy@DisableOption{final}%
3679 }

```

15.1 PDF/A

```

3680 \Hy@DisableOption{pdfa}

3681 \ifHy@pdfa
3682 \setkeys{Hyp}{pdfversion=1.4}%
3683 \def\Hy@Acrobatmenu#1#2{%
3684 \leavevmode
3685 \begingroup
3686 \edef\x{#1}%
3687 \@onelevel@sanitize\x
3688 \ifx\x\Hy@NextPage
3689 \let\y=Y%
3690 \else
3691 \ifx\x\Hy@PrevPage
3692 \let\y=Y%
3693 \else
3694 \ifx\x\Hy@FirstPage
3695 \let\y=Y%
3696 \else
3697 \ifx\x\Hy@LastPage
3698 \let\y=Y%
3699 \else
3700 \let\y=N%
3701 \fi
3702 \fi
3703 \fi
3704 \fi
3705 \expandafter\endgroup
3706 \ifx\y Y%
3707 \else
3708 \PackageError{hyperref}{%
3709 PDF/A: Named action ‘#1’ is not permitted%
3710 }\@ehc
3711 {#2}%
3712 \expandafter\@gobble
3713 \fi
3714 }%

```

```

3715 \def\Hy@temp#1{%
3716   \expandafter\def\csname Hy@#1\endcsname{#1}%
3717   \expandafter\@onelevel\@sanitize\csname Hy@#1\endcsname
3718 }%
3719 \Hy@temp{NextPage}%
3720 \Hy@temp{PrevPage}%
3721 \Hy@temp{FirstPage}%
3722 \Hy@temp{LastPage}%
3723 \else
3724 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3725 \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.

```

3726 \Hy@nextfalse
3727 \ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3728 \ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3729 \ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3730 \ifHy@next
3731   \let\texttilde\~%
3732 \fi

3733 \ifHy@figures
3734   \Hy@Info{Hyper figures ON}%
3735 \else
3736   \Hy@Info{Hyper figures OFF}%
3737 \fi

3738 \ifHy@nesting
3739   \Hy@Info{Link nesting ON}%
3740 \else
3741   \Hy@Info{Link nesting OFF}%
3742 \fi

3743 \ifHy@hyperindex
3744   \Hy@Info{Hyper index ON}%
3745 \else
3746   \Hy@Info{Hyper index OFF}%
3747 \fi

3748 \ifHy@plainpages
3749   \Hy@Info{Plain pages ON}%
3750 \else
3751   \Hy@Info{Plain pages OFF}%
3752 \fi

3753 \ifHy@backref
3754   \Hy@Info{Backreferencing ON}%
3755 \else
3756   \Hy@Info{Backreferencing OFF}%
3757 \fi

3758 \ifHy@typexml
3759   \AtEndOfPackage{%
3760     \RequirePackage{color}%
3761     \RequirePackage{nameref}%
3762   }%
3763 \fi

3764 \Hy@DisableOption{typexml}
3765 \ifHy@implicit
3766   \typeout{Implicit mode ON; LaTeX internals redefined}%

```

```

3767 \else
3768   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3769   \def\MaybeStopEarly{%
3770     \typeout{Hyperref stopped early}%
3771     \AfterBeginDocument{%
3772       \PDF@FinishDoc
3773       \gdef\PDF@FinishDoc{}}%
3774   }%
3775   \endinput
3776 }%
3777 \AtBeginDocument{%
3778   \let\autoref\ref
3779   \let\autopageref\pageref
3780   \ifx\@pdfpagemode\@empty
3781     \gdef\@pdfpagemode{UseNone}%
3782   \fi
3783   \global\Hy@backreffalse
3784 }%
3785 \AtEndOfPackage{%
3786   \global\let\ReadBookmarks\relax
3787   \global\let\WriteBookmarks\relax
3788 }%
3789 \fi
3790 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

3791 \AtEndOfPackage{%
3792   \@ifpackageloaded{tex4ht}{%
3793     \def\Hy@driver{htex4ht}%
3794     \Hy@texhttrue
3795   }{}%

```

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.

```

3796   \ifx\Hy@driver\@empty
3797   \else
3798     \def\Hy@temp{hpdfTeX}%
3799     \ifpdf
3800       \ifx\Hy@driver\Hy@temp
3801       \else
3802         \Hy@WarningNoLine{%
3803           Wrong driver ‘\Hy@driver.def’;\MessageBreak
3804           pdfTeX is running in PDF mode.\MessageBreak
3805           Forcing driver ‘\Hy@temp.def’%
3806         }%
3807         \let\Hy@driver\Hy@temp
3808       \fi
3809     \else
3810       \ifx\Hy@driver\Hy@temp
3811       \Hy@WarningNoLine{%
3812         Wrong driver ‘\Hy@driver.def’;\MessageBreak
3813         pdfTeX is not running in PDF mode.\MessageBreak
3814         Using default driver%
3815       }%
3816       \let\Hy@driver\@empty
3817     \fi
3818   \fi

```

```

3819 \fi
3820 \ifx\Hy@driver\@empty
3821 \else
3822 \def\Hy@temp{hxtex}%
3823 \ifxetex
3824 \ifx\Hy@driver\Hy@temp
3825 \else
3826 \Hy@WarningNoLine{%
3827   Wrong driver '\Hy@driver.def';\MessageBreak
3828   XeTeX is running.\MessageBreak
3829   Forcing driver '\Hy@temp.def' for XeTeX%
3830 }%
3831 \let\Hy@driver\Hy@temp
3832 \fi
3833 \fi
3834 \fi
3835 \ifx\Hy@driver\@empty
3836 \else
3837 \def\Hy@temp{hvtexhtm}%
3838 \ifvtexhtml
3839 \ifx\Hy@driver\Hy@temp
3840 \else
3841 \Hy@WarningNoLine{%
3842   Wrong driver '\Hy@driver.def';\MessageBreak
3843   VTeX is running in HTML mode.\MessageBreak
3844   Forcing driver '\Hy@temp.def'%
3845 }%
3846 \let\Hy@driver\Hy@temp
3847 \fi
3848 \else
3849 \ifx\Hy@driver\Hy@temp
3850 \Hy@WarningNoLine{%
3851   Wrong driver '\Hy@driver.def';\MessageBreak
3852   VTeX is not running in HTML mode.\MessageBreak
3853   Using default driver%
3854 }%
3855 \let\Hy@driver\@empty
3856 \fi
3857 \fi
3858 \fi

```

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

```

3859 \ifx\Hy@driver\@empty
3860 \providecommand*{\Hy@defaultdriver}{hypertex}%
3861 \ifpdf
3862 \def\Hy@driver{hpdftex}%
3863 \else
3864 \ifxetex
3865 \def\Hy@driver{hxtex}%
3866 \else
3867 \ifvtexhtml
3868 \def\Hy@driver{hvtexhtm}%
3869 \def\MaybeStopEarly{%
3870   \typeout{Hyperref stopped early}%
3871   \AfterBeginDocument{%
3872     \PDF@FinishDoc
3873     \gdef\PDF@FinishDoc{}%
3874   }%

```



```

3875     \endinput
3876   }%
3877 \else
3878   \ifvtexpdf
3879     \def\Hy@driver{hvtex}%
3880   \else
3881     \ifvtexps
3882       \def\Hy@driver{hvtex}%
3883     \else
3884       \let\Hy@driver\Hy@defaultdriver
3885     \fi
3886   \fi
3887 \fi
3888 \fi
3889 \fi
3890 \ifx\Hy@driver\Hy@defaultdriver
3891   \def\Hy@temp{hdviwind}%
3892   \ifx\Hy@temp\Hy@driver
3893     \setkeys{Hyp}{colorlinks}%
3894     \PassOptionsToPackage{dviwindo}{color}%
3895   \fi
3896 \fi
3897 \typeout{*hyperref using default driver \Hy@driver*}%
3898 \else
3899 \typeout{*hyperref using driver \Hy@driver*}%
3900 \fi
3901 \input{\Hy@driver.def}%
3902 \let\@unprocessedoptions\relax
3903 \Hy@RestoreCatcodes
3904 }

```

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.

```

3905 \newif\ifHy@DvipdfmxOutlineOpen
3906 \ifxetex
3907   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3908   \else
3909     \Hy@DvipdfmxOutlineOpentrue
3910   \fi
3911 \fi
3912 \begingroup\expandafter\expandafter\expandafter\endgroup
3913 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3914 \else
3915   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3916     \Hy@DvipdfmxOutlineOpentrue
3917   \fi
3918 \fi
3919 \Hy@DisableOption{tex4ht}
3920 \Hy@DisableOption{pdftex}
3921 \Hy@DisableOption{nativepdf}
3922 \Hy@DisableOption{dvipdfm}
3923 \Hy@DisableOption{dvipdfmx}
3924 \Hy@DisableOption{dvipdfmx-outline-open}
3925 \Hy@DisableOption{pdfmark}
3926 \Hy@DisableOption{dvips}
3927 \Hy@DisableOption{hypertex}
3928 \Hy@DisableOption{vtex}

```

```

3929 \Hy@DisableOption{vtxpdfmark}
3930 \Hy@DisableOption{dviwindo}
3931 \Hy@DisableOption{dvipsone}
3932 \Hy@DisableOption{textures}
3933 \Hy@DisableOption{latex2html}
3934 \Hy@DisableOption{ps2pdf}
3935 \Hy@DisableOption{xetex}
3936 \AtEndOfPackage{%
3937   \Hy@DisableOption{pdfversion}%
3938 }

```

15.2.2 Bookmarks

```

3939 \def\WriteBookmarks{0}
3940 \def\@bookmarkopenstatus#1{%
3941   \ifHy@bookmarksopen

```

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

```

3942   \ifnum#1<\expandafter\@firstofone\expandafter
3943     {\number\@bookmarkopenlevel} % explicit space
3944   \else
3945     -%
3946   \fi
3947 \else
3948   -%
3949 \fi
3950 }
3951 \ifHy@bookmarks
3952   \Hy@Info{Bookmarks ON}%
3953   \ifx\@pdfpagemode\@empty
3954     \def\@pdfpagemode{UseOutlines}%
3955   \fi
3956 \else
3957   \def\@bookmarkopenstatus#1{%
3958     \Hy@Info{Bookmarks OFF}%
3959     \AtEndOfPackage{%
3960       \global\let\ReadBookmarks\relax
3961       \global\let\WriteBookmarks\relax
3962     }%
3963     \ifx\@pdfpagemode\@empty
3964       \def\@pdfpagemode{UseNone}%
3965     \fi
3966 \fi
3967 \Hy@DisableOption{bookmarks}

```

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

```

3968 \def\Hy@CatcodeWrapper#1{%
3969   \def\Hy@endWrap{%
3970     \def\TMP@EnsureCode##1##2{%
3971       \edef\Hy@endWrap{%
3972         \Hy@endWrap
3973         \catcode##1 \the\catcode##1\relax
3974       }%
3975       \catcode##1 ##2\relax
3976     }%
3977     \TMP@EnsureCode{10}{12}% ^^J
3978     \TMP@EnsureCode{33}{12}% !
3979     \TMP@EnsureCode{34}{12}% "
3980     \TMP@EnsureCode{36}{3}% $ (math)

```

```

3981 \TMP@EnsureCode{38}{4}% & (alignment)
3982 \TMP@EnsureCode{39}{12}% '
3983 \TMP@EnsureCode{40}{12}% (
3984 \TMP@EnsureCode{41}{12}% )
3985 \TMP@EnsureCode{42}{12}% *
3986 \TMP@EnsureCode{43}{12}% +
3987 \TMP@EnsureCode{44}{12}% ,
3988 \TMP@EnsureCode{45}{12}% -
3989 \TMP@EnsureCode{46}{12}% .
3990 \TMP@EnsureCode{47}{12}% /
3991 \TMP@EnsureCode{58}{12}% :
3992 \TMP@EnsureCode{59}{12}% ;
3993 \TMP@EnsureCode{60}{12}% <
3994 \TMP@EnsureCode{61}{12}% =
3995 \TMP@EnsureCode{62}{12}% >
3996 \TMP@EnsureCode{63}{12}% ?
3997 \TMP@EnsureCode{91}{12}% [
3998 \TMP@EnsureCode{93}{12}% ]
3999 \TMP@EnsureCode{94}{7}% ^ (superscript)
4000 \TMP@EnsureCode{95}{8}% _ (subscript)
4001 \TMP@EnsureCode{96}{12}% '
4002 \TMP@EnsureCode{124}{12}% |
4003 \TMP@EnsureCode{126}{13}% ~ (active)
4004 #1\relax
4005 \Hy@EndWrap
4006 }

```

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

```

4007 \AtBeginDocument{%
4008   \ifHy@ocgcolorlinks
4009     \setkeys{Hyp}{colorlinks}%
4010     \ifHy@pdfa
4011       \Hy@Warning{%
4012         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4013         using 'colorlinks' instead of 'ocgcolorlinks'%
4014       }%
4015       \Hy@ocgcolorlinksfalse
4016     \fi
4017   \fi
4018   \ifHy@ocgcolorlinks
4019     \else
4020       \Hy@DisableOption{ocgcolorlinks}%
4021     \fi
4022   \ifHy@colorlinks
4023     \def\@pdfborder{0 0 0}%
4024     \let\@pdfborderstyle\@empty
4025     \ifHy@typexml
4026     \else
4027       \Hy@CatcodeWrapper{%
4028         \RequirePackage{color}%
4029       }%
4030     \fi
4031     \def\Hy@colorlink#1{%
4032       \begingroup
4033       \HyColor@UseColor#1%
4034     }%
4035     \def\Hy@endcolorlink{\endgroup}%

```

```

4036 \Hy@Info{Link coloring ON}%
4037 \else
4038 \ifHy@frenchlinks
4039 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4040 \def\Hy@endcolorlink{\endgroup}%
4041 \Hy@Info{French linking ON}%
4042 \else
for grouping consistency:
4043 \def\Hy@colorlink#1{\begingroup}%
4044 \def\Hy@endcolorlink{\endgroup}%
4045 \Hy@Info{Link coloring OFF}%
4046 \fi
4047 \fi
4048 \Hy@DisableOption{colorlinks}%
4049 \Hy@DisableOption{frenchlinks}%
4050 \ifHy@texht
4051 \long\def\@firstoffive#1#2#3#4#5{#1}%
4052 \long\def\@secondoffive#1#2#3#4#5{#2}%
4053 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4054 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4055 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4056 \providecommand*\@safe@activestruet{}%
4057 \providecommand*\@safe@activesfalse{}%
4058 \def\T@ref#1{%
4059 \Hy@safe@activestruet
4060 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4061 \Hy@safe@activesfalse
4062 }%
4063 \def\T@pageref#1{%
4064 \Hy@safe@activestruet
4065 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4066 \Hy@safe@activesfalse
4067 }%
4068 \else
4069 \ifHy@typexml
4070 \else
4071 \Hy@CatcodeWrapper{%
4072 \RequirePackage{nameref}%
4073 }%
4074 \fi
4075 \fi
4076 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
4077 \DeclareRobustCommand\pageref{%
4078 \@ifstar\@pagerefstar\T@pageref
4079 }%
4080 }
4081 \AfterBeginDocument{%
4082 \ifHy@texht
4083 \else
4084 \Hy@CatcodeWrapper{%
4085 \ReadBookmarks
4086 }%
4087 \fi
4088 }
4089 \ifHy@backref
4090 \RequirePackage{backref}%
4091 \else

```

```

4092 \let\Hy@backout\@gobble
4093 \fi
4094 \Hy@DisableOption{backref}
4095 \Hy@DisableOption{pagebackref}
4096 \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.

```

4097 \begingroup
4098 \endlinechar=-1 %
4099 \catcode'\^^A=14 %
4100 \catcode'\^^M\active
4101 \catcode'\%\active
4102 \catcode'\#\active
4103 \catcode'\_\active
4104 \catcode'\$\active
4105 \catcode'\&\active
4106 \gdef\hyper@normalise{^^A
4107 \begingroup
4108 \catcode'\^^M\active
4109 \def^^M{ }^^A
4110 \catcode'\%\active
4111 \let%\@percentchar
4112 \let%\@percentchar
4113 \catcode'\#\active
4114 \def#{\hyper@hash}^^A
4115 \def\#{\hyper@hash}^^A
4116 \@makeother\&^^A
4117 \edef&{\string&}^^A
4118 \edef&{\string&}^^A
4119 \edef\textunderscore{\string_}^^A
4120 \let_\textunderscore
4121 \catcode'\_\active
4122 \let_\textunderscore
4123 \let~\hyper@tilde
4124 \let~\hyper@tilde
4125 \let\textasciitilde\hyper@tilde
4126 \let\\ \@backslashchar
4127 \edef$\{ \string$ }^^A
4128 \Hy@safe@activetrue
4129 \hyper@n@rmalise
4130 }^^A
4131 \catcode'\#=6 ^^A
4132 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4133 \gdef\hyper@n@rmalise#1#2{^^A
4134 \def\Hy@tempa{#2}^^A
4135 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4136 \Hy@ReturnAfterElseFi{^^A
4137 \hyper@@normalise{#1}^^A
4138 }^^A

```

```

4139 \else
4140   \Hy@ReturnAfterFi{^^A
4141   \hyper@@normalise{#1}{#2}^^A
4142 }^^A
4143 \fi
4144 }^^A
4145 \gdef\hyper@@normalise#1#2{^^A
4146   \edef\Hy@tempa{^^A
4147     \endgroup
4148     \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4149   }^^A
4150   \Hy@tempa
4151 }^^A
4152 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4153   #1^^A
4154   \ifx\limits#2\limits
4155   \else
4156     \Hy@ReturnAfterFi{^^A
4157     \Hy@RemovePercentCr #2\@nil
4158     }^^A
4159   \fi
4160 }^^A
4161 \endgroup
4162 \providecommand*\hyper@chars{%
4163   \let\#\hyper@hash
4164   \let\%\@percentchar
4165   \Hy@safe@activetrue
4166 }

4167 \def\hyperlink#1#2{%
4168   \hyper@@link{#1}{#2}%
4169 }

4170 \def\Hy@VerboseLinkStart#1#2{%
4171   \ifHy@verbose
4172     \begingroup
4173     \Hy@safe@activetrue
4174     \Hy@Info{Reference (#1) to '#2'}%
4175   \endgroup
4176   \fi
4177 }

4178 \def\Hy@VerboseAnchor#1{%
4179   \ifHy@verbose
4180     \begingroup
4181     \Hy@safe@activetrue
4182     \Hy@Info{Anchor '\Hy@DestNameFilter{#1}'}%
4183   \endgroup
4184   \fi
4185 }

4186 \def\Hy@AllowHyphens{%
4187   \relax
4188   \ifhmode
4189     \penalty\@M
4190     \hskip\z@skip
4191   \fi
4192 }

4193 \DeclareRobustCommand*\href{%
4194   \@ifnextchar\bgroup\Hy@href{\hyper@@normalise\href@}%

```

```

4195 }
4196 \def\Hy@href#{%
4197   \hyper@normalise\href@
4198 }
4199 \begingroup
4200   \catcode'\$=6 %
4201   \catcode'\#=12 %
4202   \gdef\href@#1{\expandafter\href@split$1##\}%
4203   \gdef\href@split$1#$2#$3\{\%
4204     \hyper@@link{#1}{#2}%
4205   }%
4206 \endgroup

```

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

```

4207 \RequirePackage{url}
4208 \let\HyOrg@url\url
4209 \def\Hurl{\begingroup \Url}
4210 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4211 \def\nolinkurl@#1{\Hurl{#1}}
4212 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4213 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
4214 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4215 \providecommand\hyper@image[2]{#2}
4216 \def\hypertarget#1#2{%
4217   \ifHy@nesting
4218     \hyper@@anchor{#1}{#2}%
4219   \else
4220     \hyper@@anchor{#1}{\relax}#2%
4221   \fi
4222 }

```

\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.

```

4223 \DeclareRobustCommand*\hyperref{%
4224   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
4225 }
4226 \def\Hy@babelnormalise#1[#2]{%
4227   \begingroup
4228     \Hy@safe@activetrue
4229     \edef\Hy@tempa{%
4230       \endgroup
4231       \noexpand#1[#2]}%
4232   }%
4233   \Hy@tempa
4234 }
4235 \def\@hyperref{\hyper@normalise\@hyperref}
4236 \def\@hyperref#1#2#3{%
4237   \edef\ref@one{\ifx\#2\#1\else#2.\fi#3}%
4238   \expandafter\tryhyper@link\ref@one\{#1}%
4239 }
4240 \def\tryhyper@link#1\#2{%
4241   \hyper@@link{#2}{#1}%
4242 }

```

```

4243 \def\hyperdef{\@ifnextchar{\label@hyperdef}{\@hyperdef}}
4244 \def\label@hyperdef#1#2#3{% , category, name, text
4245   \ifx\\#1\\%
4246     \def\Hy@AnchorName{#2}%
4247   \else
4248     \def\Hy@AnchorName{#1.#2}%
4249   \fi
4250   \ifHy@nesting
4251     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4252   \else
4253     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{#3}%
4254   \fi
4255 }

```

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

```

4256 \def\label@hyperref[#1]{%
4257   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4258 }%
4259 \def\label@@hyperref#1#2#3{%
4260   \ifx#1\relax
4261     \protect\G@refundefinedtrue
4262     \@latex@warning{%
4263       Hyper reference ‘#2’ on page \thepage \space undefined%
4264     }%
4265     \hyper@@link{}{??}{#3}%
4266   \else
4267     \hyper@@link{\expandafter\@fifthoffive#1}%
4268     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4269   \fi
4270 }
4271 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4272                               % anchor text
4273   \@bsphack
4274   \ifx\\#2\\%
4275     \def\Hy@AnchorName{#3}%
4276   \else
4277     \def\Hy@AnchorName{#2.#3}%
4278   \fi
4279   \if@filesw
4280     \protected@write\@auxout{}{%
4281       \string\newlabel{#1}{\@empty}{\@empty}{\Hy@AnchorName}{}}%
4282     }%
4283   \fi
4284   \@esphack
4285   \ifHy@nesting
4286     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4287   \else
4288     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}{#4}%
4289   \fi
4290 }

```

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.

```

4291 \def\hyper@@link{\let\Hy@reserved@a\relax
4292 \ifnextchar{\hyper@link@}{\hyper@link@[link]}%
4293 }
4294 \def\hyper@link@[#1]#2#3#4{%
4295 \begingroup
4296 \protected@edef\Hy@tempa{#2}%
4297 \Hy@safe@activetrue
4298 \edef\x{#3}%
4299 \ifx\Hy@tempa\@empty
4300 \toks0{\hyper@link{#1}}%
4301 \else
4302 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4303 \fi
4304 \toks2{%
4305 \Hy@safe@activetrue
4306 #4%
4307 }%
4308 \edef\Hy@tempa{\the\toks2}%
4309 \edef\x{\endgroup
4310 \ifx\Hy@tempa\@empty
4311 \noexpand\Hy@Warning{Suppressing empty link}%
4312 \else
4313 \the\toks0 {\x}{\the\toks2}}%
4314 \fi
4315 }%
4316 \x
4317 }

```

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.

```

4318 \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.

```

4319 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4320 }

```

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

```

4321 \def\@pdftempwordfile{file}%
4322 \def\@pdftempwordrun{run}%
4323 \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:

```

4324 \ifx\#6\%
4325 \expandafter\@hyper@linkfile file:#7\{\#3}\{\#2}%
4326 \else
4327 \ifx\#4\%
4328 \expandafter\@hyper@linkfile file:#7\{\#3}\{\#2}%
4329 \else

```

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

```

4330 \def\@pdftempa{\#4}%
4331 \ifx\@pdftempa\@pdftempwordfile
4332 \expandafter\@hyper@linkfile#7\{\#3}\{\#2}%
4333 \else

```

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

```

4334 \ifx\@pdftempa\@pdftempwordrun
4335 \ifHy@pdfa
4336 \PackageError{hyperref}{%
4337 PDF/A: Launch action is prohibited%
4338 }\@ehc
4339 \begingroup
4340 \leavevmode
4341 #2%
4342 \endgroup
4343 \else
4344 \expandafter\@hyper@launch#7\{\#3}\{\#2}%
4345 \fi
4346 \else

```

otherwise its a URL

```

4347 \hyper@linkurl{\#3}\{\#7\ifx\#2\% \else\hyper@hash#2\fi}%
4348 \fi
4349 \fi
4350 \fi
4351 \fi
4352 }

```

By default, turn run: into file:

```

4353 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
4354 \hyper@linkurl{\#2}\{\#3}%
4355 \Hy@linkfileprefix
4356 #1%
4357 \ifx\#3\%
4358 \else
4359 \hyper@hash
4360 #3%
4361 \fi
4362 }%
4363 }

```

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

```

4364 \def\@hyper@linkfile file:#1\#2#3{%
4365 %file url,link string, name
4366 \filename@parse{\#1}%
4367 \ifx\filename@ext\relax

```

```

4368 \edef\filename@ext{\XR@ext}%
4369 \fi
4370 \def\use@file{\filename@area\filename@base.\filename@ext}%
4371 \ifx\filename@ext\XR@ext
4372 \hyper@linkfile{#2}{\use@file}{#3}%
4373 \else
4374 \ifx\@baseurl\@empty
4375 \hyper@linkurl{#2}{%
4376 \Hy@linkfileprefix\use@file\ifx\\#3\\else\hyper@hash#3\fi
4377 }%
4378 \else
4379 \hyper@linkurl{#2}{\use@file\ifx\\#3\\else\hyper@hash#3\fi}%
4380 \fi
4381 \fi
4382 }

```

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.

```

4383 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4384 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4385 \ifx\\#1\\%
4386 #2\Hy@WarningNoLine{empty link? #1: #2#3}%
4387 \else
4388 \def\anchor@spot{#2#3}%
4389 \let\put@me@back\@empty
4390 \ifx\relax#2\relax
4391 \else
4392 \ifHy@nesting
4393 \else
4394 \ifcat a\noexpand#2\relax
4395 \else
4396 \ifcat 0\noexpand#2 \relax
4397 \else
4398 % \typeout{Anchor start is not alphanumeric %
4399 % on input line\the\inputlineno%
4400 % }%
4401 \let\anchor@spot\@empty
4402 \def\put@me@back{#2#3}%
4403 \fi
4404 \fi
4405 \fi
4406 \fi
4407 \ifHy@activeanchor
4408 \anchor@spot
4409 \else
4410 \hyper@anchor{#1}%
4411 \fi
4412 \expandafter\put@me@back
4413 \fi
4414 \let\anchor@spot\@empty
4415 }

```

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.

```
4416 \let\htmladdimg\hyperimage
4417 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4418 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4419 \def\htmlref#1#2{% anchor text, label
4420   \label@hyperref[{#2}]{#1}%
4421 }
```

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.

```
4422 \def\@latextohtmlX{%
4423   \let\hhyperref\hyperref
4424   \def\hyperref##1##2##3##4{% anchor text for HTML
4425     % text to print before label in print
4426     % label
4427     % post-label text in print
4428     ##2\ref{##4}##3%
4429   }%
4430 }
```

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.

```
4431 \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
4432 \def\HyField@NewFlag#1#2{%
4433   \lowercase{\HyField@NewOption{#2}}%
4434   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4435 }
```

```

\HyField@NewFlagOnly
4436 \def\HyField@NewFlagOnly#1#2{%
4437   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4438 }

\HyField@NewOption #1: option name
4439 \def\HyField@NewOption#1{%
4440   \expandafter\newif\csname ifFld@#1\endcsname
4441   \define@key{Field}{#1}[true]{%
4442     \lowercase{\Field@boolkey{##1}}{#1}%
4443   }%
4444 }

\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
4445 \def\HyField@NewBitsetFlag#1#2#3#4{%
4446   \begingroup
4447   \count@=#4\relax
4448   \advance\count@\m@ne
4449   \def\x##1{%
4450     \endgroup
4451     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
4452     \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
4453       \expandafter\edef\csname HyField@#3@##1\endcsname{%
4454         (\number#4) #2%
4455       }%
4456     \else
4457       \expandafter\edef\csname HyField@#3@##1\endcsname{%
4458         \csname HyField@#3@##1\endcsname
4459         /#2%
4460       }%
4461     \fi
4462   }%
4463   \expandafter\x\expandafter{\the\count@}%
4464 }

\HyField@UseFlag The bit set is HyField@#1
4465 \def\HyField@UseFlag#1#2{%
4466   \lowercase{\HyField@@UseFlag{#2}}{#1}%
4467 }

\HyField@@UseFlag
4468 \def\HyField@@UseFlag#1#2{%
4469   \bitsetSetValue{HyField@#2}{%
4470     \csname HyField@#2@#1\endcsname
4471   }{%
4472     \csname ifFld@#1\endcsname 1\else 0\fi
4473   }%
4474 }

\HyField@SetFlag The bit set is HyField@#1
4475 \def\HyField@SetFlag#1#2{%
4476   \lowercase{\HyField@@SetFlag{#2}}{#1}%
4477 }

```

```

\HyField@@SetFlag
4478 \def\HyField@@SetFlag#1#2{%
4479   \bitsetSetValue{HyField@#2}{%
4480     \csname HyField@#2@#1\endcsname
4481   }{1}%
4482 }

\HyField@PrintFlags
4483 \def\HyField@PrintFlags#1#2{%
4484   \ifHy@verbose
4485     \begingroup
4486     \let\Hy@temp\empty
4487     \let\MessageBreak\relax
4488     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4489     \bitsetGetSetBitList{HyField@#1}\do{%
4490       \edef\Hy@temp{%
4491         \Hy@temp
4492         \csname HyField@#1@\x\endcsname\MessageBreak
4493       }%
4494     }%
4495   \edef\x{\endgroup
4496     \noexpand\Hy@Info{%
4497       Field flags: %
4498       \expandafter\ifx\@car#1\@nil S\else/\fi
4499       #1 %
4500       \bitsetGetDec{HyField@#1} %
4501       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4502       \Hy@temp
4503     for #2%
4504   }%
4505 } \x
4506 \fi
4507 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

4508 \HyField@NewFlag{Ff}{ReadOnly}{1}
4509 \HyField@NewFlag{Ff}{Required}{2}
4510 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4511 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4512 \HyField@NewFlag{Ff}{Radio}{16}
4513 \HyField@NewFlag{Ff}{Pushbutton}{17}
4514 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4515 \HyField@NewFlag{Ff}{Multiline}{13}
4516 \HyField@NewFlag{Ff}{Password}{14}
4517 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4518 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4519 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4520 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4521 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

4522 \HyField@NewFlag{Ff}{Combo}{18}

```

```

4523 \HyField@NewFlag{Ff}{Edit}{19}
4524 \HyField@NewFlag{Ff}{Sort}{20}
4525 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4526 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4527 \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.

```

4528 \newif\ifFld@popdown
4529 \define@key{Field}{popdown}[true]{%
4530   \lowercase{\Field@boolkey{#1}}{popdown}%
4531 }

```

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.

```

4532 \HyField@NewFlag{F}{Invisible}{1}
4533 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4534 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4535 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4536 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4537 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4538 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4539 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4540 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4541 \ifHy@pdfa
4542   \def\HyField@PDFAFflagWarning#1#2{%
4543     \Hy@Warning{%
4544       PDF/A: Annotation flag ‘#1’ must\MessageBreak
4545       be set to ‘#2’%
4546     }%
4547   }%
4548   \Fld@invisiblefalse
4549   \def\Fld@invisibletrue{%
4550     \HyField@PDFAFflagWarning{invisible}{false}%
4551   }%
4552   \Fld@hiddenfalse
4553   \def\Fld@hiddenttrue{%
4554     \HyField@PDFAFflagWarning{hidden}{false}%
4555   }%
4556   \Fld@printtrue
4557   \def\Fld@printfalse{%
4558     \HyField@PDFAFflagWarning{print}{true}%
4559   }%
4560   \Fld@nozoomtrue
4561   \def\Fld@nozoomfalse{%
4562     \HyField@PDFAFflagWarning{nozoom}{true}%
4563   }%
4564   \Fld@norotatetrue
4565   \def\Fld@norotatefalse{%
4566     \HyField@PDFAFflagWarning{norotate}{true}%
4567   }%
4568   \Fld@noviewfalse
4569   \def\Fld@noviewtrue{%

```

```

4570 \HyField@PDFAFIWarning{noview}{false}%
4571 }%
4572 \fi

```

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

```

4573 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4574 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4575 \HyField@NewFlag{Submit}{GetMethod}{4}
4576 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4577 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4578 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4579 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4580 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4581 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4582 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4583 \HyField@NewFlag{Submit}{ExclFKey}{12}
4584 \HyField@NewFlag{Submit}{EmbedForm}{14}

4585 \define@key{Field}{export}{%
4586 \lowercase{\def\Hy@temp{#1}}%
4587 \@ifundefined{Fld@export@\Hy@temp}{%
4588 \onelevel@sanitize\Hy@temp
4589 \PackageError{hyperref}{%
4590 Unknown export format '\Hy@temp'.\MessageBreak
4591 Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4592 }\@ehc
4593 }{%
4594 \let\Fld@export\Hy@temp
4595 }%
4596 }

4597 \def\Fld@export{fdf}
4598 \@namedef{Fld@export@fdf}{0}%
4599 \@namedef{Fld@export@html}{1}%
4600 \@namedef{Fld@export@xfdf}{2}%
4601 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4602 \def\HyField@FlagsSubmit{%
4603 \bitsetReset{HyField@Submit}%
4604 \ifcase\@nameuse{Fld@export@\Fld@export} %
4605 % FDF
4606 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4607 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4608 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4609 \HyField@UseFlag{Submit}{IncludeAnnotations}%
4610 \HyField@UseFlag{Submit}{CanonicalFormat}%
4611 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4612 \HyField@UseFlag{Submit}{ExclFKey}%
4613 \HyField@UseFlag{Submit}{EmbedForm}%
4614 \or % HTML
4615 \HyField@SetFlag{Submit}{ExportFormat}%
4616 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4617 \HyField@UseFlag{Submit}{GetMethod}%
4618 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4619 \HyField@UseFlag{Submit}{CanonicalFormat}%
4620 \or % XFDF

```



```

4621 \HyField@SetFlag{Submit}{XFDF}%
4622 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4623 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4624 \HyField@UseFlag{Submit}{CanonicalFormat}%
4625 \or % PDF
4626 \HyField@SetFlag{Submit}{SubmitPDF}%
4627 \HyField@UseFlag{Submit}{GetMethod}%
4628 \fi
4629 \HyField@PrintFlags{Submit}{submit button field}%
4630 \bitsetIsEmpty{HyField@Submit}{%
4631 \def\Fld@submitflags{%
4632 }{%
4633 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
4634 }%
4635 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4636 \def\HyField@FlagsAnnot#1{%
4637 \bitsetReset{HyField@F}%
4638 \HyField@UseFlag{F}{Invisible}%
4639 \HyField@UseFlag{F}{Hidden}%
4640 \HyField@UseFlag{F}{Print}%
4641 \HyField@UseFlag{F}{NoZoom}%
4642 \HyField@UseFlag{F}{NoRotate}%
4643 \HyField@UseFlag{F}{NoView}%
4644 \HyField@UseFlag{F}{Locked}%
4645 \HyField@UseFlag{F}{ToggleNoView}%
4646 \HyField@UseFlag{F}{LockedContents}%
4647 \HyField@PrintFlags{F}{#1}%
4648 \bitsetIsEmpty{HyField@F}{%
4649 \def\Fld@annotflags{%
4650 }{%
4651 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
4652 }%
4653 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4654 \def\HyField@FlagsPushButton{%
4655 \HyField@FlagsAnnot{push button field}%
4656 \bitsetReset{HyField@Ff}%
4657 \HyField@UseFlag{Ff}{ReadOnly}%
4658 \HyField@UseFlag{Ff}{Required}%
4659 \HyField@UseFlag{Ff}{NoExport}%
4660 \HyField@SetFlag{Ff}{Pushbutton}%
4661 \HyField@PrintFlags{Ff}{push button field}%
4662 \bitsetIsEmpty{HyField@Ff}{%
4663 \def\Fld@flags{%
4664 }{%
4665 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4666 }%
4667 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```
4668 \def\HyField@FlagsCheckBox{%
4669   \HyField@FlagsAnnot{check box field}%
4670   \bitsetReset{HyField@Ff}%
4671   \HyField@UseFlag{Ff}{ReadOnly}%
4672   \HyField@UseFlag{Ff}{Required}%
4673   \HyField@UseFlag{Ff}{NoExport}%
4674   \HyField@PrintFlags{Ff}{check box field}%
4675   \bitsetIsEmpty{HyField@Ff}{%
4676     \def\Fld@flags{%
4677     }{%
4678     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4679   }%
4680 }
```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```
4681 \def\HyField@FlagsRadioButton{%
4682   \HyField@FlagsAnnot{radio button field}%
4683   \bitsetReset{HyField@Ff}%
4684   \HyField@UseFlag{Ff}{ReadOnly}%
4685   \HyField@UseFlag{Ff}{Required}%
4686   \HyField@UseFlag{Ff}{NoExport}%
4687   \HyField@UseFlag{Ff}{NoToggleToOff}%
4688   \HyField@SetFlag{Ff}{Radio}%
4689   \HyField@UseFlag{Ff}{RadiosInUnison}%
4690   \HyField@PrintFlags{Ff}{radio button field}%
4691   \bitsetIsEmpty{HyField@Ff}{%
4692     \def\Fld@flags{%
4693     }{%
4694     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
4695   }%
4696 }
```

19.1.7 Text fields

\HyField@FlagsText

```
4697 \def\HyField@FlagsText{%
4698   \HyField@FlagsAnnot{text field}%
4699   \bitsetReset{HyField@Ff}%
4700   \HyField@UseFlag{Ff}{ReadOnly}%
4701   \HyField@UseFlag{Ff}{Required}%
4702   \HyField@UseFlag{Ff}{NoExport}%
4703   \HyField@UseFlag{Ff}{Multiline}%
4704   \HyField@UseFlag{Ff}{Password}%
4705   \HyField@UseFlag{Ff}{FileSelect}%
4706   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4707   \HyField@UseFlag{Ff}{DoNotScroll}%
4708   \ifFld@comb
4709     \ifcase0\ifFld@multiline
4710       \else\ifFld@password
4711       \else\ifFld@fileselect
4712       \else 1\fi\fi\fi\relax
```

```

4713 \PackageError{hyperref}{%
4714   Field option 'comb' cannot used together with\MessageBreak
4715   'multiline', 'password', or 'fileselect'%
4716 } \@ehc
4717 \else
4718   \HyField@UseFlag{Ff}{Comb}%
4719 \fi
4720 \fi
4721 \HyField@UseFlag{Ff}{RichText}%
4722 \HyField@PrintFlags{Ff}{text field}%
4723 \bitsetIsEmpty{HyField@Ff}{%
4724   \def\Fld@flags{%
4725 }{%
4726   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4727 }%
4728 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4729 \def\HyField@FlagsChoice{%
4730   \HyField@FlagsAnnot{choice field}%
4731   \bitsetReset{HyField@Ff}%
4732   \HyField@UseFlag{Ff}{ReadOnly}%
4733   \HyField@UseFlag{Ff}{Required}%
4734   \HyField@UseFlag{Ff}{NoExport}%
4735   \HyField@UseFlag{Ff}{Combo}%
4736   \ifFld@combo
4737     \HyField@UseFlag{Ff}{Edit}%
4738   \fi
4739   \HyField@UseFlag{Ff}{Sort}%
4740   \HyField@UseFlag{Ff}{MultiSelect}%
4741   \ifFld@combo
4742     \ifFld@edit
4743       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4744     \fi
4745   \fi
4746   \HyField@UseFlag{Ff}{CommitOnSelChange}%
4747   \HyField@PrintFlags{Ff}{choice field}%
4748   \bitsetIsEmpty{HyField@Ff}{%
4749     \def\Fld@flags{%
4750 }{%
4751   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4752 }%
4753 }

```

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.

```

4754 \def\HyField@PDFChoices#1{%
4755   \begingroup
4756   \gdef\Fld@choices{%
4757     \def\HyTmp@optlist{%
4758       \let\HyTmp@optitem\relax

```

```

4759 \count@=0 %
4760 \kv@parse{#1}{%
4761 \Hy@pdfstringdef\kv@key\kv@key
4762 \ifx\kv@value\relax
4763 \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4764 \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4765 \else
4766 \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4767 \fi
4768 \else
4769 \Hy@pdfstringdef\kv@value\kv@value
4770 \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4771 \fi
4772 \edef\HyTmp@optlist{%
4773 \HyTmp@optlist
4774 \HyTmp@optitem{\the\count@}{\kv@key}0%
4775 }%
4776 \advance\count@ by 1 %
4777 \@gobbletwo
4778 }%
4779 \xdef\Fld@choices{/Opt[\Fld@choices]}%
4780 \ifFld@multiselect
4781 \HyField@@PDFChoices{DV}\Fld@default
4782 \HyField@@PDFChoices{V}\Fld@value
4783 \else
4784 \ifx\Fld@default\relax
4785 \else
4786 \pdfstringdef\Hy@gtemp\Fld@default
4787 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4788 \fi
4789 \ifx\Fld@value\relax
4790 \else
4791 \pdfstringdef\Hy@gtemp\Fld@value
4792 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4793 \fi
4794 \fi
4795 \endgroup
4796 }

```

\HyField@@PDFChoices

```

4797 \def\HyField@@PDFChoices#1#2{%
4798 \ifx#2\relax
4799 \else
4800 \count@=0 %
4801 \def\HyTmp@optitem##1##2##3{%
4802 \def\HyTmp@key{##2}%
4803 \ifx\HyTmp@key\Hy@gtemp
4804 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4805 \HyTmp@optlist
4806 \HyTmp@optitem{##1}{##2}1%
4807 }%
4808 \let\HyTmp@found=Y%
4809 \else
4810 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4811 \HyTmp@optlist
4812 \HyTmp@optitem{##1}{##2}##3%
4813 }%

```

```

4814 \fi
4815 }%
4816 \expandafter\comma@parse\expandafter{#2}{%
4817 \pdfstringdef\Hy@gtemp\comma@entry
4818 \let\HyTmp@found=N %
4819 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4820 \HyTmp@optlist
4821 \ifx\HyTmp@found Y%
4822 \advance\count@ by 1 %
4823 \else
4824 \@onelevel@sanitize\comma@entry
4825 \PackageWarning{hyperref}{%
4826 \string\ChoiceBox: Ignoring value '\comma@entry',%
4827 \MessageBreak
4828 it cannot be found in the choices%
4829 }%
4830 \fi
4831 \@gobble
4832 }%
4833 \def\HyTmp@optitem##1##2##3{%
4834 \ifnum##3=1 %
4835 (##2)%
4836 \fi
4837 }%
4838 \ifcase\count@
4839 \or
4840 \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4841 \else
4842 \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4843 \ifx#1V%
4844 \def\HyTmp@optitem##1##2##3{%
4845 \ifnum##3=1 %
4846 \@firstofone{ ##1}%
4847 \fi
4848 }%
4849 \edef\HyTmp@optlist{\HyTmp@optlist}%
4850 \xdef\Fld@choices{%
4851 \Fld@choices
4852 /I[\expandafter\@firstofone\HyTmp@optlist]}%
4853 }%
4854 \fi
4855 \fi
4856 \fi
4857 }

```

19.3 Forms

\HyField@SetKeys

```

4858 \def\HyField@SetKeys{%
4859 \setkeys{Field}%
4860 }

4861 \newif\ifFld@checked
4862 \newif\ifFld@disabled
4863 \Fld@checkedfalse
4864 \Fld@disabledfalse
4865 \newcount\Fld@menulength

```

```

4866 \newdimen\Field@Width
4867 \newdimen\Fld@charsize
4868 \Fld@charsize=10\p@
4869 \def\Fld@maxlen{0}
4870 \def\Fld@align{0}
4871 \def\Fld@color{0 0 0 rg}
4872 \def\Fld@bcolor{1 1 1}
4873 \def\Fld@bordercolor{1 0 0}
4874 \def\Fld@bordersep{1\p@}
4875 \def\Fld@borderwidth{1}
4876 \def\Fld@borderstyle{S}
4877 \def\Fld@cbsymbol{4}
4878 \def\Fld@radiosymbol{H}
4879 \def\Fld@rotation{0}
4880 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4881 \def\endForm{\@endForm}
4882 \newif\ifForm@html
4883 \Form@htmlfalse
4884 \def\Form@boolkey#1#2{%
4885   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4886 }
4887 \define@key{Form}{action}{%
4888   \hyper@normalise\Hy@DefFormAction{#1}%
4889 }
4890 \def\Hy@DefFormAction{\def\Form@action}
4891 \def\enc@html{html}
4892 \define@key{Form}{encoding}{%
4893   \def\Hy@tempa{#1}%
4894   \ifx\Hy@tempa\enc@html
4895     \Form@htmltrue
4896     \def\Fld@export{html}%
4897   \else
4898     \typeout{hyperref: form 'encoding' key set to #1 %
4899     -- unknown type%
4900   }%
4901   \Form@htmlfalse
4902   \fi
4903 }
4904 \define@key{Form}{method}{%
4905   \lowercase{\def\Hy@temp{#1}}%
4906   \@ifundefined{Form@method@\Hy@temp}{%
4907     \@onelevel@sanitize\Hy@temp
4908     \PackageError{hyperref}{%
4909       Unknown method '\Hy@temp'.\MessageBreak
4910       Known values are 'post' and 'get'%
4911     }\@ehc
4912   }{%
4913     \let\Form@method\Hy@temp
4914     \ifcase\@nameuse{Form@method@\Hy@temp} %
4915       \Fld@getmethodfalse
4916     \else
4917       \Fld@getmethodtrue
4918     \fi
4919   }%
4920 }
4921 \def\Form@method{}
4922 \@namedef{Form@method@post}{0}

```

```

4923 \@namedef{Form@method@get}{1}
4924 \def\Field@boolkey#1#2{%
4925   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4926 }
4927 \newtoks\Field@toks
4928 \Field@toks={ }%
4929 \def\Field@addtoks#1#2{%
4930   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
4931   \@processme
4932 }
4933 \def\Fld@checkequals#1=#2=#3\{\{%
4934   \def\@currDisplay{#1}%
4935   \ifx\#2\%
4936     \def\@currValue{#1}%
4937   \else
4938     \def\@currValue{#2}%
4939   \fi
4940 }
4941 \define@key{Field}{loc}{%
4942   \def\Fld@loc{#1}%
4943 }
4944 \define@key{Field}{checked}[true]{%
4945   \lowercase{\Field@boolkey{#1}}{checked}%
4946 }
4947 \define@key{Field}{disabled}[true]{%
4948   \lowercase{\Field@boolkey{#1}}{disabled}%
4949 }
4950 \define@key{Field}{accesskey}{%
4951   \Field@addtoks{accesskey}{#1}%
4952 }
4953 \define@key{Field}{tabkey}{%
4954   \Field@addtoks{tabkey}{#1}%
4955 }
4956 \define@key{Field}{name}{%
4957   \def\Fld@name{#1}%
4958 }
4959 \define@key{Field}{width}{%
4960   \def\Fld@width{#1}%
4961   \Field@Width#1\setbox0=\hbox{m}%
4962 }
4963 \define@key{Field}{maxlen}{%
4964   \def\Fld@maxlen{#1}%
4965 }
4966 \define@key{Field}{menulength}{%
4967   \Fld@menulength=#1\relax
4968 }
4969 \define@key{Field}{height}{%
4970   \def\Fld@height{#1}%
4971 }
4972 \define@key{Field}{charsize}{%
4973   \Fld@charsize#1%
4974 }
4975 \define@key{Field}{borderwidth}{%
4976   \def\Fld@borderwidth{#1}%
4977 }
4978 \define@key{Field}{borderstyle}{%
4979   \def\Fld@borderstyle{#1}%

```

```

4980 }
4981 \define@key{Field}{bordersep}{%
4982   \def\Fld@bordersep{#1}%
4983 }
4984 \define@key{Field}{default}{%
4985   \def\Fld@default{#1}%
4986 }
4987 \define@key{Field}{align}{%
4988   \def\Fld@align{#1}%
4989 }
4990 \define@key{Field}{value}{%
4991   \def\Fld@value{#1}%
4992 }
4993 \define@key{Field}{checkboxsymbol}{%
4994   \Fld@DingDef\Fld@cbsymbol{#1}%
4995 }
4996 \define@key{Field}{radiosymbol}{%
4997   \Fld@DingDef\Fld@radiosymbol{#1}%
4998 }
4999 \def\Fld@DingDef#1#2{%
5000   \def\Fld@temp{}%
5001   \Fld@@DingDef#2\ding{ }\@nil
5002   \let#1\Fld@temp
5003 }
5004 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5005   \expandafter\def\expandafter\Fld@temp\expandafter{%
5006     \Fld@temp
5007     #1%
5008   }%
5009   \ifx\#3\%
5010     \expandafter\@gobble
5011   \else
5012     \begingroup
5013       \lccode'0=#2\relax
5014       \lowercase{\endgroup
5015       \expandafter\def\expandafter\Fld@temp\expandafter{%
5016         \Fld@temp
5017         0%
5018       }%
5019       }%
5020     \expandafter\@firstofone
5021   \fi
5022   {%
5023     \Fld@@DingDef#3\@nil
5024   }%
5025 }

5026 \define@key{Field}{rotation}{%
5027   \def\Fld@rotation{#1}%
5028 }

5029 \define@key{Field}{backgroundcolor}{%
5030   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5031 }
5032 \define@key{Field}{bordercolor}{%
5033   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5034 }
5035 \define@key{Field}{color}{%
5036   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%

```



```

5037 }
5038 \def\Fld@onclick@code{}
5039 \def\Fld@format@code{}
5040 \def\Fld@validate@code{}
5041 \def\Fld@calculate@code{}
5042 \def\Fld@keystroke@code{}
5043 \def\Fld@onfocus@code{}
5044 \def\Fld@onblur@code{}
5045 \def\Fld@onmousedown@code{}
5046 \def\Fld@onmouseup@code{}
5047 \def\Fld@onenter@code{}
5048 \def\Fld@onexit@code{}
5049 \def\Hy@temp#1{%
5050   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5051 }
5052 \def\Hy@@temp#1#2{%
5053   \ifHy@pdfa
5054     \define@key{Field}{#2}{%
5055       \PackageError{hyperref}{%
5056         PDF/A: Additional action ‘#2’ is prohibited%
5057       }\@ehc
5058     }%
5059   \else
5060     \define@key{Field}{#2}{%
5061       \def#1{##1}%
5062     }%
5063   \fi
5064 }
5065 \Hy@temp{keystroke}
5066 \Hy@temp{format}
5067 \Hy@temp{validate}
5068 \Hy@temp{calculate}
5069 \Hy@temp{onfocus}
5070 \Hy@temp{onblur}
5071 \Hy@temp{onenter}
5072 \Hy@temp{onexit}
5073 \def\Hy@temp#1{%
5074   \define@key{Field}{#1}{%
5075     \Field@addtoks{#1}{##1}%
5076   }%
5077 }
5078 \Hy@temp{onselect}
5079 \Hy@temp{onchange}
5080 \Hy@temp{ondblclick}
5081 \Hy@temp{onmousedown}
5082 \Hy@temp{onmouseup}
5083 \Hy@temp{onmouseover}
5084 \Hy@temp{onmousemove}
5085 \Hy@temp{onmouseout}
5086 \Hy@temp{onkeypress}
5087 \Hy@temp{onkeydown}
5088 \Hy@temp{onkeyup}
5089 \ifHy@pdfa
5090   \define@key{Field}{onclick}{%
5091     \PackageError{hyperref}{%
5092       PDF/A: Action ‘onclick’ is prohibited%
5093     }\@ehc

```

```

5094 }%
5095 \else
5096   \define@key{Field}{onclick}{%
5097     \def\Fld@onclick@code{#1}%
5098     \Field@addtoks{onclick}{#1}%
5099   }%
5100 \fi

5101 \DeclareRobustCommand\TextField{%
5102   \@ifnextchar[{\@TextField}{\@TextField[]}%
5103 }
5104 \DeclareRobustCommand\ChoiceMenu{%
5105   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5106 }
5107 \DeclareRobustCommand\CheckBox{%
5108   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5109 }
5110 \DeclareRobustCommand\PushButton{%
5111   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5112 }
5113 \DeclareRobustCommand\Gauge{%
5114   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5115 }
5116 \DeclareRobustCommand\Submit{%
5117   \@ifnextchar[{\@Submit}{\@Submit[]}%
5118 }
5119 \DeclareRobustCommand\Reset{%
5120   \@ifnextchar[{\@Reset}{\@Reset[]}%
5121 }
5122 \def\LayoutTextField#1#2{% label, field
5123   #1 #2%
5124 }
5125 \def\LayoutChoiceField#1#2{% label, field
5126   #1 #2%
5127 }
5128 \def\LayoutCheckField#1#2{% label, field
5129   #1 #2%
5130 }
5131 \def\LayoutPushButtonField#1{% button
5132   #1%
5133 }
5134 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5135 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5136 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5137 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5138 \def\MakeButtonField#1{%
5139   \sbox0{%
5140     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5141   }%
5142   \@tempdima\ht0 %
5143   \advance\@tempdima by \Fld@borderwidth bp %
5144   \advance\@tempdima by \Fld@borderwidth bp %
5145   \ht0\@tempdima
5146   \@tempdima\dp0 %
5147   \advance\@tempdima by \Fld@borderwidth bp %
5148   \advance\@tempdima by \Fld@borderwidth bp %
5149   \dp0\@tempdima
5150   \box0\relax

```

```

5151 }
5152 \def\DefaultHeightofSubmit{14pt}
5153 \def\DefaultWidthofSubmit{2cm}
5154 \def\DefaultHeightofReset{14pt}
5155 \def\DefaultWidthofReset{2cm}
5156 \def\DefaultHeightofCheckBox{\baselineskip}
5157 \def\DefaultWidthofCheckBox{\baselineskip}
5158 \def\DefaultHeightofChoiceMenu{\baselineskip}
5159 \def\DefaultWidthofChoiceMenu{\baselineskip}
5160 \def\DefaultHeightofText{\baselineskip}
5161 \def\DefaultHeightofTextMultiline{4\baselineskip}
5162 \def\DefaultWidthofText{3cm}
5163 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5164 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5165 \def\DefaultOptionsofPushButton{print}
5166 \def\DefaultOptionsofCheckBox{print}
5167 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

5168 \def\DefaultOptionsofListBox{print}
5169 \def\DefaultOptionsofComboBox{print,edit,sort}
5170 \def\DefaultOptionsofPopdownBox{print}
5171 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

5172 \ifHy@figures
5173 \Hy@Info{Hyper figures ON}%
5174 \else
5175 \Hy@Info{Hyper figures OFF}%
5176 \fi
5177 \ifHy@nesting
5178 \Hy@Info{Link nesting ON}%
5179 \else
5180 \Hy@Info{Link nesting OFF}%
5181 \fi
5182 \ifHy@hyperindex
5183 \Hy@Info{Hyper index ON}%
5184 \else
5185 \Hy@Info{Hyper index OFF}%
5186 \fi
5187 \ifHy@backref
5188 \Hy@Info{backreferencing ON}%
5189 \else
5190 \Hy@Info{backreferencing OFF}%
5191 \fi
5192 \ifHy@colorlinks
5193 \Hy@Info{Link coloring ON}%
5194 \else
5195 \Hy@Info{Link coloring OFF}%
5196 \fi
5197 \ifHy@ocgcolorlinks
5198 \Hy@Info{Link coloring with OCG ON}%
5199 \else
5200 \Hy@Info{Link coloring with OCG OFF}%
5201 \fi
5202 \ifHy@pdfa

```

```

5203 \Hy@Info{PDF/A mode ON}%
5204 \else
5205 \Hy@Info{PDF/A mode OFF}%
5206 \fi

```

21 Low-level utility macros

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

```

5207 \edef\hyper@hash{\string#}
5208 \edef\hyper@tilde{\string~}
5209 \edef\hyper@quote{\string"}
5210 \let\@currentHref\@empty
5211 \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.

```

5212 \AfterBeginDocument{%
5213 \Hy@pdfstringtrue
5214 \PDF@SetupDoc
5215 \let\PDF@SetupDoc\@empty
5216 \Hy@DisableOption{pdfpagescrop}%
5217 \Hy@DisableOption{pdfpagemode}%
5218 \Hy@DisableOption{pdfnonfullscreenpagemode}%
5219 \Hy@DisableOption{pdfdirection}%
5220 \Hy@DisableOption{pdfviewarea}%
5221 \Hy@DisableOption{pdfviewclip}%
5222 \Hy@DisableOption{pdfprintarea}%
5223 \Hy@DisableOption{pdfprintclip}%
5224 \Hy@DisableOption{pdfprintscaling}%
5225 \Hy@DisableOption{pdfduplex}%
5226 \Hy@DisableOption{pdfpicktraybypdfsize}%
5227 \Hy@DisableOption{pdfprintpagerange}%
5228 \Hy@DisableOption{pdfnumcopies}%
5229 \Hy@DisableOption{pdfstartview}%
5230 \Hy@DisableOption{pdfstartpage}%
5231 \Hy@DisableOption{pdftoolbar}%
5232 \Hy@DisableOption{pdfmenubar}%
5233 \Hy@DisableOption{pdfwindowui}%
5234 \Hy@DisableOption{pdfwindow}%
5235 \Hy@DisableOption{pdfcenterwindow}%
5236 \Hy@DisableOption{pdfdisplaydoctitle}%
5237 \Hy@DisableOption{pdfpagelayout}%
5238 \Hy@DisableOption{pdflang}%
5239 \Hy@DisableOption{baseurl}%
5240 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5241 \Hy@pdfstringfalse
5242 }

```

Ignore star from referencing macros:

```

5243 \LetLtxMacro\NoHy@OrgRef\ref
5244 \DeclareRobustCommand*\ref{%
5245 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5246 }
5247 \LetLtxMacro\NoHy@OrgPageRef\pageref
5248 \DeclareRobustCommand*\pageref{%
5249 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5250 }

```

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.

```
5251 \def\NoHyper{%
5252   \def\hyper@link@{##1}##2##3##4{##4}%
5253   \def\hyper@@anchor##1{%
5254     \global\let\hyper@livelink\hyper@link
5255     \gdef\hyper@link##1##2##3{##3}%
5256     \def\hyper@anchor##1{%
5257       \def\hyper@anchorstart##1{%
5258         \let\hyper@anchorend\@empty
5259         \def\hyper@linkstart##1##2{%
5260           \let\hyper@linkend\@empty
5261           \def\hyper@linkurl##1##2{##1}%
5262           \def\hyper@linkfile##1##2##3{##1}%
5263           \def\hyper@link@{##1}##2##3{%
5264             \let\Hy@backout\@gobble
5265           }
5266         \def\stop@hyper{%
5267           \def\hyper@link@{##1}##2##3##4{##4}%
5268           \let\Hy@backout\@gobble
5269           \def\hyper@@anchor##1{%
5270             \def\hyper@link##1##2##3{##3}%
5271             \def\hyper@anchor##1{%
5272               \def\hyper@anchorstart##1{%
5273                 \let\hyper@anchorend\@empty
5274                 \def\hyper@linkstart##1##2{%
5275                   \let\hyper@linkend\@empty
5276                   \def\hyper@linkurl##1##2{##1}%
5277                   \def\hyper@linkfile##1##2##3{##1}%
5278                   \def\hyper@link@{##1}##2##3{%
5279                 }
5280               \def\endNoHyper{%
5281                 \global\let\hyper@link\hyper@livelink
5282               }
5283             }
5284           }
5285           \RequirePackage{letltxmacro}[2008/06/13]
5286           \let\hyper@@anchor\@gobble
5287           \def\hyper@link##1##2##3{##3}%
5288           \let\hyper@anchorstart\@gobble
5289           \let\hyper@anchorend\@empty
5290           \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:

```
5284 (*nohyperref)
5285 \RequirePackage{letltxmacro}[2008/06/13]
5286 \let\hyper@@anchor\@gobble
5287 \def\hyper@link##1##2##3{##3}%
5288 \let\hyper@anchorstart\@gobble
5289 \let\hyper@anchorend\@empty
5290 \let\hyper@linkstart\@gobbletwo
```

```

5291 \let\hyper@linkend\@empty
5292 \def\hyper@linkurl#1#2{#1}%
5293 \def\hyper@linkfile#1#2#3{#1}%
5294 \def\hyper@link@{#1}#2#3{}%
5295 \let\PDF@SetupDoc\@empty
5296 \let\PDF@FinishDoc\@empty
5297 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

5298 \def\Acrobatmenu#1#2{\leavevmode#2}
5299 \let\pdfstringdefDisableCommands\@gobbletwo
5300 \let\texorpdfstring\@firstoftwo
5301 \let\pdfbookmark\@undefined
5302 \newcommand\pdfbookmark[3]{}{}
5303 \let\phantomsection\@empty
5304 \let\hypersetup\@gobble
5305 \let\hyperbaseurl\@gobble
5306 \let\href\@gobble
5307 \let\hyperdef\@gobbletwo
5308 \let\hyperlink\@gobble
5309 \let\hypertarget\@gobble
5310 \def\hyperref{%
5311   \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5312 }
5313 \long\def\@gobbleopt[#1]{}
5314 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5315 \LetLtxMacro\NoHy@OrgRef\ref
5316 \DeclareRobustCommand*\ref{%
5317   \ifstar\NoHy@OrgRef\NoHy@OrgRef
5318 }
5319 \LetLtxMacro\NoHy@OrgPageRef\pageref
5320 \DeclareRobustCommand*\pageref{%
5321   \ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5322 }
5323 \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}

```

5324 \*package
5325 \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.

```

5326 \if@files
5327   \ifHy@typexml
5328     \immediate\closeout\@mainaux
5329     \immediate\openout\@mainaux\jobname.aux\relax
5330     \immediate\write\@auxout{<relaxxml>\relax}%
5331   \fi
5332   \immediate\write\@auxout{%
5333     \string\ifx\string\hyper@anchor\string\@undefined^^J%

```

```

5334 \global\let\string\oldcontentsline\string\contentsline^^J%
5335 \gdef\string\contentsline%
5336 \string#1\string#2\string#3\string#4{%
5337 \string\oldcontentsline%
5338 {\string#1}{\string#2}{\string#3}}^^J%
5339 \global\let\string\oldnewlabel\string\newlabel^^J%
5340 \gdef\string\newlabel\string#1\string#2{%
5341 \string\newlabelxx{\string#1}\string#2}^^J%
5342 \gdef\string\newlabelxx%
5343 \string#1\string#2\string#3\string#4\string#5\string#6{%
5344 \string\oldnewlabel{\string#1}{\string#2}{\string#3}}^^J%

```

But the new aux file will be read again at the end, with the normal definitions expected, so better put things back as they were.

```

5345 \string\AtEndDocument{%
5346 \let\string\contentsline\string\oldcontentsline^^J%
5347 \let\string\newlabel\string\oldnewlabel}^^J%

```

If the document is being run with hyperref put this definition into the aux file, so we can spot it on the next run.

```

5348 \string\else^^J%
5349 \global\let\string\hyper@last\relax^^J%
5350 \string\fi^^J%
5351 }%
5352 \fi

```

Now the code to deal with adding the hyperref package to a document with aux and toc written the standard way.

If hyperref was used last time, do nothing. If it was not used, or an old version of hyperref was used, don't use that TOC at all but generate a warning. Not ideal, but better than failing with pre-5.0 hyperref TOCs.

```

5353 \ifx\hyper@last\undefined
5354 \def\@starttoc#1{%
5355 \begingroup
5356 \makeatletter
5357 \IfFileExists{\jobname.#1}{%
5358 \Hy@WarningNoLine{%
5359 old #1 file detected, not used; run LaTeX again%
5360 }%
5361 }{}%
5362 \if@filesw
5363 \expandafter\newwrite\csname tf@#1\endcsname
5364 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5365 \fi
5366 \@nobreakfalse
5367 \endgroup
5368 }%
5369 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
5370 \fi
5371 }

```

25 Title strings

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

```

5372 \ifHy@usetitle

```

```

5373 \let\HyOrg@title\title
5374 \let\HyOrg@author\author
5375 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
5376 \def\Hy@scanopttitle[#1]{%
5377   \gdef\Hy@title{#1}%
5378   \HyOrg@title{#1}%
5379 }%
5380 \def\Hy@scantitle#1{%
5381   \gdef\Hy@title{#1}%
5382   \HyOrg@title{#1}%
5383 }%
5384 \def\author{\@ifnextchar{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5385 \def\Hy@scanoptauthor[#1]{%
5386   \gdef\Hy@author{#1}%
5387   \HyOrg@author{#1}%
5388 }%
5389 \def\Hy@scanauthor#1{%
5390   \gdef\Hy@author{#1}%
5391   \HyOrg@author{#1}%
5392 }%

```

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.

```

5393 \begingroup
5394 \def\process@me#1\@nil#2{%
5395   \expandafter\let\expandafter\x\csname @#2\endcsname
5396   \edef\y{\expandafter\strip@prefix\meaning\x}%
5397   \def\c##1##2\@nil{%
5398     \ifx\\##1\\%
5399     \else
5400       \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5401         \expandafter{\x}%
5402     \fi
5403   }%
5404   \expandafter\c\y\relax#1\@nil
5405 }%
5406 \expandafter\process@me\string\@latex@\@nil{title}%
5407 \expandafter\process@me\string\@latex@\@nil{author}%
5408 \endgroup
5409 \fi
5410 \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.

```

5411 \def\Hy@UseMaketitleString#1{%
5412   \@ifundefined{Hy@#1}{-}%
5413   \begingroup
5414     \let\Hy@saved@hook\pdfstringdefPreHook
5415     \pdfstringdefDisableCommands{%
5416       \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname

```



```

5417     \let\newline\\%
5418   }%
5419   \expandafter\ifx\csname @pdf#1\endcsname\@empty
5420     \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5421       \csname Hy@#1\endcsname\@empty
5422     }%
5423   \fi
5424   \global\let\pdfstringdefPreHook\Hy@saved@hook
5425 \endgroup
5426 }%
5427 }
5428 \def\Hy@newline@title#1{ #1}
5429 \def\Hy@newline@author#1{, #1}
5430 \def\Hy@UseMaketitleInfos{%
5431   \Hy@UseMaketitleString{title}%
5432   \Hy@UseMaketitleString{author}%
5433 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5434 \RequirePackage{atbegshi}[2007/09/09]
5435 \def\Hy@EveryPageHook{}
5436 \def\Hy@EveryPageBoxHook{}
5437 \def\Hy@FirstPageHook{}
5438 \AtBeginShipout{%
5439   \Hy@EveryPageHook
5440   \ifx\Hy@EveryPageBoxHook\@empty
5441     \else
5442       \setbox\AtBeginShipoutBox=\vbox{%
5443         \offinterlineskip
5444         \Hy@EveryPageBoxHook
5445         \box\AtBeginShipoutBox
5446       }%
5447     \fi
5448 }
5449 \AtBeginShipoutFirst{%
5450   \Hy@FirstPageHook
5451 }
5452 \g@addto@macro\Hy@FirstPageHook{%
5453   \PDF@FinishDoc
5454   \gdef\PDF@FinishDoc{}}%
5455 }

```

27.1 PDF /PageLabels

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

```

5456 \ifHy@pagelabels
5457   \begingroup\expandafter\expandafter\expandafter\endgroup
5458   \expandafter\ifx\csname thepage\endcsname\relax
5459     \Hy@pagelabelsfalse
5460     \Hy@WarningNoLine{%
5461       Option 'pdfpagelabels' is turned off\MessageBreak

```

```

5462     because \string\thepage\space is undefined%
5463   }%
5464   \csname fi\endcsname
5465   \csname iffalse\expandafter\endcsname
5466 \fi

```

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

```

5467 \def\thispdfpagelabel#1{%
5468   \gdef\HyPL@thisLabel{#1}%
5469 }%
5470 \global\let\HyPL@thisLabel\relax

```

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

```

5471 \def\HyPL@Labels{}%

```

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

```

5472 \newcount\Hy@abspage
5473 \Hy@abspage=0 %

```

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

```

5474 \def\HyPL@LastType{init}%
5475 \def\HyPL@LastNumber{0}%
5476 \def\HyPL@LastPrefix{}%

```

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

```

5477 \def\HyPL@arabic{D}%
5478 \def\HyPL@Roman{R}%
5479 \def\HyPL@roman{r}%
5480 \def\HyPL@Alph{A}%
5481 \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.

```

5482 \def\HyPL@EveryPage{%
5483   \begingroup
5484   \ifx\HyPL@thisLabel\relax
5485     \let\HyPL@page\thepage
5486   \else
5487     \let\HyPL@page\HyPL@thisLabel
5488     \global\let\HyPL@thisLabel\relax
5489   \fi
5490   \let\HyPL@Type\relax
5491   \ifnum\the\c@page>0 %
5492     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5493   \fi
5494   \let\Hy@temp Y%
5495   \ifx\HyPL@Type\HyPL@LastType
5496   \else
5497     \let\Hy@temp N%
5498   \fi
5499   \ifx\HyPL@Type\relax
5500     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5501   \else
5502     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5503   \fi
5504   \ifx\HyPL@Prefix\HyPL@LastPrefix

```

```

5505 \else
5506 \let\Hy@temp N%
5507 \fi
5508 \if Y\Hy@temp
5509 \advance\c@page by -1 %
5510 \ifnum\HyPL@LastNumber=\the\c@page\relax
5511 \else
5512 \let\Hy@temp N%
5513 \fi
5514 \Hy@StepCount\c@page
5515 \fi
5516 \if N\Hy@temp
5517 \ifx\HyPL@Type\relax
5518 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
5519 \else
5520 \HyPL@StorePageLabel{%
5521 \ifx\HyPL@Prefix\@empty
5522 \else
5523 /P(\HyPL@Prefix)%
5524 \fi
5525 /S/\csname HyPL\HyPL@Type\endcsname
5526 \ifnum\the\c@page=1 %
5527 \else
5528 \space/St \the\c@page
5529 \fi
5530 }%
5531 \fi
5532 \fi
5533 \xdef\HyPL@LastNumber{\the\c@page}%
5534 \global\let\HyPL@LastType\HyPL@Type
5535 \global\let\HyPL@LastPrefix\HyPL@Prefix
5536 \endgroup
5537 \Hy@GlobalStepCount\Hy@abspage
5538 }%

```

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

```

5539 \def\HyPL@CheckThePage#1\@nil{%
5540 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5541 }%

```

`\HyPL@@CheckThePage` The first check is, is `\thepage` is defined such as in \LaTeX , e.g.: `\csname @arabic\endcsname\c@page`. In the current implementation the check fails, if there is another `\csname` before.

The second check tries to detect `\arabic{page}` at the end of the definition text of `\thepage`.

```

5542 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5543 \def\Hy@tempa{#4}%
5544 \def\Hy@tempb{\csname\endcsname\c@page}%
5545 \ifx\Hy@tempa\Hy@tempb
5546 \expandafter\ifx\csname HyPL#3\endcsname\relax
5547 \else
5548 \def\HyPL@Type{#3}%
5549 \def\HyPL@Prefix{#2}%
5550 \fi
5551 \else
5552 \begingroup
5553 \let\Hy@next\endgroup

```

```

5554 \let\HyPL@found\@undefined
5555 \def\arabic{\HyPL@Format{arabic}}%
5556 \def\Roman{\HyPL@Format{Roman}}%
5557 \def\roman{\HyPL@Format{roman}}%
5558 \def\Alph{\HyPL@Format{Alph}}%
5559 \def\alph{\HyPL@Format{alph}}%
5560 \protected@edef\Hy@temp{#1}%
5561 \ifx\HyPL@found\relax
5562 \toks@ \expandafter{\Hy@temp}%
5563 \edef\Hy@next{\endgroup
5564 \noexpand\HyPL@@@CheckThePage\the\toks@
5565 \noexpand\HyPL@found\relax\noexpand\@nil
5566 }%
5567 \fi
5568 \Hy@next
5569 \fi
5570 }%

```

`\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`.

```

5571 \def\HyPL@Format#1#2{%
5572 \ifx\HyPL@found\@undefined
5573 \expandafter\ifx\csname c@#2\endcsname\c@page
5574 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5575 \else
5576 \expandafter\noexpand\csname#1\endcsname{#2}%
5577 \fi
5578 \else
5579 \expandafter\noexpand\csname#1\endcsname{#2}%
5580 \fi
5581 }%

```

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

```

5582 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5583 \def\Hy@tempa{#3}%
5584 \def\Hy@tempb{\HyPL@found\relax}%
5585 \ifx\Hy@tempa\Hy@tempb
5586 \def\HyPL@Type{#2}%
5587 \def\HyPL@Prefix{#1}%
5588 \fi
5589 }%

```

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

```

5590 \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`.

```

5591 \def\HyPL@Useless{0<</S/D>>}%
5592 \@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.

```

5593 \def\HyPL@SetPageLabels{%
5594 \@onelevel@sanitize\HyPL@Labels

```

```

5595 \ifx\HyPL@Labels\@empty
5596 \else
5597 \ifx\HyPL@Labels\HyPL@Useless
5598 \else
5599 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5600 \fi
5601 \fi
5602 }%

5603 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5604 \fi

```

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

```

5605 \Hy@DisableOption{pdfpagelabels}
5606 \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

```

5607 <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.

```

5608 <*vTeX>
5609 \providecommand*{\XR@ext}{pdf}
5610 \edef\Hy@VTeXversion{%
5611 \ifx\VTeXversion\@undefined
5612 \z@
5613 \else
5614 \ifx\VTeXversion\relax
5615 \z@
5616 \else
5617 \VTeXversion
5618 \fi
5619 \fi
5620 }
5621 \begingroup
5622 \ifnum\Hy@VTeXversion<660 %
5623 \gdef\Hy@PutCatalog#1{%
5624 \Hy@WarningNoLine{%
5625 VTeX 6.59g or above required for pdfpagelabels%
5626 }%
5627 }%
5628 \else
5629 \gdef\Hy@PutCatalog#1{%
5630 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5631 }%
5632 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5633 \ifx\#2\%
5634 \else
5635 \immediate\special{!pdfpagelabels #2}%
5636 \fi

```

```

5637 }%
5638 \fi
5639 \endgroup
5640 \</vtx>

5641 \<*pdfTeX | vTeX>

```

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

```

5642 \ifHy@pagelabels
5643 \def\HyPL@StorePageLabel#1{%
5644 \toks@\expandafter{\HyPL@Labels}%
5645 \xdef\HyPL@Labels{%
5646 \the\toks@
5647 \the\Hy@abspage<<#1>>%
5648 }%
5649 }%

```

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.

```

5650 \RequirePackage{atveryend}[2009/12/07]%
5651 \AtVeryEndDocument{%
5652 \HyPL@SetPageLabels
5653 }%

5654 \fi
5655 \</pdfTeX | vTeX>

```

27.1.2 xetex

```

5656 \<*xetex>
5657 \HyPsd@LoadUnicode
5658 \Hy@unicodetrue
5659 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5660 \else
5661 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5662 \fi
5663 \HyPsd@LoadStringEncoding
5664 \define@key{Hyp}{unicode}[true]{%
5665 \Hy@boolkey{unicode}{#1}%
5666 \ifHy@unicode
5667 \else
5668 \Hy@Warning{%
5669 XeTeX driver only supports ‘unicode=true’.\MessageBreak
5670 Ignoring option setting ‘unicode=false’%
5671 }%
5672 \Hy@unicodetrue
5673 \fi
5674 }
5675 \define@key{Hyp}{pdfencoding}{%
5676 \edef\HyPsd@temp{#1}%
5677 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5678 \let\HyPsd@pdfencoding\HyPsd@temp
5679 \else
5680 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5681 \let\HyPsd@pdfencoding\HyPsd@temp
5682 \else
5683 \Hy@Warning{%

```

```

5684      XeTeX driver only supports 'pdfencoding=unicode|auto.%
5685      \MessageBreak
5686      Ignoring option setting 'pdfencoding=\HyPsd@temp'%
5687      }%
5688      \fi
5689      \fi
5690  }
5691  \let\HyXeTeX@CheckUnicode\relax
5692  \</xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5693  \<*pdfmarkbase>
5694  \begingroup
5695  \<@ifundefined{headerps@out}{\}{\}%
5696  \toks@ \expandafter{\Hy@FirstPageHook}%
5697  \xdef\Hy@FirstPageHook{%
5698  \noexpand\headerps@out{%
5699  systemdict /pdfmark known%
5700  {%
5701  userdict /?pdfmark systemdict /exec get put%
5702  }\{%
5703  userdict /?pdfmark systemdict /pop get put %
5704  userdict /pdfmark systemdict /cleartomark get put%
5705  }%
5706  ifelse%
5707  }%
5708  \the\toks@
5709  }%
5710  }%
5711  \endgroup
5712  \</pdfmarkbase>

\Hy@PutCatalog

5713  \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\<@pdfm@mark{docview << #1 >>}}
5714  \<*pdfmarkbase>
5715  \def\Hy@PutCatalog#1{%
5716  \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5717  }
5718  \</pdfmarkbase>

5719  \<*pdfmarkbase | dvipdfm | xetex>
5720  \ifHy@pagelabels

```

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

```

5721  \def\HyPL@StorePageLabel#1{%
5722  \if@filesw
5723  \begingroup
5724  \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5725  \immediate\write\@mainaux{%
5726  \string\HyPL@Entry{\Hy@tempa}%
5727  }%
5728  \endgroup
5729  \fi
5730  }%

```

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.

```

5731 \AfterBeginDocument{%
5732   \if@files
5733     \immediate\write\@mainaux{%
5734       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5735     }%
5736   \fi
5737   \ifx\HyPL@Labels\@empty
5738     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5739   \else
5740     \HyPL@SetPageLabels
5741   \fi
5742   \let\HyPL@Entry\@gobble
5743 }%

```

\HyPL@Entry

```

5744 \def\HyPL@Entry#1{%
5745   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5746     \HyPL@Labels
5747     #1%
5748   }%
5749 }%

5750 \fi
5751 </pdfmarkbase | dvipdfm | xetex>
5752 <*package>
5753 \MaybeStopEarly

```

28 Automated L^AT_EX hypertext cross-references

Anything which can be referenced advances some counter; we overload this to put in a hypertext starting point (with no visible anchor), and make a note of that for later use in \label. This will fail badly if \theH<name> does not expand to a sensible reference. This means that classes or package which introduce new elements need to define an equivalent \theH<name> for every \the<name>. We do make a trap to make \theH<name> be the same as \arabic{<name>}, if \theH<name> is not defined, but this is not necessarily a good idea. Alternatively, the ‘naturalnames’ option uses whatever L^AT_EX provides, which may be useable. But then its up to you to make sure these are legal PDF and HTML names. The ‘hypertextnames=false’ option just makes up arbitrary names.

All the shenanigans is to make sure section numbers etc are always arabic, separated by dots. Who knows how people will set up \@currentlabel? If they put spaces in, or brackets (quite legal) then the hypertext processors will get upset.

But this is flaky, and open to abuse. Styles like subeqn will mess it up, for starters. Appendices are an issue, too. We just hope to cover most situations. We can at least cope with the standard sectioning structure, allowing for \part and \chapter.

Start with a fallback for equations

```

5754 \def\Hy@CounterExists#1{%
5755   \begingroup\expandafter\expandafter\expandafter\endgroup
5756   \expandafter\ifx\csname c@#1\endcsname\relax
5757     \expandafter\@gobble
5758   \else
5759     \begingroup\expandafter\expandafter\expandafter\endgroup
5760     \expandafter\ifx\csname the#1\endcsname\relax
5761       \expandafter\expandafter\expandafter\@gobble
5762     \else

```



```

5763 \expandafter\expandafter\expandafter\@firstofone
5764 \fi
5765 \fi
5766 }
5767 \Hy@CounterExists{section}{%
5768 \newcommand\theHequation{\theHsection.\arabic{equation}}}%
5769 }
5770 \Hy@CounterExists{part}{%
5771 \newcommand\theHpart{\arabic{part}}}%
5772 }
5773 \ifundefined{thechapter}{%
5774 \newcommand\theHsection {\arabic{section}}%
5775 \newcommand\theHfigure {\arabic{figure}}%
5776 \newcommand\theHtable {\arabic{table}}%
5777 }{%
5778 \newcommand\theHchapter {\arabic{chapter}}%
5779 \newcommand\theHfigure {\theHchapter.\arabic{figure}}%
5780 \newcommand\theHtable {\theHchapter.\arabic{table}}%
5781 \newcommand\theHsection {\theHchapter.\arabic{section}}%
5782 }
5783 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
5784 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5785 \newcommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
5786 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5787 \newcommand\theHtheorem {\theHsection.\arabic{theorem}}
5788 \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.

```

5789 \let\H@item\item
5790 \newcounter{Item}
5791 \def\theHItem{\arabic{Item}}
5792 \def\item{%
5793 \@hyper@itemfalse
5794 \if@nmbrlist\@hyper@itemtrue\fi
5795 \H@item
5796 }
5797 \newcommand\theHenumi {\theHItem}
5798 \newcommand\theHenumii {\theHItem}
5799 \newcommand\theHenumiii {\theHItem}
5800 \newcommand\theHenumiv {\theHItem}
5801 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5802 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5803 \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.

```

5804 \let\H@refstepcounter\refstepcounter
5805 \edef\name@of@eq{equation}%
5806 \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.

```

5807 \newif\if@hyper@item
5808 \newif\if@skiphyperref

```

```

5809 \@hyper@itemfalse
5810 \@skiphyperreffalse
5811 \def\refstepcounter#1{%
5812   \ifHy@pdfstring
5813   \else
5814     \H@refstepcounter{#1}%
5815     \edef\This@name{#1}%
5816     \ifx\This@name\name@of@slide
5817     \else
5818       \if@skiphyperref
5819       \else
5820         \if@hyper@item
5821         \stepcounter{Item}%
5822         \hyper@refstepcounter{Item}%
5823         \@hyper@itemfalse
5824       \else
5825         \hyper@refstepcounter{#1}%
5826       \fi
5827     \fi
5828   \fi
5829 \fi
5830 }

```

AMS¹TeX 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.

```

5831 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5832 \def\hyper@refstepcounter#1{%
5833   \edef\This@name{#1}%
5834   \ifx\This@name\name@of@eq
5835     \@ifundefined{theHequation}{%
5836       \make@stripped@name{\theequation}%
5837       \let\theHequation\newname
5838     }{}%
5839   \fi
5840   \@ifundefined{theH#1}{%
5841     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5842   }{}%
5843   \hyper@makecurrent{#1}%
5844   \ifmeasuring@
5845   \else
5846     \Hy@raisedlink{%
5847       \hyper@anchorstart{\@currentHref}\hyper@anchorend
5848     }%
5849   \fi
5850 }

```

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`.

```

5851 \begingroup\expandafter\expandafter\expandafter\endgroup
5852 \expandafter\ifx\csname chapter\endcsname\relax
5853 \def\Hy@chapterstring{section}%

```

```

5854 \else
5855   \def\Hy@chapterstring{chapter}%
5856 \fi
5857 \def\Hy@appendixstring{appendix}
5858 \def\Hy@chapapp{\Hy@chapterstring}
5859 \let\HyOrg@appendix\appendix
5860 \def\appendix{%
5861   \@ifundefined{chapter}%
5862     {\gdef\theHsection{\Alph{section}}}%
5863     {\gdef\theHchapter{\Alph{chapter}}}%
5864   \xdef\Hy@chapapp{\Hy@appendixstring}%
5865   \HyOrg@appendix
5866 }

```

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

```

5867 \def\hyper@makecurrent#1{%
5868   \begingroup
5869     \edef\Hy@param{#1}%
5870     \ifx\Hy@param\Hy@chapterstring
5871       \let\Hy@param\Hy@chapapp
5872     \fi
5873     \ifHy@hypertextnames
5874       \let\@number\@firstofone
5875       \@ifundefined{latin@Alph}{-}{%
5876         \ifx\@Alph\greek@Alph
5877           \def\@Alph{Alph\@arabic}%
5878         \fi
5879       }%
5880       \ifx\@Alph\@Alph@bul
5881         \def\@Alph{Alph\@arabic}%
5882       \fi
5883       \ifx\@alph\@alph@bul
5884         \def\@alph{alph\@arabic}%
5885       \fi
5886       \ifHy@naturalnames
5887         \let\textlatin\@firstofone
5888         \xdef\@currentHlabel{\csname the#1\endcsname}%
5889       \else
5890         \xdef\@currentHlabel{%
5891           \csname
5892             the%
5893             \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
5894             #1%
5895           \endcsname
5896         }%
5897       \fi
5898       \xdef\@currentHref{%
5899         \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5900       }%
5901     \else
5902       \Hy@GlobalStepCount\Hy@linkcounter
5903       \xdef\@currentHref{\Hy@param.\the\Hy@linkcounter}%
5904     \fi
5905   \endgroup
5906 }

5907 \@ifpackageloaded{fancyvrb}{%

```

```

5908 \ifpackagelater{fancyvrb}{1998/05/20}{-}{-}%
5909 \def\FV@StepLineNo{%
5910   \FV@SetLineNo
5911   \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
5912   \FV@SetLineNo
5913 }%
5914 }%
5915 }{-}

```

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`

```

5916 \AtBeginDocument{%
5917   \ifclassloaded{revtex4}{-}%
5918   \@namedef{ver@lastpage.sty}{1994/06/25}%
5919 }{-}%
5920 \ifpackageloaded{lastpage}{-}%
5921   \ifHy@pageanchor
5922   \else
5923     \Hy@WarningNoLine{%
5924       The \string\pageref{LastPage} link doesn't work\MessageBreak
5925       with disabled option 'pageanchor'%
5926     }%
5927   \fi
5928 \def\lastpage@putlabel{%
5929   \addtocounter{page}{-1}%
5930   \if@filesw
5931     \begingroup
5932     \let\@number\@firstofone
5933     \ifHy@pageanchor
5934       \ifHy@hypertextnames
5935       \ifHy@plainpages
5936         \def\Hy@temp{\arabic{page}}%
5937       \else
5938         \Hy@unicodefalse
5939         \pdfstringdef\Hy@temp{\thepage}%
5940       \fi
5941     \else
5942       \def\Hy@temp{\the\Hy@pagecounter}%
5943     \fi
5944   \fi
5945   \immediate\write\@auxout{%
5946     \string\newlabel
5947     {LastPage}{{}{\thepage}}{-}{-}%
5948     \ifHy@pageanchor page.\Hy@temp\fi}{-}%
5949   }%
5950 \endgroup
5951 \fi

```

```

5952 \addtocounter{page}{1}%
5953 }%
5954 \@ifclassloaded{revtex4}{%
5955 \begingroup
5956 \toks@ \expandafter{\lastpage@putlabel}%
5957 \edef\x{\endgroup
5958 \def\noexpand\lastpage@putlabel{%
5959 \noexpand\stepcounter{page}%
5960 \the\toks@
5961 \noexpand\addtocounter{page}\noexpand\m@ne
5962 }%
5963 }%
5964 \x
5965 }{}%
5966 }{}%
5967 }
5968 \</package>
5969 \<*check>
5970 \checkpackage{lastpage}[1994/06/25]
5971 \checkcommand\def\lastpage@putlabel{%
5972 \addtocounter{page}{-1}%
5973 \immediate\write\@auxout{%
5974 \string\newlabel{LastPage}{\the\thepage}}%
5975 }%
5976 \addtocounter{page}{1}%
5977 }
5978 \</check>
5979 \<*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.

```

5980 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
5981 \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:

```

5982 \@ifpackageloaded{titlesec}{%
5983 \def\ttl@Hy@steplink#1{%
5984 \Hy@GlobalStepCount\Hy@linkcounter
5985 \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5986 \edef\ttl@Hy@saveanchor{%
5987 \noexpand\Hy@raisedlink{%
5988 \noexpand\hyper@anchorstart{\@currentHref}%
5989 \noexpand\hyper@anchorend
5990 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
5991 \noexpand\ttl@Hy@PatchSaveWrite
5992 }%
5993 }%
5994 }%

```

```

5995 \def\ttl@Hy@PatchSaveWrite{%
5996   \begingroup
5997   \toks@{\expandafter{\ttl@savewrite}}%
5998   \edef\x{\endgroup
5999     \def\noexpand\ttl@savewrite{%
6000       \let\noexpand\@currentHref
6001       \noexpand\ttl@Hy@SavedCurrentHref
6002       \the\toks@
6003     }%
6004   }%
6005   \x
6006 }%
6007 \def\ttl@Hy@refstepcounter#1{%
6008   \let\ttl@b\Hy@raisedlink
6009   \def\Hy@raisedlink##1{%
6010     \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6011   }%
6012   \refstepcounter{#1}%
6013   \let\Hy@raisedlink\ttl@b
6014 }%
6015 }{}

Package titletoc support:
6016 \@ifpackageloaded{titletoc}{%
6017   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6018 }{}

```

32 Package varioref support

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

```

6019 \def\Hy@varioref@undefined{???}{??}{-}{-}
6020 \@ifpackageloaded{varioref}{%
6021   \def\vref@pagenum#1#2{%
6022     \@ifundefined{r@#2}{%
6023       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6024     }{}%
6025     \edef#1{\getpagerefnumber{#2}}%
6026   }%
6027 }{}

```

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

```

6028 \@ifpackageloaded{longtable}{%
6029   \begingroup
6030   \def\y{\LT@array}%
6031   \@ifundefined{scr@LT@array}{-}{\def\y{\scr@LT@array}}%
6032   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
6033     \expandafter\endgroup
6034     \expandafter\def\y[##1]##2{%

```

```

6035 \H@refstepcounter{#1}%
6036 \hyper@makecurrent{table}%
6037 \let\Hy@LT@currentHlabel\@currentHlabel
6038 \let\Hy@LT@currentHref\@currentHref
6039 #2\@sharp#####4%
6040 }%
6041 }%
6042 \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
Patch of \LT@start: add anchor before first line after \vskip\LTpre
6043 \begingroup
6044 \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
6045 \endgroup
6046 \def\LT@start{%
6047 #1%
6048 \let\@currentHlabel\Hy@LT@currentHlabel
6049 \let\@currentHref\Hy@LT@currentHref
6050 \Hy@raisedlink{%
6051 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6052 }%
6053 \ifvoid\LT@firsthead\copy
6054 #2%
6055 }%
6056 }%
6057 \expandafter\x\LT@start\@nil
6058 }{}

```

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.

```

6059 \let\new@refstepcounter\refstepcounter
6060 \let\H@equation\equation
6061 \let\H@endequation\endequation
6062 \@ifpackageloaded{amsmath}{%
6063 \long\def\Hy@temp{%
6064 \incr@eqnum
6065 \mathdisplay@push
6066 \st@rredfalse \global\@eqnswtrue
6067 \mathdisplay{equation}%
6068 }%
6069 \ifx\Hy@temp\equation
6070 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6071 \csname iftrue\endcsname
6072 \else
6073 \long\def\equation{%
6074 \mathdisplay@push
6075 \st@rredfalse \global\@eqnswtrue
6076 \mathdisplay{equation}%
6077 \incr@eqnum
6078 }%
6079 \fi
6080 \fi

```

```

6081 }{%
6082   \def\equation{%
6083     \let\refstepcounter\H@refstepcounter
6084     \H@equation
6085     \@ifundefined{theHequation}{%
6086       \make@stripped@name{\theequation}%
6087       \let\theHequation\newname
6088     }{%
6089       \hyper@makecurrent{equation}%
6090       \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6091       \let\refstepcounter\new@refstepcounter
6092     }%
6093   \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6094 }

```

My goodness, why can't L^AT_EX be consistent? Why is `\eqnarray` set up differently from other objects?

People (you know who you are, Thomas Beuth) sometimes make an `eqnarray` where *all* the lines end with `\notag`, so there is no suitable anchor at all. In this case, pass by on the other side.

```

6095 \newif\if@eqnstar
6096 \@eqnstarfalse
6097 \let\H@eqnarray\eqnarray
6098 \let\H@endeqnarray\endeqnarray
6099 \def\eqnarray{%
6100   \let\Hy@reserved@a\relax
6101   \def\@currentHref{}%
6102   \H@eqnarray
6103   \if@eqnstar
6104   \else
6105     \ifx\\\@currentHref\\%
6106     \else
6107       \@ifundefined{theHequation}{%
6108         \make@stripped@name{\theequation}%
6109         \let\theHequation\newname
6110       }{%
6111         \hyper@makecurrent{equation}%
6112         \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6113       }%
6114     \fi
6115   }
6116 \def\endeqnarray{%
6117   \H@endeqnarray
6118 }

```

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.

```

6119 \@namedef{eqnarray*}{%
6120   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6121 }
6122 \@namedef{endeqnarray*}{%
6123   \nonumber\endeqnarray\@eqnstarfalse
6124 }

```

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

```

6125 \@ifundefined{subeqnarray}{%
6126   \let\H@subeqnarray\subeqnarray
6127   \let\H@endsubeqnarray\endsubeqnarray

```



```

6128 \def\subeqnarray{%
6129   \let\Hy@reserved@a\relax
6130   \H@subeqnarray
6131   \@ifundefined{theHequation}{%
6132     \make@stripped@name{\theequation}%
6133     \let\theHequation\newname
6134   }{}%
6135   \hyper@makecurrent{equation}%
6136   \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6137 }%
6138 \def\endsubeqnarray{%
6139   \H@endsubeqnarray
6140 }%
6141 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6142 }

```

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

```

6143 \def\make@stripped@name#1{%
6144   \begingroup
6145   \escapechar\m@ne
6146   \global\let\newname\@empty
6147   \protected@edef\Hy@tempa{#1}%
6148   \edef\@tempb{%
6149     \noexpand\@tfor\noexpand\Hy@tempa:=%
6150     \expandafter\strip@prefix\meaning\Hy@tempa
6151   }%
6152   \@tempb\do{%
6153     \if{\Hy@tempa\else
6154     \if}\Hy@tempa\else
6155     \xdef\newname{\newname\Hy@tempa}%
6156     \fi
6157   }%
6158 }%
6159 \endgroup
6160 }

```

Support for amsmath's subequations:

```

6161 \begingroup\expandafter\expandafter\expandafter\endgroup
6162 \expandafter\ifx\csname subequations\endcsname\relax
6163 \else
6164   \let\HyOrg@subequations\subequations
6165   \def\subequations{%
6166     \stepcounter{equation}%
6167     \protected@edef\theHparentequation{%
6168       \@ifundefined{theHequation}\theequation\theHequation
6169     }%
6170     \addtocounter{equation}{-1}%
6171     \HyOrg@subequations
6172     \def\theHequation{\theHparentequation\alph{equation}}%
6173     \ignorespaces
6174   }%
6175 \fi

```

Support for package amsthm (Daniel Müllner):

```

6176 \@ifpackageloaded{amsthm}{%
6177   \def\@thm#1#2#3{%
6178     \ifhmode
6179       \unskip\unskip\par

```

```

6180 \fi
6181 \normalfont
6182 \trivlist
6183 \let\thmheadn\relax
6184 \let\thm@swap\@gobble
6185 \thm@notefont{\fontseries\mddefault\upshape}%
6186 \thm@headpunct{.}% add period after heading
6187 \thm@headsep 5\p@ plus\p@ minus\p@\relax
6188 \thm@space@setup
6189 #1% style overrides
6190 \@topsep \thm@preskip % used by thm head
6191 \@topsepadd \thm@postskip % used by \@endparenv
6192 \def\dth@counter{#2}%
6193 \ifx\@empty\dth@counter
6194 \def\@tempa{%
6195 \@oparg{\@begintheorem{#3}{}}[]%
6196 }%
6197 \else
6198 \H@refstepcounter{#2}%
6199 \hyper@makecurrent{#2}%
6200 \def\@tempa{%
6201 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
6202 }%
6203 \fi
6204 \@tempa
6205 }%
6206 \dth@everypar={%
6207 \@minipagefalse
6208 \global\@newlistfalse
6209 \@noparitemfalse
6210 \if@inlabel
6211 \global\@inlabelfalse
6212 \begingroup
6213 \setbox\z@\lastbox
6214 \ifvoid\z@
6215 \kern-\itemindent
6216 \fi
6217 \endgroup
6218 \ifx\@empty\dth@counter
6219 \else
6220 \Hy@raisedlink{%
6221 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6222 }%
6223 \fi
6224 \unhbox\@labels
6225 \fi
6226 \if@nobreak
6227 \@nobreakfalse \clubpenalty\@M
6228 \else
6229 \clubpenalty\@clubpenalty \everypar{}%
6230 \fi
6231 }%
6232 }{}

```

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.

```
6233 \ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6234 \ifHy@hyperfootnotes
6235   \newcounter{Hfootnote}%
6236   \let\H@@footnotetext\@footnotetext
6237   \let\H@@footnotemark\@footnotemark
6238   \def\xfootnotenext[#1]{%
6239     \begingroup
6240       \csname c@\@mpfn\endcsname #1\relax
6241       \unrestored@protected@xdef\@thefnmark{\thempfn}%
6242     \endgroup
6243     \ifx\@footnotetext\@mpfootnotetext
6244       \expandafter\H@@mpfootnotetext
6245     \else
6246       \expandafter\H@@footnotetext
6247     \fi
6248   }%
6249   \def\@xfootnotemark[#1]{%
6250     \begingroup
6251       \c@footnote #1\relax
6252       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6253     \endgroup
6254     \H@@footnotemark
6255   }%
6256   \let\H@@mpfootnotetext\@mpfootnotetext
6257   \long\def\@mpfootnotetext#1{%
6258     \H@@mpfootnotetext{%
6259       \ifHy@nesting
6260         \expandafter\hyper@@anchor\expandafter{%
6261           \Hy@footnote@currentHref
6262         }{#1}%
6263       \else
6264         \Hy@raisedlink{%
6265           \expandafter\hyper@@anchor\expandafter{%
6266             \Hy@footnote@currentHref
6267           }{\relax}%
6268         }#1%
6269       \fi
6270     }%
6271   }%
6272   \long\def\@footnotetext#1{%
6273     \H@@footnotetext{%
6274       \ifHy@nesting
6275         \expandafter\hyper@@anchor\expandafter{%
6276           \Hy@footnote@currentHref
6277         }{#1}%
6278       \else
6279         \Hy@raisedlink{%
6280           \expandafter\hyper@@anchor\expandafter{%
6281             \Hy@footnote@currentHref
6282           }{\relax}%

```

```

6283 }%
6284 \let\@currentHlabel\Hy@footnote@currentHlabel
6285 \let\@currentHref\Hy@footnote@currentHref
6286 \let\@currentlabelname\@empty
6287 #1%
6288 \fi
6289 }%
6290 }%

```

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.

```

6291 \def\@footnotemark{%
6292   \leavevmode
6293   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
6294   \stepcounter{Hfootnote}%
6295   \global\let\Hy@saved@currentHlabel\@currentHlabel
6296   \global\let\Hy@saved@currentHref\@currentHref
6297   \hyper@makecurrent{Hfootnote}%
6298   \global\let\Hy@footnote@currentHlabel\@currentHlabel
6299   \global\let\Hy@footnote@currentHref\@currentHref
6300   \global\let\@currentHlabel\Hy@saved@currentHlabel
6301   \global\let\@currentHref\Hy@saved@currentHref
6302   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6303   \@makefnmark
6304   \hyper@linkend
6305   \ifhmode\spacefactor\x@sf\fi
6306   \relax
6307 }%

```

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

```

6308 \ifpackageloaded{longtable}{%
6309   \CheckCommand*\LT@p@ftntext}[1]{%
6310     \edef\@tempa{%
6311       \the\LT@p@ftn
6312       \noexpand\footnotetext[\the\c@footnote]%
6313     }%
6314     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6315   }%
6316   \long\def\LT@p@ftntext#1{%
6317     \edef\@tempa{%
6318       \the\LT@p@ftn
6319       \begingroup
6320         \noexpand\c@footnote=\the\c@footnote\relax
6321         \noexpand\protected@xdef
6322           \noexpand\@thefnmark{\noexpand\thempfn}%
6323         \noexpand\protected@xdef\noexpand\@thefnmark{%
6324           \noexpand\thempfn
6325         }%
6326         \expandafter\expandafter\expandafter\noexpand
6327           \expandafter\expandafter\expandafter\Hy@LT@footnotetext
6328           \expandafter\expandafter\expandafter{%
6329             \expandafter\Hy@footnote@currentHref\expandafter
6330             \expandafter{\Hy@footnote@currentHlabel}%

```

```

6331 }%
6332 \global\LT@p@ftn\expandafter{%
6333   \@tempa{#1}%
6334   \endgroup
6335 }%
6336 }%
6337 \long\def\Hy@LT@footnotetext#1#2#3{%
6338   \H@@@footnotetext{%
6339     \ifHy@nesting
6340       \hyper@@anchor{#1}{#3}%
6341     \else
6342       \Hy@raisedlink{%
6343         \hyper@@anchor{#1}{\relax}%
6344       }%
6345       \def\@currentHlabel{#2}%
6346       \def\@currentHref{#1}%
6347       \let\@currentlabelname\@empty
6348       #3%
6349     \fi
6350   }%
6351 }%
6352 }{}%

```

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

```

6353 \ifpackageloaded{fancyvrb}{%
6354   \def\V@@@footnotetext{%
6355     \insert\footins\bgroup
6356     \csname reset@font\endcsname
6357     \footnotesize
6358     \interlinepenalty\interfootnotelinepenalty
6359     \splittopskip\footnotesep
6360     \splitmaxdepth\dp\strutbox
6361     \floatingpenalty \@MM
6362     \hsize\columnwidth
6363     \@parboxrestore
6364     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6365     \@makefnintext{}%
6366     \rule{\z@}{\footnotesep}%
6367     \bgroup
6368     \aftergroup\V@@@footnotetext
6369     \Hy@raisedlink{%
6370       \expandafter\hyper@@anchor\expandafter{%
6371         \Hy@footnote@currentHref
6372       }\relax}%
6373   }%
6374   \let\@currentHlabel\Hy@footnote@currentHlabel
6375   \let\@currentHref\Hy@footnote@currentHref
6376   \let\@currentlabelname\@empty
6377   \ignorespaces
6378 }%
6379 }{}%

```

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

```

6380 \def\Hy@temp#1{%
6381   \begingroup
6382   \unrestored@protected\xdef\@thefnmark{\ref{#1}}%
6383   \endgroup

```

```

6384 \@@footnotemark
6385 }%
6386 \ifx\Hy@temp\footref
6387 \def\footref#1{%
6388 \begingroup
6389 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6390 \endgroup
6391 \H@@@footnotemark
6392 }%
6393 \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.

```

6394 \let\HyOrg@maketitle\maketitle
6395 \def\maketitle{%
6396 \let\Hy@saved@footnotemark\@@footnotemark
6397 \let\Hy@saved@footnotetext\@@footnotetext
6398 \let\@@footnotemark\H@@@footnotemark
6399 \let\@@footnotetext\H@@@footnotetext
6400 \@ifnextchar[\Hy@maketitle@optarg{% ]
6401 \HyOrg@maketitle
6402 \Hy@maketitle@end
6403 }%
6404 }%
6405 \def\Hy@maketitle@optarg[#1]{%
6406 \HyOrg@maketitle[{#1}]%
6407 \Hy@maketitle@end
6408 }%
6409 \def\Hy@maketitle@end{%
6410 \ifx\@@footnotemark\H@@@footnotemark
6411 \let\@@footnotemark\Hy@saved@footnotemark
6412 \fi
6413 \ifx\@@footnotetext\H@@@footnotetext
6414 \let\@@footnotetext\Hy@saved@footnotetext
6415 \fi
6416 }%

```

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

```

6417 \def\realfootnote{%
6418 \@ifnextchar[\@xfootnote{%
6419 \stepcounter{\@mpfn}%
6420 \protected@xdef\@thefnmark{\thempfn}%
6421 \H@@@footnotemark\H@@@footnotetext
6422 }%
6423 }%

6424 \fi
6425 \Hy@DisableOption{hyperfootnotes}

6426 \</package>
6427 \<*check>
6428 \checklatex
6429 \checkcommand\def\@xfootnotenext[#1]{%
6430 \begingroup
6431 \csname c@\@mpfn\endcsname #1\relax
6432 \unrestored@protected@xdef\@thefnmark{\thempfn}%
6433 \endgroup
6434 \@footnotetext

```

```

6435 }
6436 \checkcommand\def\@xfootnotemark[#1]{%
6437   \begingroup
6438     \c@footnote #1\relax
6439     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6440   \endgroup
6441   \@footnotemark
6442 }
6443 \checkcommand\def\@footnotemark{%
6444   \leavevmode
6445   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6446   \@makefnmark
6447   \ifhmode\spacefactor\@x@sf\fi
6448   \relax
6449 }
6450 \end{check}
6451 \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.

```

6452 \def\caption{%
6453   \ifx\@capttype\@undefined
6454     \@latex@error{\noexpand\caption outside float}\@ehd
6455     \expandafter\@gobble
6456   \else
6457     \H@refstepcounter\@capttype
6458     \let\Hy@tempa\@caption
6459     \@ifundefined{float@caption}{%
6460       }{%
6461         \expandafter\ifx\csname @float@c@\@capttype\endcsname
6462           \float@caption
6463           \let\Hy@tempa\Hy@float@caption
6464         \fi
6465       }%
6466     \expandafter\@firstofone
6467   \fi
6468   {\@dblarg{\Hy@tempa\@capttype}}%
6469 }
6470 \long\def\@caption#1[#2]#3{%
6471   \expandafter\ifx\csname if@capstart\expandafter\endcsname
6472     \csname iftrue\endcsname
6473     \global\let\@currentHref\hc@currentHref
6474   \else
6475     \hyper@makecurrent{\@capttype}%
6476   \fi
6477   \@ifundefined{NR@gettitle}{%
6478     \def\@currentlabelname{#2}%
6479   }{%
6480     \NR@gettitle{#2}%
6481   }%
6482   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6483     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6484   }%
6485   \begingroup

```

```

6486 \parboxrestore
6487 \if@minipage
6488 \setminipage
6489 \fi
6490 \normalize
6491 \expandafter\ifx\csname if@capstart\expandafter\endcsname
6492 \csname iftrue\endcsname
6493 \global\@capstartfalse
6494 \makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6495 \else
6496 \makecaption{\csname fnum@#1\endcsname}{%
6497 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

6498 \ifHy@nesting
6499 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6500 \else
6501 \Hy@raisedlink{%
6502 \expandafter\hyper@@anchor\expandafter{%
6503 \@currentHref
6504 }{\relax}%
6505 }%
6506 #3%
6507 \fi
6508 }%
6509 \fi
6510 \par
6511 \endgroup
6512 }

```

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.

```

6513 \let\Hy@float@caption\@caption
6514 \ifpackageloaded{float}{%
6515 \def\Hy@float@caption{%
6516 \ifx\Hy@float@currentHref\@undefined
6517 \hyper@makecurrent{\@cuptype}%
6518 \global\let\Hy@float@currentHref\@currentHref
6519 \else
6520 \let\@currentHref\Hy@float@currentHref
6521 \fi
6522 \float@caption
6523 }%
6524 \let\HyOrg@float@makebox\float@makebox
6525 \renewcommand{\float@makebox}[1]{%
6526 \HyOrg@float@makebox{%
6527 #1\relax
6528 \ifx\Hy@float@currentHref\@undefined
6529 \else
6530 \expandafter\hyper@@anchor\expandafter{%
6531 \Hy@float@currentHref
6532 }{\relax}%
6533 \global\let\Hy@float@currentHref\@undefined
6534 \fi
6535 }%
6536 }%
6537 }{}
6538 \endpackage

```



```

6539 <*check>
6540 \checklatex[1999/06/01 - 2000/06/01]
6541 \checkcommand\def\caption{%
6542   \ifx\@capttype\@undefined
6543     \@latex@error{\noexpand\caption outside float}\@ehd
6544     \expandafter\@gobble
6545   \else
6546     \refstepcounter\@capttype
6547     \expandafter\@firstofone
6548   \fi
6549   {\@dblarg{\@caption\@capttype}}}%
6550 }
6551 \checkcommand\long\def\@caption#1[#2]#3{%
6552   \par
6553   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6554     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6555   }%
6556   \begingroup
6557     \@parboxrestore
6558     \if@minipage
6559       \setminipage
6560     \fi
6561     \normalsize
6562     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6563   \endgroup
6564 }
6565 </check>
6566 <*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.

```

6567 \def\hyper@natlinkstart#1{%
6568   \Hy@backout{#1}%
6569   \hyper@linkstart{cite}{cite.#1}%
6570   \def\hyper@nat@current{#1}%
6571 }
6572 \def\hyper@natlinkend{%
6573   \hyper@linkend
6574 }
6575 \def\hyper@natlinkbreak#1#2{%
6576   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6577 }
6578 \def\hyper@natanchorstart#1{%
6579   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6580 }
6581 \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.

```

6582 \ifundefined{NAT@parse}{%
6583   \providecommand*\@extra@binfo{}%
6584   \providecommand*\@extra@b@citeb{}%
6585   \def\bibcite#1#2{%
6586     \@newl@bel{b}{#1\@extra@binfo}{%
6587       \hyper@link[cite]{#1\@extra@b@citeb}{#2}%
6588     }%
6589   }%
6590   \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.”.

```

6591 \let\Hy@bibcite\bibcite
6592 \begingroup
6593   \ifundefined{bbl@cite@choice}{%
6594     \g@addto@macro\bbl@cite@choice{%
6595       \let\bibcite\Hy@bibcite
6596     }%
6597   }%
6598 \endgroup

```

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

```

6599 \providecommand*\@BIBLABEL{\@biblabel}%
6600 \def\@bibitem[#1]#2{%
6601   \@skiphyperreftrue
6602   \H@item[%
6603     \ifx\Hy@raisedlink\@empty
6604       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6605       \@BIBLABEL{#1}%
6606       \hyper@anchorend
6607     \else
6608       \Hy@raisedlink{%
6609         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6610       }%
6611       \@BIBLABEL{#1}%
6612     \fi
6613   \hfill
6614 ]%
6615   \@skiphyperreffalse
6616   \if@filesw
6617     \begingroup
6618       \let\protect\noexpand
6619       \immediate\write\@auxout{%
6620         \string\bibcite{#2}{#1}%
6621       }%
6622     \endgroup
6623   \fi
6624   \ignorespaces
6625 }%

```

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

```

6626 \def\@bibitem#1{%
6627   \@skiphyperreftrue\H@item\@skiphyperreffalse
6628   \Hy@raisedlink{%

```

```

6629 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6630 }%
6631 \if@filesw
6632 \begingroup
6633 \let\protect\noexpand
6634 \immediate\write\@auxout{%
6635 \string\bibcite{#1}{\the\value{\@listctr}}}%
6636 }%
6637 \endgroup
6638 \fi
6639 \ignorespaces
6640 }%
6641 }{}

6642 </package>
6643 <*check>
6644 \checklatex
6645 \checkcommand\def\@lbibitem[#1]#2{%
6646 \item[\@biblabel{#1}\hfill]%
6647 \if@filesw
6648 {%
6649 \let\protect\noexpand
6650 \immediate\write\@auxout{%
6651 \string\bibcite{#2}{#1}%
6652 }%
6653 }%
6654 \fi
6655 \ignorespaces
6656 }
6657 \checkcommand\def\@bibitem#1{%
6658 \item
6659 \if@filesw
6660 \immediate\write\@auxout{%
6661 \string\bibcite{#1}{\the\value{\@listctr}}}%
6662 }%
6663 \fi
6664 \ignorespaces
6665 }
6666 </check>
6667 <*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.

```

6668 \@ifclassloaded{revtex}{%
6669 \Hy@Info{*** compatibility with revtex **** }%
6670 \def\revtex@checking#1#2{%
6671 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6672 \expandafter\def\csname b@#1\endcsname{#2}%
6673 \@SetMaxRnhefLabel{#1}%
6674 \expandafter\let\csname b@#1\endcsname\T@temp
6675 }%

```

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

```

6676 \@ifundefined{CITE}{\def\CITE{\cite}}{}%
6677 \providecommand*{\@extra@b@citeb}{}%
6678 \def\CITEX[#1]#2{%

```

```

6679 \let\@citea\@empty
6680 \leavevmode
6681 \unskip
6682 $\sim$
6683 \scriptstyle
6684 \@CITE{
6685   \@for\@citeb:=#2\do{
6686     \@citea
6687     \def\@citea{,\penalty\@m\ }
6688     \edef\@citeb{\expandafter\@firstofone\@citeb}%
6689     \if@filesw
6690       \immediate\write\@auxout{\string\citation{\@citeb}}%
6691     \fi
6692     \ifundefined{b@\@citeb\extra@b@citeb}{
6693       \mbox{\reset@font\bfseries ?}%
6694       \G@refundefinedtrue
6695       \@latex@warning{
6696         Citation '\@citeb' on page \thepage \space undefined%
6697       }
6698     }{
6699       {\csname b@\@citeb\extra@b@citeb\endcsname}%
6700     }
6701   }
6702 }{#1}%
6703 }$%
6704 }%

```

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.

```

6705 \def\@citex[#1]#2{
6706   \let\@citea\@empty
6707   \@cite{
6708     \@for\@citeb:=#2\do{
6709       \@citea
6710       \def\@citea{,\penalty\@m\ }
6711       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6712       \if@filesw
6713         \immediate\write\@auxout{\string\citation{\@citeb}}%
6714       \fi
6715       \ifundefined{b@\@citeb\extra@b@citeb}{
6716         \mbox{\reset@font\bfseries ?}%
6717         \G@refundefinedtrue
6718         \@latex@warning{
6719           Citation '\@citeb' on page \thepage \space undefined%
6720         }
6721       }{
6722         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
6723       }
6724     }
6725   }{#1}%
6726 }%
6727 }{}

```

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.

```

6728 \ifpackageloaded{harvard}{%
6729   \AtBeginDocument{%
6730     \Hy@Info{*** compatibility with harvard **** }%
6731     \Hy@raiselinksfalse
6732     \def\harvardcite#1#2#3#4{%
6733       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{cite.#1}{#2}}%
6734       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{cite.#1}{#3}}%
6735       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{cite.#1}{#4}}%
6736       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6737     }%
6738     \def\HAR@citetoaux#1{%
6739       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6740       \ifHy@backref
6741         \ifx\@empty\@currentlabel
6742           \else
6743             \@bsphack
6744             \if@filesw
6745               \protected@write\@auxout{}{%
6746                 \string\@writefile{brf}{%
6747                   \string\backcite{#1}{%
6748                     {\thepage}{\@currentlabel}{\@currentHref}%
6749                   }%
6750               }%
6751             }%
6752           \fi
6753         \@esphack
6754       \fi
6755     }%
6756     \def\harvarditem{%
6757       \ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
6758     }%
6759     \def\@harvarditem[#1]#2#3#4#5\par{%
6760       \item[]%
6761       \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6762       \if@filesw
6763         \begingroup
6764           \def\protect##1{\string ##1\space}%
6765           \ifthenelse{\equal{#1}{\null}}{%
6766             {\def\next{{#4}{#2}{#3}}}%
6767             {\def\next{{#4}{#2}{#1}{#3}}}%
6768           \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6769         \endgroup
6770       \fi
6771       \protect\hspace*{-\labelwidth}%
6772       \protect\hspace*{-\labelsep}%
6773       \ignorespaces
6774       #5%
6775       \ifHy@backref
6776         \newblock
6777         \backref{\csname br@#4\endcsname}%
6778       \fi
6779     \par
6780

```

```
6781 }%
```

\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:

```
6782 \long\def\HAR@checkcitations#1#2#3#4{%
6783   \def\HAR@tempa{\hyper@@link[cite]{#1}{#2}}%
6784   \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6785   \def\HAR@tempa{\hyper@@link[cite]{#1}{#3}}%
6786   \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6787   \def\HAR@tempa{\hyper@@link[cite]{#1}{#4}}%
6788   \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6789   \else
6790     \@tempswatrue
6791   \fi
6792   \else
6793     \@tempswatrue
6794   \fi
6795   \else
6796     \@tempswatrue
6797   \fi
6798 }%
6799 }%

6800 {}%
```

37.2 Package chicago

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

```
6801 \@ifpackageloaded{chicago}{%
```

\citeN

```
6802 \def\citeN{%
6803   \def\@citesep{-1000}%
6804   \def\@cite##1##2{##1}%
6805   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
6806   \@citedata@opt
6807 }%
```

\shortciteN

```
6808 \def\shortciteN{%
6809   \def\@citesep{-1000}%
6810   \def\@cite##1##2{##1}%
6811   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6812   \@citedata@opt
6813 }%
```

\@citedata@opt

```
6814 \def\@citedata@opt{%
6815   \let\@cite@opt\@empty
6816   \ifnextchar [{%
6817     \@tempswatrue
6818     \@citedatax@opt
6819   }{%
6820     \@tempswafalse
6821     \@citedatax[]%
```

```

6822 }%
6823 }%

```

\@citedatax@opt

```

6824 \def\@citedatax@opt[#1]{%
6825   \def\@cite@opt{, #1}%
6826   \@citedatax[{#1}]%
6827 }%

6828 }{}

```

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.

```

6829 \def\Hy@EveryPageAnchor{%
6830   \Hy@DistillerDestFix
6831   \ifHy@pageanchor
6832     \ifHy@hypertextnames
6833     \ifHy@plainpages
6834       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6835     \else
6836       \begingroup
6837         \let\@number\@firstofone
6838         \Hy@unicodedefalse
6839         \pdfstringdef\@the@H@page{\thepage}%
6840       \endgroup
6841       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6842     \fi
6843   \else
6844     \Hy@GlobalStepCount\Hy@pagecounter
6845     \def\Hy@TempPageAnchor{%
6846       \hyper@@anchor{page.\the\Hy@pagecounter}%
6847     }%
6848   \fi
6849   \vbox to 0pt{%
6850     \kern\voffset
6851     \kern\topmargin
6852     \kern-1bp\relax
6853     \hbox to 0pt{%
6854       \kern\hoffset
6855       \kern\ifodd\value{page}%
6856         \oddsidemargin
6857       \else
6858         \evensidemargin
6859       \fi
6860       \kern-1bp\relax
6861       \Hy@TempPageAnchor
6862     \hss
6863   }%
6864   \vss
6865 }%

```

```

6866 \fi
6867 }
6868 \g@addto@macro\Hy@EveryPageBoxHook{%
6869 \Hy@EveryPageAnchor
6870 }

```

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.

```

6871 \def\addcontentsline#1#2#3{% toc extension, type, tag
6872 \begingroup
6873 \let\label\@gobble
6874 \ifx\@currentHref\@empty
6875 \Hy@Warning{%
6876 No destination for bookmark of \string\addcontentsline,%
6877 \MessageBreak destination is added%
6878 }%
6879 \phantomsection
6880 \fi
6881 \expandafter\ifx\csname toplevel@#2\endcsname\relax
6882 \begingroup
6883 \def\Hy@tempa{#1}%
6884 \ifx\Hy@tempa\Hy@bookmarkstype
6885 \Hy@WarningNoLine{%
6886 bookmark level for unknown #2 defaults to 0%
6887 }%
6888 \else
6889 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6890 \fi
6891 \endgroup
6892 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
6893 \fi
6894 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
6895 \Hy@writebookmark{\csname the#2\endcsname}%
6896 {#3}%
6897 {\@currentHref}%
6898 {\Hy@toplevel}%
6899 {#1}%
6900 \ifHy@verbose
6901 \begingroup
6902 \def\Hy@tempa{#3}%
6903 \@onelevel@sanitize\Hy@tempa
6904 \let\temp@online\on@line
6905 \let\on@line\@empty
6906 \Hy@Info{%
6907 bookmark\temp@online:\MessageBreak
6908 thecounter {\csname the#2\endcsname}\MessageBreak
6909 text {\Hy@tempa}\MessageBreak
6910 reference {\@currentHref}\MessageBreak
6911 toplevel {\Hy@toplevel}\MessageBreak
6912 type {#1}%
6913 }%
6914 \endgroup
6915 \fi

```



```

6916 \addtocontents{#1}{%
6917 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6918 }%
6919 \endgroup
6920 }
6921 \def\contentsline#1#2#3#4{%
6922 \ifx\\#4\\%
6923 \csname l@#1\endcsname{#2}{#3}%
6924 \else
6925 \ifcase\Hy@linktoc % none
6926 \csname l@#1\endcsname{#2}{#3}%
6927 \or % section
6928 \csname l@#1\endcsname{%
6929 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6930 }{#3}%
6931 \or % page
6932 \csname l@#1\endcsname{#2}{#3}%
6933 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6934 }%
6935 \else % all
6936 \csname l@#1\endcsname{%
6937 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6938 }{%
6939 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6940 }%
6941 \fi
6942 \fi
6943 }
6944 \end{package}
6945 \end{check}
6946 \checklatex
6947 \checkcommand\def\addcontentsline#1#2#3{%
6948 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
6949 }
6950 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6951 \end{check}
6952 \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.

```

6953 \let\H@definecounter\@definecounter
6954 \def\@definecounter#1{%
6955 \H@definecounter{#1}%
6956 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6957 }

```

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.

```

6958 \let\H@newctr\@newctr
6959 \def\@newctr#1[#2]{%
6960 \H@newctr#1[{#2}]%
6961 \expandafter\def\csname theH#1\endcsname{%
6962 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
6963 }%

```

6964 }

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.

```

6965 \ifpackageloaded{amsmath}{%
6966   \def\Hy@make@anchor{%
6967     \Hy@GlobalStepCount\Hy@linkcounter
6968     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6969     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6970   }%
6971   \def\Hy@make@df@tag@@#1{%
6972     \gdef\df@tag{%
6973       \maketag@@@{\Hy@make@anchor#1}%
6974       \def\@currentlabel{#1}%
6975     }%
6976   }%
6977   \def\Hy@make@df@tag@@@#1{%
6978     \gdef\df@tag{%
6979       \tagform@{\Hy@make@anchor#1}%
6980       \toks@{\xp{\p@equation{#1}}}%
6981       \edef\@currentlabel{\the\toks@}%
6982     }%
6983   }%
6984   \let\HyOrg@make@df@tag@@\make@df@tag@@
6985   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
6986   \let\make@df@tag@@\Hy@make@df@tag@@
6987   \let\make@df@tag@@@\Hy@make@df@tag@@@
6988 }{}

```

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

```

6989 \ifpackagewith{hyperref}{pdf $\TeX$ }{%
6990   \let\H@seteqlabel\@seteqlabel
6991   \def\@seteqlabel#1{%
6992     \H@seteqlabel{#1}%
6993     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6994     \Hy@raisedlink{%
6995       \hyper@anchorstart{\@currentHref}\hyper@anchorend
6996     }%
6997   }%
6998 }{}

```

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.

```
6999 \let\HyOrg@addtoreset\@addtoreset
7000 \def\@addtoreset#1#2{%
7001   \HyOrg@addtoreset{#1}{#2}%
7002   \expandafter\xdef\csname theH#1\endcsname{%
7003     \expandafter\noexpand
7004       \csname the\@ifundefined{theH#2}{H#2}\endcsname
7005     .\noexpand\the\noexpand\value{#1}%
7006   }%
7007 }
```

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

```
7008 \</package>
7009 \<*check>
7010 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7011 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7012   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7013     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7014       \@addtoreset{#2}{#3}%
7015       \@xp\xdef\csname the#2\endcsname{%
7016         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7017       }%
7018     }%
7019   }%
7020 }%
7021 \</check>
7022 \<*package>
7023 \@ifpackageloaded{amsmath}{%
7024   \@ifpackagelater{amsmath}{1999/12/14}{%
7025     \renewcommand*{\numberwithin}[3][\arabic]{%
7026       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7027         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7028           \HyOrg@addtoreset{#2}{#3}%
7029           \@xp\xdef\csname the#2\endcsname{%
7030             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
7031           }%
7032           \@xp\xdef\csname theH#2\endcsname{%
7033             \@xp\@nx
7034             \csname the\@ifundefined{theH#3}{H#3}\endcsname
7035             .\@nx#1{#2}%
7036           }%
7037         }%
7038       }%
7039     }%
7040   }{%
7041     \Hy@WarningNoLine{%
7042       \string\numberwithin\space of package 'amsmath' %
7043       only fixed\MessageBreak
7044       for version 2000/06/06 v2.12 or newer%
7045     }%
7046   }%
7047 }
```

42 Included figures

Simply intercept the low level graphics package macro.

```
7048 \ifHy@figures
7049 \let\Hy@Gin@setfile\Gin@setfile
7050 \def\Gin@setfile#1#2#3{%
7051 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7052 }%
7053 \fi
7054 \Hy@DisableOption{hyperfigures}
```

43 hyperindex entries

Internal command names are prefixed with \HyInd@.

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

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

```
7055 \ifHy@hyperindex
7056 \def\HyInd@ParenLeft{ }%
7057 \def\HyInd@ParenRight{ }%
7058 \def\hyperindexformat#1#2{%
7059 \let\HyOrg@hyperpage\hyperpage
7060 \let\hyperpage\@firstofone
7061 #1{\HyOrg@hyperpage{#2}}%
7062 \let\hyperpage\HyOrg@hyperpage
7063 }%
7064 \Hy@nextfalse
7065 \@ifpackageloaded{multind}{\Hy@nexttrue}{ }%
7066 \@ifpackageloaded{index}{\Hy@nexttrue}{ }%
7067 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{ }%
7068 \begingroup
7069 \lccode'\|=\expandafter'\HyInd@EncapChar\relax
7070 \lccode'\|/\='\\relax
7071 \lowercase{\endgroup
7072 \ifHy@next
7073 \let\HyInd@org@wrindex\@wrindex
7074 \def\@wrindex#1#2{\HyInd@\@wrindex{#1}{#2}||}%
7075 \def\HyInd@\@wrindex#1#2|#3|#4\\{%
7076 \ifx\|#3\\%
7077 \HyInd@org@wrindex{#1}{#2|hyperpage}%
7078 \else
7079 \HyInd@@@wrindex{#1}{#2}{#3}\\%
7080 \fi
7081 }%
7082 \def\HyInd@@@wrindex#1#2#3#4\\{%
7083 \def\Hy@temp@A{#3}%
7084 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7085 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7086 \relax
7087 \HyInd@org@wrindex{#1}{%
```

```

7088         #2|hyperindexformat{/#3#4}%
7089     }%
7090 \else
7091     \ifx\\#4\\%
7092         \ifx\Hy@temp@A\HyInd@ParenRight
7093             \HyInd@org@wrindex{#1}{#2|#3}%
7094         \else
7095             \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
7096         \fi
7097     \else
7098         \HyInd@org@wrindex{#1}{%
7099             #2|#3hyperindexformat{/#4}%
7100         }%
7101     \fi
7102 \fi
7103 }%
7104 \else
7105 \def\@wrindex#1{\@@wrindex#1||\}%
7106 \def\@@wrindex#1|#2|#3\{\%
7107 \if@files
7108     \ifx\\#2\\%
7109         \protected@write\@indexfile{}\{%
7110             \string\indexentry{#1|hyperpage}\{thepage}%
7111         }%
7112     \else
7113         \HyInd@@@wrindex{#1}#2\%
7114     \fi
7115 \fi
7116 \endgroup
7117 \@esphack
7118 }%
7119 \def\HyInd@@@wrindex#1#2#3\{\%
7120 \def\Hy@temp@A{#2}%
7121 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7122     \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7123     \relax
7124 \protected@write\@indexfile{}\{%
7125     \string\indexentry{%
7126         #1|hyperindexformat{/#2#3}%
7127     }\{thepage}%
7128     }%
7129 \else
7130     \ifx\\#3\\%
7131         \ifx\Hy@temp@A\HyInd@ParenRight
7132             \protected@write\@indexfile{}\{%
7133                 \string\indexentry{#1|#2}\{thepage}%
7134             }%
7135         \else
7136             \protected@write\@indexfile{}\{%
7137                 \string\indexentry{#1|#2hyperpage}\{thepage}%
7138             }%
7139         \fi
7140     \else
7141         \protected@write\@indexfile{}\{%
7142             \string\indexentry{%
7143                 #1|#2hyperindexformat{/#3}%
7144             }\{thepage}%

```

```

7145     }%
7146     \fi
7147     \fi
7148     }%
7149     \fi
7150     }%
7151 \fi
7152 \Hy@DisableOption{hyperindex}
7153 \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.

```

7154 \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.

```

7155 \def\hyperpage#1{%
7156   \HyInd@hyperpage#1\nohyperpage{}\@nil
7157 }
7158 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7159   \HyInd@@hyperpage{#1}%
7160   #2%
7161   \def\Hy@temp{#3}%
7162   \ifx\Hy@temp\@empty
7163     \else
7164       \Hy@ReturnAfterFi{%
7165         \HyInd@hyperpage#3\@nil
7166       }%
7167     \fi
7168 }
7169 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
7170 \def\@hyperpage#1--#2--#3\\\{%
7171   \ifx\#2\\\%
7172     \@commahyperpage{#1}%
7173   \else
7174     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7175   \fi
7176 }
7177 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
7178 \def\@commahyperpage#1, #2,#3\\\{%
7179   \ifx\#2\\\%
7180     \HyInd@pagelink{#1}%
7181   \else
7182     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7183   \fi
7184 }

```

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

```

7185 \def\HyInd@pagelink#1{%
7186   \begingroup
7187   \toks@={}%
7188   \HyInd@removespaces#1 \@nil
7189   \endgroup
7190 }
7191 \def\HyInd@removespaces#1 #2\@nil{%
7192   \toks@=\expandafter{\the\toks@#1}%

```

```

7193 \ifx\#2\%
7194 \edef\x{\the\toks@}%
7195 \ifx\x\@empty
7196 \else
7197 \hyperlink{page.\the\toks@}{\the\toks@}%
7198 \fi
7199 \else
7200 \Hy@ReturnAfterFi{%
7201 \HyInd@removespaces#2\@nil
7202 }%
7203 \fi
7204 }

```

44 Compatibility with foiltex

```

7205 \@ifclassloaded{foils}{%
7206 \providecommand*\ext@table{lot}%
7207 \providecommand*\ext@figure{lof}%
7208 }{}

```

45 Compatibility with seminar slide package

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

```

7209 \@ifclassloaded{seminar}{%
7210 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
7211 }{%
7212 \Hy@seminarslidesfalse
7213 }
7214 \@ifpackageloaded{slidesec}{%
7215 \newcommand\theHslidesection {\arabic{slidesection}}}%
7216 \newcommand\theHslidesubsection{%
7217 \theHslidesection.\arabic{slidesubsection}}%
7218 }%
7219 \def\slide@heading[#1]#2{%
7220 \H@refstepcounter{slidesection}%
7221 \@addtoreset{slidesubsection}{slidesection}%
7222 \addtocontents{los}{%
7223 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
7224 {\@SCTR}{slideheading.\theslidesection}%
7225 }%
7226 \def\Hy@tempa{#2}%
7227 \ifx\Hy@tempa\@empty
7228 \else
7229 {%
7230 \edef\@currentlabel{%
7231 \csname p@slidesection\endcsname\theslidesection
7232 }%
7233 \makeslideheading{#2}%
7234 }%
7235 \fi
7236 \gdef\theslideheading{#1}%
7237 \gdef\theslidesubheading{}%
7238 \ifHy@bookmarksnumbered
7239 \def\Hy@slidetitle{\theslidesection\space #1}%
7240 \else

```

```

7241 \def\Hy@slidetitle{#1}%
7242 \fi
7243 \ifHy@hypertextnames
7244 \ifHy@naturalnames
7245 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
7246 \Hy@writebookmark
7247 {\theslidesection}%
7248 {\Hy@slidetitle}%
7249 {slideheading.\theslidesection}%
7250 {1}%
7251 {toc}%
7252 \else
7253 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7254 \Hy@writebookmark
7255 {\theslidesection}%
7256 {\Hy@slidetitle}%
7257 {slideheading.\theHslidesection}%
7258 {1}%
7259 {toc}%
7260 \fi
7261 \else
7262 \Hy@GlobalStepCount\Hy@linkcounter
7263 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7264 \Hy@writebookmark
7265 {\theslidesection}%
7266 {\Hy@slidetitle}%
7267 {slideheading.\the\Hy@linkcounter}%
7268 {1}%
7269 {toc}%
7270 \fi
7271 }%
7272 \def\slide@subheading{#1}#2{%
7273 \H@refstepcounter{slidesubsection}%
7274 \addtocontents{los}{%
7275 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7276 {\@SCTR}{slideheading.\theslidesubsection}%
7277 }%
7278 \def\Hy@tempa{#2}%
7279 \ifx\Hy@tempa\@empty
7280 \else
7281 {%
7282 \edef\@currentlabel{%
7283 \csname p@slidesubsection\endcsname\theslidesubsection
7284 }%
7285 \makeslidesubheading{#2}%
7286 }%
7287 \fi
7288 \gdef\theslidesubheading{#1}%
7289 \ifHy@bookmarksnumbered
7290 \def\Hy@slidetitle{\theslidesubsection\space #1}%
7291 \else
7292 \def\Hy@slidetitle{#1}%
7293 \fi
7294 \ifHy@hypertextnames
7295 \ifHy@naturalnames
7296 \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7297 \Hy@writebookmark

```



```

7298     {\theslidesubsection}%
7299     {\Hy@slidetitle}%
7300     {slideheading.\theslidesubsection}%
7301     {2}%
7302     {toc}%
7303   \else
7304     \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7305     \Hy@writebookmark
7306       {\theslidesubsection}%
7307       {\Hy@slidetitle}%
7308       {slideheading.\theHslidesubsection}%
7309       {2}%
7310       {toc}%
7311   \fi
7312 \else
7313   \Hy@GlobalStepCount\Hy@linkcounter
7314   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7315   \Hy@writebookmark
7316     {\theslidesubsection}%
7317     {\Hy@slidetitle}%
7318     {slideheading.\the\Hy@linkcounter}%
7319     {1}%
7320     {toc}%
7321 \fi
7322 }%
7323 \providecommand*{\listslidenam}{List of Slides}%
7324 \def\listofslides{%
7325   \section*{%
7326     \listslidenam
7327     \@mkboth{%
7328       \expandafter\MakeUppercase\listslidenam
7329     }{%
7330       \expandafter\MakeUppercase\listslidenam
7331     }%
7332   }%
7333   \def\l@slide##1##2##3##4{%
7334     \slide@undottedcline{%
7335       \slidenumberline{##3}{\hyperlink{##4}{##2}}%
7336     }{%
7337     }%
7338     \let\l@subslide\l@slide
7339     \@startlos
7340   }%
7341   \def\slide@contents{%
7342     \def\l@slide##1##2##3##4{%
7343       \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7344     }%
7345     \let\l@subslide\@gobblefour
7346     \@startlos
7347   }%
7348   \def\Slide@contents{%
7349     \def\l@slide##1##2##3##4{%
7350       \ifcase\lslide@flag
7351         \message{##1 ** \the\c@slidesection}%
7352         \ifnum##1>\c@slidesection
7353           \def\lslide@flag{1}%
7354         {%

```

```

7355         \large
7356         \slide@cline{%
7357             \slidenumberline{$\Rightarrow\bullet$}%
7358             {\hyperlink{##4}{##2}}%
7359         }{##3}%
7360     }%
7361     \else
7362     {%
7363         \large
7364         \slide@cline{%
7365             \slidenumberline{$\surd\;\bullet$}%
7366             {\hyperlink{##4}{##2}}%
7367         }{##3}%
7368     }%
7369     \fi
7370 \or
7371 \def\lslide@flag{2}%
7372 {%
7373     \large
7374     \slide@cline{%
7375         \slidenumberline{$\bullet$}%
7376         {\hyperlink{##4}{##2}}%
7377     }{##3}%
7378 }%
7379 \or
7380 {%
7381     \large
7382     \slide@cline{%
7383         \slidenumberline{$\bullet$}%
7384         {\hyperlink{##4}{##2}}%
7385     }{##3}%
7386 }%
7387 \fi
7388 }%
7389 \def\l@subslide##1##2##3##4{%
7390     \ifnum\lslide@flag=1 %
7391         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7392     \fi
7393 }%
7394 \def\lslide@flag{0}%
7395 \@startlos
7396 }%
7397 }{}

```

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.)

```

7398 \ifHy@texht
7399     \expandafter\endinput
7400 \fi
7401 \let\real@setref\@setref
7402 \def\@setref#1#2#3{% csname, extract group, refname
7403     \ifx#1\relax
7404         \protect\G@refundefinedtrue
7405         \nfss@text{\reset@font\bfseries ??}%
7406         \@latex@warning{%
7407             Reference ‘#3’ on page \thepage \space undefined%
7408         }%

```

```

7409 \else
7410   \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7411 \fi
7412 }

```

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

```

7413 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7414   \begingroup
7415   \toks0={\hyper@@link{#5}{#4}}%
7416   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7417   \edef\x{\endgroup
7418     \the\toks0 \the\toks1 }%
7419   }%
7420 \x
7421 }
7422 \def\@pagesetref#1#2#3{% csname, extract macro, ref
7423   \ifx#1\relax
7424     \protect\G@refundefinedtrue
7425     \nfss@text{\reset@font\bfseries ??}%
7426     \@latex@warning{%
7427       Reference '#3' on page \thepage \space undefined%
7428     }%
7429   \else
7430     \protect\hyper@@link
7431     {\expandafter\@fifthoffive#1}%
7432     {page.\expandafter\@secondoffive#1}%
7433     {\expandafter\@secondoffive#1}%
7434   \fi
7435 }
7436 \</package>
7437 \<*check>
7438 \checklatex
7439 \checkcommand\def\@setref#1#2#3{%
7440   \ifx#1\relax
7441     \protect\G@refundefinedtrue
7442     \nfss@text{\reset@font\bfseries ??}%
7443     \@latex@warning{%
7444       Reference '#3' on page \thepage\space undefined%
7445     }%
7446   \else
7447     \expandafter#2#1\null
7448   \fi
7449 }
7450 \</check>
7451 \<*package>

```

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

```

7452 \def\HyRef@StarSetRef#1{%
7453   \begingroup
7454   \Hy@safe@activetrue
7455   \edef\x{#1}%
7456   \@onelevel@sanitize\x
7457   \edef\x{\endgroup
7458     \noexpand\HyRef@@StarSetRef
7459     \expandafter\noexpand\csname r@\x\endcsname{\x}%
7460   }%

```

```

7461 \x
7462 }
7463 \def\HyRef@@StarSetRef#1#2#3{%
7464 \ifx#1\@undefined
7465 \let#1\relax
7466 \fi
7467 \real@setref#1#3{#2}%
7468 }
7469 \def\@refstar#1{%
7470 \HyRef@StarSetRef{#1}\@firstoffive
7471 }
7472 \def\@pagerefstar#1{%
7473 \HyRef@StarSetRef{#1}\@secondoffive
7474 }
7475 \AtBeginDocument{%
7476 \ifpackageloaded{varioref}{%
7477 \def\@Refstar#1{%
7478 \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7479 }%
7480 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7481 \MakeUppercase#1%
7482 }%
7483 \DeclareRobustCommand*\@Ref{#1}{%
7484 \ifstar\@Refstar\HyRef@Ref
7485 }%
7486 \def\HyRef@Ref#1{%
7487 \hyperref[{#1}]{\@Ref*{#1}}%
7488 }%
7489 \def\Vr@f#1{%
7490 \leavevmode\unskip\vref@space
7491 \hyperref[{#1}]{%
7492 \@Ref*{#1}%
7493 \let\vref@space\nobreakspace
7494 \@vpageref{\unskip}{#1}%
7495 }%
7496 }%
7497 \def\vr@f#1{%
7498 \leavevmode\unskip\vref@space
7499 \begingroup
7500 \let\T@pageref\@pagerefstar
7501 \hyperref[{#1}]{%
7502 \@ref*{#1}%
7503 \vpageref{\unskip}{#1}%
7504 }%
7505 \endgroup
7506 }%
7507 }{}%
7508 }
7509 \DeclareRobustCommand*\@autopageref{%
7510 \ifstar{%
7511 \HyRef@autopagerefname\pageref*%
7512 }\HyRef@autopageref
7513 }
7514 \def\HyRef@autopageref#1{%
7515 \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
7516 }
7517 \def\HyRef@autopagerefname{%

```

```

7518 \@ifundefined{pageautorefname}{%
7519 \@ifundefined{pagename}{%
7520 \Hy@Warning{No autoref name for 'page'}%
7521 }{%
7522 \pagename\nobreakspace
7523 }%
7524 }{%
7525 \pageautorefname\nobreakspace
7526 }%
7527 }
7528 \DeclareRobustCommand*{\autoref}{%
7529 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7530 }
7531 \def\HyRef@autoref#1#2{%
7532 \begingroup
7533 \Hy@safe@activetrue
7534 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7535 \endgroup
7536 }
7537 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7538 \HyRef@ShowKeysRef{#2}%
7539 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7540 \edef\HyRef@thisref{%
7541 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7542 }%
7543 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7544 \Hy@safe@activetrue
7545 #3{%
7546 \expandafter\@fifthoffive#1\@empty\@empty\@empty
7547 }{%
7548 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7549 }{%
7550 \HyRef@currentHtag
7551 \expandafter\@firstoffive#1\@empty\@empty\@empty
7552 \null
7553 }%
7554 \else
7555 \protect\G@refundefinedtrue
7556 \nfss@text{\reset@font\bfseries ??}%
7557 \@latex@warning{%
7558 Reference '#2' on page \thepage\space undefined%
7559 }%
7560 \fi
7561 }
7562 \def\HyRef@testreftype#1.#2\.{%
7563 \@ifundefined{#1autorefname}{%
7564 \@ifundefined{#1name}{%
7565 \HyRef@StripStar#1\*\@nil{#1}%
7566 \@ifundefined{\HyRef@name autorefname}{%
7567 \@ifundefined{\HyRef@name name}{%
7568 \def\HyRef@currentHtag{}%
7569 \Hy@Warning{No autoref name for '#1'}%
7570 }{%
7571 \edef\HyRef@currentHtag{%
7572 \expandafter\noexpand\csname\HyRef@name name\endcsname
7573 \noexpand~%
7574 }%

```

```

7575     }%
7576   }{%
7577     \edef\HyRef@currentHtag{%
7578       \expandafter\noexpand
7579       \csname\HyRef@name autorefname\endcsname
7580       \noexpand~%
7581     }%
7582   }%
7583 }{%
7584   \edef\HyRef@currentHtag{%
7585     \expandafter\noexpand\csname#1name\endcsname
7586     \noexpand~%
7587   }%
7588 }%
7589 }{%
7590   \edef\HyRef@currentHtag{%
7591     \expandafter\noexpand\csname#1autorefname\endcsname
7592     \noexpand~%
7593   }%
7594 }%
7595 }
7596 \def\HyRef@StripStar#1*\#2\@nil#3{%
7597   \def\HyRef@name{#2}%
7598   \ifx\HyRef@name\HyRef@CaseStar
7599     \def\HyRef@name{#1}%
7600   \else
7601     \def\HyRef@name{#3}%
7602   \fi
7603 }
7604 \def\HyRef@CaseStar{*\\}
7605 \def\HyRef@currentHtag{

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7606 \let\HyRef@ShowKeysRef\@gobble
7607 \def\HyRef@ShowKeysInit{%
7608   \begingroup\expandafter\expandafter\expandafter\endgroup
7609   \expandafter\ifx\csname SK@@label\endcsname\relax
7610   \else
7611     \ifx\SK@ref\@empty
7612     \else
7613       \def\HyRef@ShowKeysRef{%
7614         \SK@\SK@@ref
7615       }%
7616     \fi
7617   \fi
7618 }
7619 \@ifpackageloaded{showkeys}{%
7620   \HyRef@ShowKeysInit
7621 }{%
7622   \AtBeginDocument{%
7623     \@ifpackageloaded{showkeys}{%
7624       \HyRef@ShowKeysInit
7625     }{}%
7626   }%
7627 }

```

Defaults for the names that `\autoref` uses.

```

7628 \providecommand* \AMSautorefname { \equationautorefname }
7629 \providecommand* \Hfootnoteautorefname { \footnoteautorefname }
7630 \providecommand* \Itemautorefname { \itemautorefname }
7631 \providecommand* \itemautorefname { item }
7632 \providecommand* \equationautorefname { Equation }
7633 \providecommand* \footnoteautorefname { footnote }
7634 \providecommand* \itemautorefname { item }
7635 \providecommand* \figureautorefname { Figure }
7636 \providecommand* \tableautorefname { Table }
7637 \providecommand* \partautorefname { Part }
7638 \providecommand* \appendixautorefname { Appendix }
7639 \providecommand* \chapterautorefname { chapter }
7640 \providecommand* \sectionautorefname { section }
7641 \providecommand* \subsectionautorefname { subsection }
7642 \providecommand* \subsubsectionautorefname { subsubsection }
7643 \providecommand* \paragraphautorefname { paragraph }
7644 \providecommand* \subparagraphautorefname { subparagraph }
7645 \providecommand* \FancyVerbLineautorefname { line }
7646 \providecommand* \theoremautorefname { Theorem }
7647 \providecommand* \pageautorefname { page }
7648 \end{package}

```

46 Configuration files

46.1 PS/PDF strings

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

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

```

7649 < *pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo >
7650 \RequirePackage { pdfTeXcmds } [ 2009 / 04 / 10 ]
7651 \begingroup \expandafter \expandafter \expandafter \endgroup
7652 \expandafter \ifx \cscname pdf@escapestring \endcscname \relax
7653 \begingroup
7654 \catcode \backslash = 0 %
7655 \makeother \backslash %
7656 \firstofone { \endgroup
7657 | def | Hy@pstringdef #1 #2 { %
7658 | \begingroup
7659 | \edef ~ { | string ~ } %
7660 | \xdef | Hy@gtemp { #2 } %
7661 | \endgroup
7662 | let #1 | Hy@gtemp
7663 | @onelevel @sanitize #1 %
7664 | \edef #1 { | \expandafter | Hy@ExchangeBackslash #1 \backslash | @nil } %
7665 | \edef #1 { | \expandafter | Hy@ExchangeLeftParenthesis #1 ( | @nil } %
7666 | \edef #1 { | \expandafter | Hy@ExchangeRightParenthesis #1 ) | @nil } %
7667 } %
7668 | def | Hy@ExchangeBackslash #1 \backslash #2 | @nil { %
7669 #1 %

```

```

7670 |ifx|\#2|\%%
7671 |else
7672   \\\%
7673   |Hy@ReturnAfterFi{%
7674   |Hy@ExchangeBackslash#2|@nil
7675   }%
7676 |fi
7677 }%
7678 }%
7679 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7680   #1%
7681   \ifx\#2\\%
7682   \else
7683     \@backslashchar(%
7684     \Hy@ReturnAfterFi{%
7685     \Hy@ExchangeLeftParenthesis#2\@nil
7686     }%
7687   \fi
7688 }%
7689 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7690   #1%
7691   \ifx\#2\\%
7692   \else
7693     \@backslashchar)%
7694     \Hy@ReturnAfterFi{%
7695     \Hy@ExchangeRightParenthesis#2\@nil
7696     }%
7697   \fi
7698 }%
7699 \else
7700 \def\Hy@pstringdef#1#2{%
7701   \begingroup
7702   \edef~{\string~}%
7703   \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7704   \endgroup
7705   \let#1\Hy@gtemp
7706 }%
7707 \fi
7708 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

7709 <*pdfTeX>
7710 \providecommand*{\XR@ext}{pdf}
7711 \Hy@setbreaklinks{true}

```

This driver is for Han The Thanh's T_EX variant which produces PDF directly. This has new primitives to do PDF things, which usually translate almost directly to PDF code, so there is a lot of flexibility which we do not at present harness.

Set PDF version if requested by option `pdfversion`.

- pdfT_EX 1.10a, 2003-01-16: `\pdfoptionpdfminorversion`
- pdfT_EX 1.30, 2005-08-08: `\pdfminorversion`

```

7712 \let\Hy@pdfminorversion\relax
7713 \begingroup\expandafter\expandafter\expandafter\endgroup
7714 \expandafter\ifx\cname pdfminorversion\endcname\relax
7715 \begingroup\expandafter\expandafter\expandafter\endgroup

```



```

7716 \expandafter\ifx\csmname pdfoptionpdfminorversion\endcsmname\relax
7717 \else
7718   \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7719 \fi
7720 \else
7721   \def\Hy@pdfminorversion{\pdfminorversion}%
7722 \fi
7723 \@ifundefined{Hy@pdfminorversion}{%
7724   \PackageInfo{hyperref}{%
7725     PDF version is not set, because pdfTeX is too old (<1.10a)%
7726   }%
7727 }{%
7728   \ifHy@ocgcolorlinks
7729     \ifnum\Hy@pdfminorversion<5 %
7730       \setkeys{Hyp}{pdfversion=1.5}%
7731     \fi
7732   \fi
7733   \ifHy@setpdfversion
7734     \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7735   \else
7736     \Hy@pdfminorversion=\Hy@pdfversion\relax
7737   \fi
7738   \PackageInfo{hyperref}{%
7739     \expandafter\string\Hy@pdfminorversion
7740     :=\number\Hy@pdfversion\space
7741   }%
7742 \fi
7743 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7744 }
7745 \Hy@DisableOption{pdfversion}%

7746 \ifHy@ocgcolorlinks
7747 \immediate\pdfobj{%
7748   <<%
7749     /Type/OCG%
7750     /Name(View)%
7751     /Usage<<%
7752       /Print<<%
7753         /PrintState/OFF%
7754       >>%
7755     /View<<%
7756       /ViewState/ON%
7757     >>%
7758   >>%
7759 }%
7760 }%
7761 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7762 \immediate\pdfobj{%
7763   <<%
7764     /Type/OCG%
7765     /Name(Print)%
7766     /Usage<<%
7767       /Print<<%
7768         /PrintState/ON%
7769       >>%
7770     /View<<%
7771       /ViewState/OFF%
7772     >>%

```

```

7773     >>%
7774     >>%
7775 }%
7776 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
7777 \immediate\pdfobj{%
7778 [%
7779   \OBJ@OCG@view\space\OBJ@OCG@print
7780 ]%
7781 }%
7782 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
7783 \pdfcatalog{%
7784   /OCProperties<<%
7785     /OCGs \OBJ@OCGs
7786     /D<<%
7787       /OFF[\OBJ@OCG@print]%
7788       /AS[%
7789         <<%
7790           /Event/View%
7791           /OCGs \OBJ@OCGs
7792           /Category[/View]%
7793         >>%
7794         <<%
7795           /Event/Print%
7796           /OCGs \OBJ@OCGs
7797           /Category[/Print]%
7798         >>%
7799         <<%
7800           /Event/Export%
7801           /OCGs \OBJ@OCGs
7802           /Category[/Print]%
7803         >>%
7804       ]%
7805     >>%
7806   >>%
7807 }%
7808 \begingroup
7809 \edef\x{\endgroup
7810   \pdfpageresources{%
7811     /Properties<<%
7812       /OCView \OBJ@OCG@view
7813       /OCPrint \OBJ@OCG@print
7814     >>%
7815   }%
7816 }%
7817 \x
7818 \AtBeginDocument{%
7819   \def\Hy@colorlink#1{%
7820     \begingroup
7821       \ifHy@ocgcolorlinks
7822         \def\Hy@ocgcolor{#1}%
7823         \setbox0=\color@hbox
7824       \else
7825         \HyColor@UseColor#1%
7826       \fi
7827     }%
7828   \def\Hy@endcolorlink{%
7829     \ifHy@ocgcolorlinks

```

```

7830 \color@endbox
7831 \mbox{%
7832 \pdfliteral page{/OC/OCPrint BDC}%
7833 \rlap{\copy0}%
7834 \pdfliteral page{EMC/OC/OCView BDC}%
7835 \begingroup
7836 \expandafter\HyColor@UseColor\Hy@ocgcolor
7837 \box0 %
7838 \endgroup
7839 \pdfliteral page{EMC}%
7840 }%
7841 \fi
7842 \endgroup
7843 }%
7844 }%
7845 \else
7846 \Hy@DisableOption{ocgcolorlinks}%
7847 \fi

```

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

```

7848 \def\setpdfinkmargin#1{\pdfinkmargin#1}
7849 \ifx\pdfstartlink\@undefined% less than version 14
7850 \let\pdfstartlink\pdfannotlink
7851 \let\pdfinkmargin\@tempdima
7852 \let\pdfxform\pdfform
7853 \let\pdfastxform\pdfastform
7854 \let\pdfrefxform\pdfrefform
7855 \else
7856 \pdfinkmargin1pt %
7857 \fi

```

First set up the default linking

```

7858 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

7859 \def\new@pdfink#1{%
7860 \Hy@SaveLastskip
7861 \Hy@VerboseAnchor{#1}%
7862 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7863 \Hy@DestName\Hy@pstringDest\@pdfview
7864 \Hy@RestoreLastskip
7865 }
7866 \let\pdf@endanchor\@empty

```

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

```

7867 \def\Hy@DestName#1#2{%
7868 \pdfdest name{#1}#2\relax
7869 }

```

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.

```

7870 \providecommand*\@pdfborder{0 0 1}
7871 \providecommand*\@pdfborderstyle{}
7872 \def\Hy@undefinedname{UNDEFINED}
7873 \def\find@pdfink#1#2{%

```

```

7874 \leavevmode
7875 \protected@edef\Hy@testname{#2}%
7876 \ifx\Hy@testname\@empty
7877   \Hy@Warning{%
7878     Empty destination name,\MessageBreak
7879     using '\Hy@undefinedname'%
7880   }%
7881   \let\Hy@testname\Hy@undefinedname
7882 \else
7883   \Hy@pstringdef\Hy@testname{%
7884     \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7885   }%
7886 \fi
7887 \Hy@StartlinkName{%
7888   \ifHy@pdfa /F 4\fi
7889   \Hy@setpdfborder
7890   \ifx\@pdfhighlight\@empty
7891   \else
7892     /H\@pdfhighlight
7893   \fi
7894   \ifx\CurrentBorderColor\relax
7895   \else
7896     /C[\CurrentBorderColor]%
7897   \fi
7898 } \Hy@testname
7899 \expandafter\Hy@colorlink\csname @#1color\endcsname
7900 }
7901 \def\Hy@StartlinkName#1#2{%
7902   \pdfstartlink attr{#1}goto name{#2}\relax
7903 }
7904 \def\close@pdflink{%
7905   \Hy@endcolorlink
7906   \pdfendlink
7907 }
7908 \def\hyper@anchor#1{%
7909   \new@pdfink{#1}\anchor@spot\pdf@endanchor
7910 }
7911 \def\hyper@anchorstart#1{%
7912   \new@pdfink{#1}%
7913   \Hy@activeanchortrue
7914 }
7915 \def\hyper@anchorend{%
7916   \pdf@endanchor
7917   \Hy@activeanchorfalse
7918 }
7919 \def\hyper@linkstart#1#2{%
7920   \Hy@VerboseLinkStart{#1}{#2}%
7921   \@ifundefined{@#1bordercolor}{%
7922     \let\CurrentBorderColor\relax
7923   }{%
7924     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7925   }%
7926   \find@pdfink{#1}{#2}%
7927 }
7928 \def\hyper@linkend{\close@pdflink}
7929 \def\hyper@link#1#2#3{%
7930   \Hy@VerboseLinkStart{#1}{#2}%

```

```

7931 \@ifundefined{@#1bordercolor}{%
7932 \let\CurrentBorderColor\relax
7933 }{%
7934 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7935 }%
7936 \find@pdfink{#1}{#2}#3%
7937 \close@pdfink
7938 }
7939 \let\CurrentBorderColor\@linkbordercolor
7940 \def\hyper@linkurl#1#2{%
7941 \begingroup
7942 \Hy@pstringdef\Hy@pstringURI{#2}%
7943 \hyper@chars
7944 \leavevmode
7945 \pdfstartlink
7946 attr{%
7947 \Hy@setpdfborder
7948 \ifx\@pdfhighlight\@empty
7949 \else
7950 /H\@pdfhighlight
7951 \fi
7952 \ifx\@urlbordercolor\relax
7953 \else
7954 /C[\@urlbordercolor]%
7955 \fi
7956 }%
7957 user{%
7958 /Subtype/Link%
7959 \ifHy@pdfa /F 4\fi
7960 /A<<%
7961 /Type/Action%
7962 /S/URI%
7963 /URI(\Hy@pstringURI)%
7964 >>%
7965 }%
7966 \relax
7967 \Hy@colorlink\@urlcolor#1%
7968 \close@pdfink
7969 \endgroup
7970 }
7971 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
7972 \begingroup
7973 \Hy@pstringdef\Hy@pstringF{#2}%
7974 \Hy@pstringdef\Hy@pstringD{#3}%
7975 \leavevmode
7976 \pdfstartlink
7977 attr{%
7978 \Hy@setpdfborder
7979 \ifx\@pdfhighlight\@empty
7980 \else
7981 /H\@pdfhighlight
7982 \fi
7983 \ifx\@filebordercolor\relax
7984 \else
7985 /C[\@filebordercolor]%
7986 \fi
7987 }%

```

```

7988     user {%
7989         /Subtype/Link%
7990         \ifHy@pdfa /F 4\fi
7991         /A<<%
7992         /F(\Hy@pstringF)%
7993         /S/GoToR%
7994         \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}

```

```

7995     \ifx\#3\%
7996     /D[0 \@pdfstartview]%
7997     \else
7998     /D(\Hy@pstringD)%
7999     \fi
8000     >>%
8001     }%
8002     \relax
8003     \Hy@colorlink\@filecolor#1%
8004     \close@pdfink
8005     \endgroup
8006 }
8007 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
8008   \begingroup
8009     \Hy@pstringdef\Hy@pstringF{#1}%
8010     \Hy@pstringdef\Hy@pstringP{#3}%
8011     \leavevmode
8012     \pdfstartlink
8013     attr{%
8014         \Hy@setpdfborder
8015         \ifx\@pdfhighlight\@empty
8016         \else
8017         /H\@pdfhighlight
8018         \fi
8019         \ifx\@runbordercolor\relax
8020         \else
8021         /C[\@runbordercolor]%
8022         \fi
8023     }%
8024     user {%
8025         /Subtype/Link%
8026         \ifHy@pdfa /F 4\fi
8027         /A<<%
8028         /F(\Hy@pstringF)%
8029         /S/Launch%
8030         \Hy@SetNewWindow
8031         \ifx\#3\%
8032         \else
8033         /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%

```

```

8034     \fi
8035     >>%
8036   }%
8037   \relax
8038   \Hy@colorlink\@runcolor#2%
8039   \close@pdflink
8040 \endgroup
8041 }

```

\@pdfproducer

```

8042 \ifx\@pdfproducer\relax
8043   \begingroup\expandafter\expandafter\expandafter\endgroup
8044   \expandafter\ifx\csname luatexversion\endcsname\relax
8045     \def\@pdfproducer{pdfTeX}%
8046   \ifx\eTeXversion\@undefined
8047     \else
8048       \ifx\eTeXversion\relax
8049         \else
8050           \ifnum\eTeXversion>0 %
8051             \def\@pdfproducer{pdfeTeX}%
8052           \fi
8053         \fi
8054       \fi
8055     \ifx\pdfTeXversion\@undefined
8056     \else
8057       \ifnum\pdfTeXversion<100 %
8058         \edef\@pdfproducer{%
8059           \@pdfproducer
8060           \the\pdfTeXversion.\pdfTeXrevision
8061         }%
8062       \else
8063         \ifnum\pdfTeXversion<130 %
8064           \edef\@pdfproducer{%
8065             \@pdfproducer-%
8066             \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8067             \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8068             \pdfTeXrevision
8069           }%
8070         \else
8071           \ifnum\pdfTeXversion<140 %
8072             \else
8073               \def\@pdfproducer{pdfTeX}%
8074             \fi
8075             \edef\@pdfproducer{%
8076               \@pdfproducer-%
8077               \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8078               \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8079               \pdfTeXrevision
8080             }%
8081           \fi
8082         \fi
8083       \fi
8084     \else
8085       \begingroup
8086       \count@=\luatexversion
8087       \divide\count@ by 100 %
8088       \edef\x{\the\count@}%

```

```

8089 \count@=-\x\relax
8090 \multiply\count@ by 100 %
8091 \advance\count@ by \luatexversion
8092 \edef\x{\endgroup
8093 \def\noexpand\@pdfproducer{%
8094 LuaTeX-\x.\the\count@.\luatexrevision
8095 }%
8096 }%
8097 \x
8098 \fi
8099 \fi

```

\PDF@SetupDox

```

8100 \def\PDF@SetupDoc{%
8101 \ifx\@pdfpagescrop\@empty
8102 \else
8103 \edef\process@me{%
8104 \pdfpagesattr={%
8105 /CropBox[\@pdfpagescrop]%
8106 \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
8107 \else
8108 ^^Jthe\pdfpagesattr
8109 \fi
8110 }%
8111 }%
8112 \process@me
8113 \fi
8114 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8115 \pdfcatalog{%
8116 /PageMode/\@pdfpagemode
8117 \ifx\@baseurl\@empty
8118 \else
8119 /URI<</Base(\Hy@pstringB)>>%
8120 \fi
8121 }%
8122 \ifx\@pdfstartpage\@empty
8123 \else
8124 \ifx\@pdfstartview\@empty
8125 \else
8126 openaction goto page\@pdfstartpage{\@pdfstartview}%
8127 \fi
8128 \fi
8129 \edef\Hy@temp{%
8130 \ifHy@toolbar\else /HideToolbar true\fi
8131 \ifHy@menubar\else /HideMenubar true\fi
8132 \ifHy>windowui\else /HideWindowUI true\fi
8133 \ifHy@fitwindow /FitWindow true\fi
8134 \ifHy@centerwindow /CenterWindow true\fi
8135 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8136 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8137 \Hy@UseNameKey{Direction}\@pdfdirection
8138 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8139 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8140 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8141 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8142 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8143 \Hy@UseNameKey{Duplex}\@pdfduplex

```



```

8144 \ifx\@pdfpicktraybypdfsize\@empty
8145 \else
8146   /PickTrayByPDFSize \@pdfpicktraybypdfsize
8147 \fi
8148 \ifx\@pdfprintpagerange\@empty
8149 \else
8150   /PrintPageRange[\@pdfprintpagerange]%
8151 \fi
8152 \ifx\@pdfnumcopies\@empty
8153 \else
8154   /NumCopies \@pdfnumcopies
8155 \fi
8156 }%
8157 \pdfcatalog{%
8158   \ifx\Hy@temp\@empty
8159   \else
8160     /ViewerPreferences<<\Hy@temp>>%
8161   \fi
8162   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8163   \ifx\@pdflang\@empty
8164   \else
8165     /Lang(\@pdflang)%
8166   \fi
8167 }%
8168 }

```

\PDF@FinishDoc

```

8169 \def\PDF@FinishDoc{%
8170   \Hy@UseMaketitleInfos
8171   \HyInfo@GenerateAddons
8172   \pdfinfo{%
8173     /Author(\@pdfauthor)%
8174     /Title(\@pdftitle)%
8175     /Subject(\@pdfsubject)%
8176     /Creator(\@pdfcreator)%
8177     \ifx\@pdfcreationdate\@empty
8178     \else
8179       /CreationDate(\@pdfcreationdate)%
8180     \fi
8181     \ifx\@pdfmoddate\@empty
8182     \else
8183       /ModDate(\@pdfmoddate)%
8184     \fi
8185     \ifx\@pdfproducer\relax
8186     \else
8187       /Producer(\@pdfproducer)%
8188     \fi
8189     /Keywords(\@pdfkeywords)%
8190     \ifx\@pdftrapped\@empty
8191     \else
8192       /Trapped/\@pdftrapped
8193     \fi
8194     \HyInfo@Addons
8195   }%
8196   \Hy@DisableOption{pdfauthor}%
8197   \Hy@DisableOption{pdftitle}%
8198   \Hy@DisableOption{pdfsubject}%

```

```

8199 \Hy@DisableOption{pdfcreator}%
8200 \Hy@DisableOption{pdfcreationdate}%
8201 \Hy@DisableOption{pdfmoddate}%
8202 \Hy@DisableOption{pdfproducer}%
8203 \Hy@DisableOption{pdfkeywords}%
8204 \Hy@DisableOption{pdftrapped}%
8205 \Hy@DisableOption{pdfinfo}%
8206 }

```

`\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`.

```

8207 \def\hyper@pagetransition{%
8208   \ifx\@pdfpagetransition\relax
8209   \else
8210     \expandafter\Hy@RemoveTransPageAttr
8211     \the\pdfpageattr^^J/Trans{>>\END
8212     \ifx\@pdfpagetransition\@empty
8213     \else
8214       \edef\@processme{%
8215         \global\pdfpageattr{%
8216           \the\pdfpageattr
8217             ^^J/Trans << /S /\@pdfpagetransition\space >>%
8218         }%
8219       }%
8220       \@processme
8221     \fi
8222   \fi
8223 }

```

`\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.

```

8224 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8225   \ifx\#2\%
8226     \global\pdfpageattr{#1}%
8227   \else
8228     \Hy@RemoveTransPageAttr#1#4\END
8229   \fi
8230 }

```

`\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`.

```

8231 \def\hyper@pageduration{%
8232   \ifx\@pdfpageduration\relax
8233   \else
8234     \expandafter
8235     \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{ } \END
8236     \ifx\@pdfpageduration\@empty
8237     \else
8238       \edef\@processme{%
8239         \global\pdfpageattr{%
8240           \the\pdfpageattr
8241             ^^J/Dur \@pdfpageduration\space
8242         }%

```

```

8243     }%
8244     \@processme
8245   \fi
8246 \fi
8247 }

```

`\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.

```

8248 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8249   \ifx\#2\%
8250     \global\pdfpageattr{#1}%
8251   \else
8252     \Hy@RemoveDurPageAttr#1#4\END
8253   \fi
8254 }

```

`\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).

```

8255 \def\hyper@pagehidden{%
8256   \ifHy@useHidKey
8257     \expandafter
8258     \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{ } \END
8259   \ifHy@pdfpagehidden
8260     \edef\@processme{%
8261       \global\pdfpageattr{%
8262         \the\pdfpageattr
8263         ^^J/Hid true % SPACE
8264       }%
8265     }%
8266     \@processme
8267   \fi
8268 \fi
8269 }

```

`\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.

```

8270 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
8271   \ifx\#2\%
8272     \global\pdfpageattr{#1}%
8273   \else
8274     \Hy@RemoveHidPageAttr#1#4\END
8275   \fi
8276 }

8277 \g@addto@macro\Hy@EveryPageHook{%
8278   \hyper@pagetransition
8279   \hyper@pageduration
8280   \hyper@pagehidden
8281 }

```

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

```

8282 </pdftex>
8283 <*pdftex | xetex>
8284 \AtBeginDocument{%
8285   \ifHy@setpagesize
8286     \expandafter\@firstofone
8287   \else
8288     \expandafter\@gobble
8289   \fi
8290   {%
8291     \@ifclassloaded{seminar}{%
8292 <*pdftex>
8293   \setlength{\pdfhorigin}{1truein}%
8294   \setlength{\pdfvorigin}{1truein}%
8295 </pdftex>
8296   \ifportrait
8297     \ifdim\paperwidth=\z@
8298   \else
8299     \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8300   \fi
8301   \ifdim\paperheight=\z@
8302   \else
8303     \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8304   \fi
8305   \else
8306     \ifdim\paperheight=\z@
8307   \else
8308     \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8309   \fi
8310   \ifdim\paperwidth=\z@
8311   \else
8312     \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8313   \fi
8314   \fi
8315   }{%
8316     \@ifundefined{stockwidth}{%
8317       \ifdim\paperwidth>\z@
8318         \setlength{\pdfpagewidth}{\paperwidth}%
8319       \fi
8320       \ifdim\paperheight>\z@
8321         \setlength{\pdfpageheight}{\paperheight}%
8322       \fi
8323     }{%
8324       \ifdim\stockwidth>\z@
8325         \setlength{\pdfpagewidth}{\stockwidth}%
8326       \fi
8327       \ifdim\stockheight>\z@
8328         \setlength{\pdfpageheight}{\stockheight}%
8329       \fi
8330     }%
8331   }%
8332 }%
8333 \Hy@DisableOption{setpagesize}%
8334 }
8335 </pdftex | xetex>
8336 <*pdftex>
8337 \def\Acrobatmenu#1#2{%
8338   \Hy@Acrobatmenu{#1}{#2}%

```

```

8339 \pdfstartlink
8340   attr{%
8341     \Hy@setpdfborder
8342     \ifx\@pdfhighlight\@empty
8343     \else
8344       /H\@pdfhighlight
8345     \fi
8346     \ifx\@menubordercolor\relax
8347     \else
8348       /C\@menubordercolor]%
8349     \fi
8350   }%
8351   user{%
8352     /Subtype/Link%
8353     \ifHy@pdfa /F 4\fi
8354     /A<<%
8355       /S/Named/N/#1%
8356     >>%
8357   }%
8358   \relax
8359   \Hy@colorlink\@menucolor#2%
8360   \close@pdflink
8361 }%
8362 }

```

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`.

```

8363 \def\Hy@FixNotFirstPage{%
8364   \gdef\Hy@FixNotFirstPage{%
8365     \setbox\AtBeginShipoutBox=\hbox{%
8366       \copy\AtBeginShipoutBox
8367     }%
8368   }%
8369 }
8370 \AtBeginShipout{\Hy@FixNotFirstPage}
8371 \</pdfTeX>

```

46.3 hypertext

The HyperTeX specification (this is borrowed from an article by Arthur Smith) says that conformant viewers/translators must recognize the following set of `\special` commands:

href: `html:`

name: `html:`

end: `html:`

image: `html:`

base_name: html:<base href = "href_string">

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

The *href* and *name* commands must be paired with an *end* command later in the T_EX file — the T_EX commands between the two ends of a pair form an *anchor* in the document. In the case of an *href* command, the *anchor* is to be highlighted in the *dvi* viewer, and when clicked on will cause the scene to shift to the destination specified by *href_string*. The *anchor* associated with a name command represents a possible location to which other hypertext links may refer, either as local references (of the form href="#name_string" with the *name_string* identical to the one in the name command) or as part of a URL (of the form URL#name_string). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that “” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```
8372 \*hypertex
8373 \providecommand*\XR@ext}{dvi}
8374 \def\PDF@FinishDoc{}
8375 \def\PDF@SetupDoc{%
8376   \ifx\@baseurl\@empty
8377   \else
8378     \special{html:<base href="\@baseurl">}%
8379   \fi
8380 }
8381 \def\hyper@anchor#1{%
8382   \Hy@SaveLastskip
8383   \Hy@VerboseAnchor{#1}%
8384   \begingroup
8385     \let\protect=\string
8386     \hyper@chars
8387     \special{html:<a name=%
8388       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8389   \endgroup
8390   \Hy@Activeanchortrue
8391   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8392   \special{html:</a>}%
8393   \Hy@Activeanchorfalse
8394   \Hy@RestoreLastskip
8395 }
8396 \def\hyper@anchorstart#1{%
8397   \Hy@SaveLastskip
8398   \Hy@VerboseAnchor{#1}%
8399   \begingroup
8400     \hyper@chars
8401     \special{html:<a name=%
8402       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8403   \endgroup
8404   \Hy@Activeanchortrue
8405 }
8406 \def\hyper@anchorend{%
8407   \special{html:</a>}%
8408   \Hy@Activeanchorfalse
```

```

8409 \Hy@RestoreLastskip
8410 }
8411 \def\@urlltype{url}
8412 \def\hyper@linkstart#1#2{%
8413 \Hy@VerboseLinkStart{#1}{#2}%
8414 \expandafter\Hy@colorlink\csname @#1color\endcsname
8415 \def\Hy@tempa{#1}%
8416 \ifx\Hy@tempa\@urlltype
8417 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8418 \else
8419 \begingroup
8420 \hyper@chars
8421 \special{html:<a href=%
8422 \hyper@quote\#\Hy@DestNameFilter{#2}\hyper@quote>}%
8423 \endgroup
8424 \fi
8425 }
8426 \def\hyper@linkend{%
8427 \special{html:</a>}%
8428 \Hy@endcolorlink
8429 }
8430 \def\hyper@linkfile#1#2#3{%
8431 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
8432 }
8433 \def\hyper@linkurl#1#2{%

```

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

```

8434 \leavevmode
8435 \ifHy@raiselinks
8436 \setbox\@tempboxa=\color@hbox #1\color@endbox
8437 \@linkdim\dp\@tempboxa
8438 \lower\@linkdim\hbox{%
8439 \hyper@chars
8440 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8441 }%
8442 \Hy@colorlink\@urlcolor#1%
8443 \@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).

```

8444 \advance\@linkdim by -6.5\p@
8445 \raise\@linkdim\hbox{\special{html:</a>}}%
8446 \Hy@endcolorlink
8447 \else
8448 \begingroup
8449 \hyper@chars
8450 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8451 \Hy@colorlink\@urlcolor#1%
8452 \special{html:</a>}%
8453 \Hy@endcolorlink
8454 \endgroup
8455 \fi
8456 }

```

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

```

8457 \def\hyper@link#1#2#3{%

```

```

8458 \Hy@VerboseLinkStart{#1}{#2}%
8459 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
8460 }

8461 \def\hyper@image#1#2{%
8462 \begingroup
8463 \hyper@chars
8464 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8465 \endgroup
8466 }
8467 </hypertex>
8468 <*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.

```

8469 \providecommand*\XR@ext}{dvi}
8470 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
8471 \def\hyper@anchor#1{%
8472 \Hy@SaveLastskip
8473 \Hy@VerboseAnchor{#1}%
8474 \begingroup
8475 \let\protect=\string
8476 \special{mark: #1}%
8477 \endgroup
8478 \Hy@activeanchortrue
8479 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8480 \Hy@activeanchorfalse
8481 \Hy@RestoreLastskip
8482 }
8483 \def\hyper@anchorstart#1{%
8484 \Hy@SaveLastskip
8485 \Hy@VerboseAnchor{#1}%
8486 \special{mark: #1}%
8487 \Hy@activeanchortrue
8488 }
8489 \def\hyper@anchorend{%
8490 \Hy@activeanchorfalse
8491 \Hy@RestoreLastskip
8492 }
8493 \def\hyper@linkstart#1#2{%
8494 \Hy@VerboseLinkStart{#1}{#2}%
8495 \expandafter\Hy@colorlink\csname @#1color\endcsname
8496 \special{button: %
8497 10000000 %
8498 \number\baselineskip\space
8499 #2%
8500 }%

```



```

8501 }
8502 \def\hyper@linkend{%
8503   \Hy@endcolorlink
8504 }
8505 \def\hyper@link#1#2#3{%
8506   \Hy@VerboseLinkStart{#1}{#2}%
8507   \setbox\@tempboxa=\color@hbox #3\color@endbox
8508   \leavevmode
8509   \ifHy@raiselinks
8510     \@linkdim\dp\@tempboxa
8511     \lower\@linkdim\hbox{%
8512       \special{button: %
8513         \number\wd\@tempboxa\space
8514         \number\ht\@tempboxa\space
8515         #2%
8516       }%
8517       \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8518       \Hy@endcolorlink
8519     }%
8520     \@linkdim\ht\@tempboxa
8521     \advance\@linkdim by -6.5\p@
8522     \raise\@linkdim\hbox{}%
8523   \else
8524     \special{button: %
8525       \number\wd\@tempboxa\space
8526       \number\ht\@tempboxa\space
8527       #2%
8528     }%
8529     \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8530     \Hy@endcolorlink
8531   \fi
8532 }
8533 \def\hyper@linkurl#1#2{%
8534   \begingroup
8535   \hyper@chars
8536   \leavevmode
8537   \setbox\@tempboxa=\color@hbox #1\color@endbox
8538   \ifHy@raiselinks
8539     \@linkdim\dp\@tempboxa
8540     \lower\@linkdim\hbox{%
8541       \special{button: %
8542         \number\wd\@tempboxa\space
8543         \number\ht\@tempboxa\space
8544         launch: \wwwbrowser\space
8545         #2%
8546       }%
8547       \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8548     }%
8549     \@linkdim\ht\@tempboxa
8550     \advance\@linkdim by -6.5\p@
8551     \raise\@linkdim\hbox{}%
8552   \else
8553     \special{button: %
8554       \number\wd\@tempboxa\space
8555       \number\ht\@tempboxa\space
8556       launch: \wwwbrowser\space
8557       #2%

```

```

8558     }%
8559     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8560     \fi
8561 \endgroup
8562 }
8563 \def\hyper@linkfile#1#2#3{%
8564 \begingroup
8565 \hyper@chars
8566 \leavevmode
8567 \setbox\@tempboxa=\color@hbox #1\color@endbox
8568 \ifHy@raiselinks
8569 \@linkdim\dp\@tempboxa
8570 \lower\@linkdim\hbox{%
8571 \special{button: %
8572 \number\wd\@tempboxa\space
8573 \number\ht\@tempboxa\space
8574 #3,%
8575 file: #2%
8576 }%
8577 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8578 }%
8579 \@linkdim\ht\@tempboxa
8580 \advance\@linkdim by -6.5\p@
8581 \raise\@linkdim\hbox{}%
8582 \else
8583 \special{button: %
8584 \number\wd\@tempboxa\space
8585 \number\ht\@tempboxa\space
8586 #3,%
8587 file: #2%
8588 }%
8589 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8590 \fi
8591 \endgroup
8592 }
8593 \ifx\@pdfproducer\relax
8594 \def\@pdfproducer{dviwindo + Distiller}%
8595 \fi
8596 \HyInfo@AddonUnsupportedtrue
8597 \def\PDF@FinishDoc{%
8598 \Hy@UseMaketitleInfos
8599 \HyInfo@TrappedUnsupported
8600 \special{PDF: Keywords \@pdfkeywords}%
8601 \special{PDF: Title \@pdftitle}%
8602 \special{PDF: Creator \@pdfcreator}%
8603 \ifx\@pdfcreationdate\@empty
8604 \else
8605 \special{PDF: CreationDate \@pdfcreationdate}%
8606 \fi
8607 \ifx\@pdfmoddate\@empty
8608 \else
8609 \special{PDF: ModDate \@pdfmoddate}%
8610 \fi
8611 \special{PDF: Author \@pdfauthor}%
8612 \ifx\@pdfproducer\relax
8613 \else
8614 \special{PDF: Producer \@pdfproducer}%

```

```

8615 \fi
8616 \special{PDF: Subject \@pdfsubject}%
8617 \Hy@DisableOption{pdfauthor}%
8618 \Hy@DisableOption{pdftitle}%
8619 \Hy@DisableOption{pdfsubject}%
8620 \Hy@DisableOption{pdfcreator}%
8621 \Hy@DisableOption{pdfcreationdate}%
8622 \Hy@DisableOption{pdfmoddate}%
8623 \Hy@DisableOption{pdfproducer}%
8624 \Hy@DisableOption{pdfkeywords}%
8625 \Hy@DisableOption{pdftrapped}%
8626 \Hy@DisableOption{pdfinfo}%
8627 }
8628 \def\PDF@SetupDoc{%
8629 \ifx\@baseurl\@empty
8630 \else
8631 \special{PDF: Base \@baseurl}%
8632 \fi
8633 \ifx\@pdfpagescrop\@empty\else
8634 \special{PDF: BBox \@pdfpagescrop}%
8635 \fi
8636 \def\Hy@temp{%
8637 \ifx\@pdfstartpage\@empty
8638 \else
8639 \ifx\@pdfstartview\@empty
8640 \else
8641 \edef\Hy@temp{%
8642 ,Page=\@pdfstartpage
8643 ,View=\@pdfstartview
8644 }%
8645 \fi
8646 \fi
8647 \edef\Hy@temp{%
8648 \noexpand\pdfmark{%
8649 pdfmark=/DOCVIEW,%
8650 PageMode=/\@pdfpagemode
8651 \Hy@temp
8652 }%
8653 }%
8654 \Hy@temp
8655 \ifx\@pdfpagescrop\@empty
8656 \else
8657 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8658 \fi
8659 \edef\Hy@temp{%
8660 \ifHy@toolbar\else /HideToolbar true\fi
8661 \ifHy@menubar\else /HideMenubar true\fi
8662 \ifHy>windowui\else /HideWindowUI true\fi
8663 \ifHy@fitwindow /FitWindow true\fi
8664 \ifHy@centerwindow /CenterWindow true\fi
8665 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8666 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8667 \Hy@UseNameKey{Direction}\@pdfdirection
8668 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8669 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8670 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8671 \Hy@UseNameKey{PrintClip}\@pdfprintclip

```

```

8672 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8673 \Hy@UseNameKey{Duplex}\@pdfduplex
8674 \ifx\@pdfpicktraybypdfsize\@empty
8675 \else
8676 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8677 \fi
8678 \ifx\@pdfprintpagerange\@empty
8679 \else
8680 /PrintPageRange[\@pdfprintpagerange]%
8681 \fi
8682 \ifx\@pdfnumcopies\@empty
8683 \else
8684 /NumCopies \@pdfnumcopies
8685 \fi
8686 }%
8687 \pdfmark{pdfmark=/PUT,%
8688 Raw={%
8689 \string{Catalog\string}<<%
8690 \ifx\Hy@temp\@empty
8691 \else
8692 /ViewerPreferences<<\Hy@temp>>%
8693 \fi
8694 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8695 \ifx\@pdflang\@empty
8696 \else
8697 /Lang(\@pdflang)%
8698 \fi
8699 >>%
8700 }%
8701 }%
8702 }
8703 </dviwindo>
8704 < *dvipdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8705 \providecommand*{\XR@ext}{pdf}
8706 \Hy@setbreaklinks{true}
8707 \newsavebox{\pdfm@box}
8708 \def\@pdfm@mark#1{\special{pdf:#1}}
8709 \def\@pdfm@dest#1{%
8710 \Hy@SaveLastskip
8711 \Hy@VerboseAnchor{#1}%
8712 \begingroup
8713 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8714 \def\x{XYZ}%
8715 \ifx\x\@pdfview
8716 \def\x{XYZ @xpos @ypos null}%
8717 \else
8718 \def\x{FitH}%
8719 \ifx\x\@pdfview
8720 \def\x{FitH @ypos}%
8721 \else
8722 \def\x{FitBH}%
8723 \ifx\x\@pdfview
8724 \def\x{FitBH @ypos}%

```

```

8725 \else
8726 \def\x{FitV}%
8727 \ifx\x\@pdfview
8728 \def\x{FitV @xpos}%
8729 \else
8730 \def\x{FitBV}%
8731 \ifx\x\@pdfview
8732 \def\x{FitBV @xpos}%
8733 \else
8734 \def\x{Fit}%
8735 \ifx\x\@pdfview
8736 \let\x\@pdfview
8737 \else
8738 \def\x{FitB}%
8739 \ifx\x\@pdfview
8740 \let\x\@pdfview
8741 \else
8742 \def\x{FitR}%
8743 \ifx\x\@pdfview
8744 \Hy@Warning{'pdfview=FitR' is not supported}%
8745 \def\x{XYZ @xpos @ypos null}%
8746 \else
8747 \@onelevel@sanitize\@pdfview
8748 \Hy@Warning{%
8749 Unknown value '\@pdfview' for pdfview%
8750 }%
8751 \def\x{XYZ @xpos @ypos null}%
8752 \fi
8753 \fi
8754 \fi
8755 \fi
8756 \fi
8757 \fi
8758 \fi
8759 \fi
8760 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8761 \endgroup
8762 \Hy@RestoreLastskip
8763 }
8764 \providecommand*\@pdfview{XYZ}
8765 \providecommand*\@pdfborder{0 0 1}
8766 \providecommand*\@pdfborderstyle{}
8767 \def\hyper@anchor#1{%
8768 \@pdfm@dest{#1}%
8769 }
8770 \def\hyper@anchorstart#1{%
8771 \Hy@activeanchortrue
8772 \@pdfm@dest{#1}%
8773 }
8774 \def\hyper@anchorend{%
8775 \Hy@activeanchorfalse
8776 }
8777 \newcounter{Hy@AnnotLevel}
8778 \ifHy@ocgcolorlinks
8779 \def\OBJ@OCG@view{@OCG@view}%
8780 \@pdfm@mark{%
8781 obj \OBJ@OCG@view <<%

```

```

8782     /Type/OCG%
8783     /Name(View)%
8784     /Usage<<%
8785         /Print<<%
8786         /PrintState/OFF%
8787     >>%
8788     /View<<%
8789         /ViewState/ON%
8790     >>%
8791 >>%
8792 >>%
8793 }%
8794 \@pdfm@mark{close \OBJ@OCG@view}%
8795 \def\OBJ@OCG@print{\@OCG@print}%
8796 \@pdfm@mark{%
8797     obj \OBJ@OCG@print <<%
8798         /Type/OCG%
8799         /Name(Print)%
8800         /Usage<<%
8801         /Print<<%
8802         /PrintState/ON%
8803     >>%
8804     /View<<%
8805         /ViewState/OFF%
8806     >>%
8807 >>%
8808 >>%
8809 }%
8810 \@pdfm@mark{close \OBJ@OCG@print}%
8811 \def\OBJ@OCGs{\@OCGs}%
8812 \@pdfm@mark{%
8813     obj \OBJ@OCGs [%
8814         \OBJ@OCG@view\space\OBJ@OCG@print
8815     ]%
8816 }%
8817 \@pdfm@mark{close \OBJ@OCGs}%
8818 \@pdfm@mark{%
8819     put @catalog <<%
8820         /OCProperties<<%
8821         /OCGs \OBJ@OCGs
8822         /D<<%
8823         /OFF[\OBJ@OCG@print]%
8824         /AS[%
8825             <<%
8826             /Event/View%
8827             /OCGs \OBJ@OCGs
8828             /Category[/View]%
8829         >>%
8830         <<%
8831         /Event/Print%
8832         /OCGs \OBJ@OCGs
8833         /Category[/Print]%
8834     >>%
8835     <<%
8836         /Event/Export%
8837         /OCGs \OBJ@OCGs
8838         /Category[/Print]%

```

```

8839         >>%
8840     ]%
8841     >>%
8842     >>%
8843     >>%
8844 }%
8845 \AtBeginShipout{%
8846     \setbox\AtBeginShipoutBox=\hbox{%
8847         \copy\AtBeginShipoutBox
8848         \@pdfm@mark{%
8849             put @resources <<%
8850                 /Properties<<%
8851                     /OCView \OBJ@OCG@view
8852                     /OCPrint \OBJ@OCG@print
8853                 >>%
8854             >>%
8855         }%
8856     }%
8857 }%
8858 \AtBeginDocument{%
8859     \def\Hy@colorlink#1{%
8860         \begingroup
8861         \ifHy@ocgcolorlinks
8862             \def\Hy@ocgcolor{#1}%
8863             \setbox0=\color@hbox
8864         \else
8865             \HyColor@UseColor#1%
8866         \fi
8867     }%
8868     \def\Hy@endcolorlink{%
8869         \ifHy@ocgcolorlinks
8870             \color@endbox
8871             \mbox{%
8872                 \@pdfm@mark{content /OC/OCPrint BDC}%
8873                 \rlap{\copy0}%
8874                 \@pdfm@mark{content EMC/OC/OCView BDC}%
8875             \begingroup
8876                 \expandafter\HyColor@UseColor\Hy@ocgcolor
8877                 \box0 %
8878             \endgroup
8879             \@pdfm@mark{content EMC}%
8880         }%
8881         \fi
8882     \endgroup
8883 }%
8884 }%
8885 \else
8886     \Hy@DisableOption{ocgcolorlinks}%
8887 \fi

8888 \def\Hy@BeginAnnot#1{%
8889     \stepcounter{Hy@AnnotLevel}%
8890     \ifnum\value{Hy@AnnotLevel}=\@ne
8891         #1%
8892     \fi
8893 }
8894 \def\Hy@endAnnot{%
8895     \ifnum\value{Hy@AnnotLevel}=\@ne

```

```

8896 \Hy@endcolorlink
8897 \@pdfm@mark{eann}%
8898 \fi
8899 \addtocounter{Hy@AnnotLevel}\m@ne
8900 }

8901 \def\Hy@undefinedname{UNDEFINED}
8902 \def\hyper@linkstart#1#2{%
8903 \Hy@VerboseLinkStart{#1}{#2}%
8904 \Hy@BeginAnnot{%
8905 \protected@edef\Hy@testname{#2}%
8906 \ifx\Hy@testname\@empty
8907 \Hy@Warning{%
8908 Empty destination name,\MessageBreak
8909 using '\Hy@undefinedname'%
8910 }%
8911 \let\Hy@testname\Hy@undefinedname
8912 \else
8913 \Hy@pstringdef\Hy@testname{%
8914 \expandafter\HyperDestNameFilter\expandafter{%
8915 \Hy@testname
8916 }%
8917 }%
8918 \fi
8919 \@pdfm@mark{%
8920 bann<<%
8921 /Type/Annot%
8922 /Subtype/Link%
8923 \ifHy@pdfa /F 4\fi
8924 \Hy@setpdfborder
8925 \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8926 \else
8927 /C[\csname @#1bordercolor\endcsname]%
8928 \fi
8929 /A<<%
8930 /S/GoTo%
8931 /D(\Hy@testname)%
8932 >>%
8933 >>%
8934 }%
8935 \expandafter\Hy@colorlink\csname @#1color\endcsname
8936 }%
8937 }

8938 \def\hyper@linkend{\Hy@EndAnnot}%
8939 \def\hyper@link#1#2#3{%
8940 \hyper@linkstart{#1}{#2}#3\hyper@linkend
8941 }

8942 \def\hyper@linkfile#1#2#3{%
8943 \leavevmode
8944 \Hy@BeginAnnot{%
8945 \Hy@pstringdef\Hy@pstringF{#2}%
8946 \Hy@pstringdef\Hy@pstringD{#3}%
8947 \@pdfm@mark{%
8948 bann<<%
8949 /Type/Annot%
8950 /Subtype/Link%
8951 \ifHy@pdfa /F 4\fi
8952 \Hy@setpdfborder

```



```

8953 \ifx\@filebordercolor\relax
8954 \else
8955 /C[\@filebordercolor]%
8956 \fi
8957 /A<<%
8958 /S/GoToR%
8959 /F(\Hy@pstringF)%
8960 /D\ifx\#3\[\0 \@pdfstartview]\else(\Hy@pstringD)\fi
8961 \Hy@SetNewWindow
8962 >>%
8963 >>%
8964 }%
8965 \Hy@colorlink\@filecolor
8966 }%
8967 #1%
8968 \Hy@endAnnot
8969 }
8970 \def\hyper@linkurl#1#2{%
8971 \leavevmode
8972 \Hy@BeginAnnot{%
8973 \Hy@pstringdef\Hy@pstringURI{#2}%
8974 \@pdfm@mark{%
8975 bann<<%
8976 /Type/Annot%
8977 /Subtype/Link%
8978 \ifHy@pdfa /F 4\fi
8979 \Hy@setpdfborder
8980 \ifx\@urlbordercolor\relax
8981 \else
8982 /C[\@urlbordercolor]%
8983 \fi
8984 /A<<%
8985 /S/URI%
8986 /URI(\Hy@pstringURI)%
8987 >>%
8988 >>%
8989 }%
8990 \Hy@colorlink\@urlcolor
8991 }%
8992 #1%
8993 \Hy@endAnnot
8994 }
8995 \def\Acrobatmenu#1#2{%
8996 \Hy@Acrobatmenu{#1}{#2}{%
8997 \Hy@BeginAnnot{%
8998 \@pdfm@mark{%
8999 bann<<%
9000 /Type/Annot%
9001 /Subtype/Link%
9002 \ifHy@pdfa /F 4\fi
9003 /A<<%
9004 /S/Named%
9005 /N/#1%
9006 >>%
9007 \Hy@setpdfborder
9008 \ifx\@menubordercolor\relax
9009 \relax

```

```

9010         /C[\@menubordercolor]%
9011         \fi
9012     >>%
9013 }%
9014 \Hy@colorlink\@menucolor
9015 }%
9016 #2%
9017 \Hy@EndAnnot
9018 }%
9019 }
9020 \ifx\@pdfproducer\relax
9021 \def\@pdfproducer{dvipdfm}%

```

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

```

9022 \begingroup\expandafter\expandafter\expandafter\endgroup
9023 \expandafter\ifx\csname XeTeXversion\endcsname\relax
9024 \else
9025 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9026 \fi
9027 \fi
9028 \def\PDF@FinishDoc{%
9029 \Hy@UseMaketitleInfos
9030 \HyInfo@GenerateAddons
9031 \@pdfm@mark{%
9032 docinfo<<%
9033 /Title(\@pdftitle)%
9034 /Subject(\@pdfsubject)%
9035 /Creator(\@pdfcreator)%
9036 \ifx\@pdfcreationdate\@empty
9037 \else
9038 /CreationDate(\@pdfcreationdate)%
9039 \fi
9040 \ifx\@pdfmoddate\@empty
9041 \else
9042 /ModDate(\@pdfmoddate)%
9043 \fi
9044 /Author(\@pdfauthor)%
9045 \ifx\@pdfproducer\relax
9046 \else
9047 /Producer(\@pdfproducer)%
9048 \fi
9049 /Keywords(\@pdfkeywords)%
9050 \ifx\@pdftrapped\@empty
9051 \else
9052 /Trapped/\@pdftrapped
9053 \fi
9054 \HyInfo@Addons
9055 >>%
9056 }%
9057 \Hy@DisableOption{pdfauthor}%
9058 \Hy@DisableOption{pdftitle}%
9059 \Hy@DisableOption{pdfsubject}%
9060 \Hy@DisableOption{pdfcreator}%
9061 \Hy@DisableOption{pdfcreationdate}%
9062 \Hy@DisableOption{pdfmoddate}%
9063 \Hy@DisableOption{pdfproducer}%
9064 \Hy@DisableOption{pdfkeywords}%
9065 \Hy@DisableOption{pdftrapped}%

```

```

9066 \Hy@DisableOption{pdfinfo}%
9067 }

9068 \def\PDF@SetupDoc{%
9069 \edef\Hy@temp{%
9070 \ifHy@toolbar\else /HideToolbar true\fi
9071 \ifHy@menubar\else /HideMenubar true\fi
9072 \ifHy>windowui\else /HideWindowUI true\fi
9073 \ifHy@fitwindow /FitWindow true\fi
9074 \ifHy@centerwindow /CenterWindow true\fi
9075 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9076 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfmonfullscreenpagemode
9077 \Hy@UseNameKey{Direction}\@pdfdirection
9078 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9079 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9080 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9081 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9082 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9083 \Hy@UseNameKey{Duplex}\@pdfduplex
9084 \ifx\@pdfpicktraybypdfsize\@empty
9085 \else
9086 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9087 \fi
9088 \ifx\@pdfprintpagerange\@empty
9089 \else
9090 /PrintPageRange[\@pdfprintpagerange]%
9091 \fi
9092 \ifx\@pdfnumcopies\@empty
9093 \else
9094 /NumCopies \@pdfnumcopies
9095 \fi
9096 }%
9097 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9098 \@pdfm@mark{%
9099 docview<<%
9100 \ifx\@pdfstartpage\@empty
9101 \else
9102 \ifx\@pdfstartview\@empty
9103 \else
9104 /OpenAction[page\@pdfstartpage\@pdfstartview]%
9105 \fi
9106 \fi
9107 \ifx\@baseurl\@empty
9108 \else
9109 /URI<</Base(\Hy@pstringB)>>%
9110 \fi
9111 /PageMode/\@pdfpagemode
9112 \ifx\Hy@temp\@empty
9113 \else
9114 /ViewerPreferences<<\Hy@temp>>%
9115 \fi
9116 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9117 \ifx\@pdflang\@empty
9118 \else
9119 /Lang(\@pdflang)%
9120 \fi
9121 >>%
9122 }%

```

```

9123 \ifx\@pdfpagescrop\@empty
9124 \else
9125   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9126 \fi
9127 }
9128 </dvipdfm | xetex>

```

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

```

9129 <*dvipdfm>
9130 \AtBeginShipoutFirst{%
9131   \ifHy@setpagesize
9132     \begingroup
9133       \ifundefined{stockwidth}{%
9134         \ifdim\paperwidth>\z@
9135         \ifdim\paperheight>\z@
9136           \special{papersize=\the\paperwidth,\the\paperheight}%
9137         \fi
9138       \fi
9139     }{%
9140       \ifdim\stockwidth>\z@
9141       \ifdim\stockheight>\z@
9142         \special{papersize=\the\stockwidth,\the\stockheight}%
9143       \fi
9144     }%
9145   \endgroup
9146 \fi
9147 \Hy@DisableOption{setpagesize}%
9148 }
9149 }
9150 </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.

```

9151 <*vtexhtml>
9152 \providecommand*\XR@ext{\htm}
9153 \RequirePackage{vtexhtml}
9154 \newif\if@Localurl
9155 \def\PDF@FinishDoc{}
9156 \def\PDF@SetupDoc{%
9157   \ifx\@baseurl\@empty
9158     \else
9159     \special{!direct <base href="\@baseurl">}%
9160   \fi
9161 }
9162 \def\@urltype{url}
9163 \def\hyper@link#1#2#3{%
9164   \Hy@VerboseLinkStart{#1}{#2}%
9165   \leavevmode
9166   \special{!direct <a href=%
9167     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9168   #3%
9169   \special{!direct </a>}%
9170 }
9171 \def\hyper@linkurl#1#2{%

```

```

9172 \begingroup
9173 \hyper@chars
9174 \leavevmode
9175 \MathBSuppress=1\relax
9176 \special{!direct <a href=%
9177   \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9178   #1%
9179 \MathBSuppress=0\relax
9180 \special{!direct </a>}%
9181 \endgroup
9182 }
9183 \def\hyper@linkfile#1#2#3{%
9184   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\##3\fi}%
9185 }
9186 \def\hyper@linkstart#1#2{%
9187   \Hy@VerboseLinkStart{#1}{#2}%
9188   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
9189     \@Localurltrue
9190     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
9191   \else
9192     \@Localurlfalse
9193   \begingroup
9194     \hyper@chars
9195     \special{!aref \HyperDestNameFilter{#2}}%
9196   \endgroup
9197   \fi
9198 }
9199 \def\hyper@linkend{%
9200   \if@Localurl
9201     \special{!endaref}%
9202   \else
9203     \special{!direct </a>}%
9204   \fi
9205 }
9206 \def\hyper@anchorstart#1{%
9207   \Hy@SaveLastskip
9208   \Hy@VerboseAnchor{#1}%
9209   \begingroup
9210     \hyper@chars
9211     \special{!aname #1}%
9212     \special{!direct <a name=%
9213       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9214   \endgroup
9215   \Hy@activeanchortrue
9216 }
9217 \def\hyper@anchorend{%
9218   \special{!direct </a>}%
9219   \Hy@activeanchorfalse
9220   \Hy@RestoreLastskip
9221 }
9222 \def\hyper@anchor#1{%
9223   \Hy@SaveLastskip
9224   \Hy@VerboseAnchor{#1}%
9225   \begingroup
9226     \let\protect=\string
9227     \hyper@chars
9228     \leavevmode

```

```

9229 \special{!aname #1}%
9230 \special{!direct <a name=%
9231 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9232 \endgroup
9233 \Hy@activeanchortrue
9234 \bgroup\anchor@spot\egroup
9235 \special{!direct </a>}%
9236 \Hy@activeanchorfalse
9237 \Hy@RestoreLastskip
9238 }
9239 \def\@Form[#1]{%
9240 \typeout{Sorry, TeXpider does not yet support FORMs}%
9241 }
9242 \def\@endForm{}
9243 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9244 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
9245 }
9246 \def\@TextField[#1]#2{% parameters, label
9247 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
9248 }
9249 \def\@CheckBox[#1]#2{% parameters, label
9250 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
9251 }
9252 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
9253 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
9254 }
9255 \def\@PushButton[#1]#2{% parameters, label
9256 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
9257 }
9258 \def\@Reset[#1]#2{%
9259 \typeout{Sorry, TeXpider does not yet support FORMs}%
9260 }
9261 \def\@Submit[#1]#2{%
9262 \typeout{Sorry, TeXpider does not yet support FORMs}%
9263 }
9264 </vtexhtml>
9265 <*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.

```

9266 \ifx\mediaheight\@undefined
9267 \else
9268 \ifx\mediaheight\relax
9269 \else
9270 \ifHy@setpagesize
9271 \providecommand*{\VTeXInitMediaSize}{%
9272 \@ifundefined{stockwidth}{%
9273 \ifdim\paperheight>0pt %
9274 \setlength\mediaheight\paperheight
9275 \fi
9276 \ifdim\paperheight>0pt %
9277 \setlength\mediawidth\paperwidth
9278 \fi
9279 }{%
9280 \ifdim\stockheight>0pt %
9281 \setlength\mediaheight\stockheight

```

```

9282      \fi
9283      \ifdim\stockwidth>0pt %
9284      \setlength\mediawidth\stockwidth
9285      \fi
9286    }%
9287  }%
9288  \AtBeginDocument{\VTeXInitMediaSize}%
9289  \fi
9290  \Hy@DisableOption{setpagesize}%
9291  \fi
9292  \fi

```

Older versions of VTeX require xyz in lower case.

```

9293 \providecommand*\@pdfview{xyz}
9294 \providecommand*\@pdfborder{0 0 1}
9295 \providecommand*\@pdfborderstyle{}
9296 \let\CurrentBorderColor\@linkbordercolor
9297 \def\hyper@anchor#1{%
9298   \Hy@SaveLastskip
9299   \Hy@VerboseAnchor{#1}%
9300   \begingroup
9301     \let\protect=\string
9302     \hyper@chars
9303     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9304   \endgroup
9305   \Hy@activeanchortrue
9306   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9307   \Hy@activeanchorfalse
9308   \Hy@RestoreLastskip
9309 }
9310 \def\hyper@anchorstart#1{%
9311   \Hy@SaveLastskip
9312   \Hy@VerboseAnchor{#1}%
9313   \begingroup
9314     \hyper@chars
9315     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9316   \endgroup
9317   \Hy@activeanchortrue
9318 }
9319 \def\hyper@anchorend{%
9320   \Hy@activeanchorfalse
9321   \Hy@RestoreLastskip
9322 }
9323 \def\@urltype{url}
9324 \def\Hy@undefinedname{UNDEFINED}
9325 \def\hyper@linkstart#1#2{%
9326   \Hy@VerboseLinkStart{#1}{#2}%
9327   \Hy@pstringdef\Hy@pstringURI{#2}%
9328   \expandafter\Hy@colorlink\csname @#1color\endcsname
9329   \@ifundefined{@#1bordercolor}{%
9330     \let\CurrentBorderColor\relax
9331   }{%
9332     \edef\CurrentBorderColor{%
9333       \csname @#1bordercolor\endcsname
9334     }%
9335   }%
9336   \def\Hy@tempa{#1}%
9337   \ifx\Hy@tempa\@urltype

```

```

9338 \special{!%
9339   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9340   a=<%
9341     \ifHy@pdfa /F 4\fi
9342     \Hy@setpdfborder
9343     \ifx\CurrentBorderColor\relax
9344     \else
9345       /C [\CurrentBorderColor]%
9346     \fi
9347   >%
9348   }%
9349 \else
9350   \protected@edef\Hy@testname{#2}%
9351   \ifx\Hy@testname\@empty
9352     \Hy@Warning{%
9353       Empty destination name,\MessageBreak
9354       using '\Hy@undefinedname'%
9355     }%
9356   \let\Hy@testname\Hy@undefinedname
9357   \fi
9358 \special{!%
9359   aref \expandafter\HyperDestNameFilter
9360     \expandafter{\Hy@testname};%
9361   a=<%
9362     \ifHy@pdfa /F 4\fi
9363     \Hy@setpdfborder
9364     \ifx\CurrentBorderColor\relax
9365     \else
9366       /C [\CurrentBorderColor]%
9367     \fi
9368   >%
9369   }%
9370 \fi
9371 }
9372 \def\hyper@linkend{%
9373   \special{!endaref}%
9374   \Hy@endcolorlink
9375 }
9376 \def\hyper@linkfile#1#2#3{%
9377   \leavevmode
9378   \special{!%
9379     aref <%
9380     \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
9381     f=#2>#3;%
9382     a=<%
9383       \ifHy@pdfa /F 4\fi
9384       \Hy@setpdfborder
9385       \ifx\@filebordercolor\relax
9386       \else
9387         /C [\@filebordercolor]%
9388       \fi
9389     >%
9390   }%
9391   \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9392   \special{!endaref}%
9393 }
9394 \def\hyper@linkurl#1#2{%

```



```

9395 \begingroup
9396 \Hy@pstringdef\Hy@pstringURI{#2}%
9397 \hyper@chars
9398 \leavevmode
9399 \special{!%
9400   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9401   a=<%
9402     \ifHy@pdfa /F 4\fi
9403     \Hy@setpdfborder
9404     \ifx\@urlbordercolor\relax
9405     \else
9406       /C [\@urlbordercolor]%
9407     \fi
9408   >%
9409 }%
9410 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9411 \special{!endaref}%
9412 \endgroup
9413 }
9414 \def\hyper@link#1#2#3{%
9415 \Hy@VerboseLinkStart{#1}{#2}%
9416 \@ifundefined{@#1bordercolor}{%
9417   \let\CurrentBorderColor\relax
9418 }{%
9419   \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9420 }%
9421 \leavevmode
9422 \protected@edef\Hy@testname{#2}%
9423 \ifx\Hy@testname\@empty
9424   \Hy@Warning{%
9425     Empty destination name,\MessageBreak
9426     using '\Hy@undefinedname'%
9427   }%
9428   \let\Hy@testname\Hy@undefinedname
9429 \fi
9430 \special{!%
9431   aref \expandafter\HyperDestNameFilter
9432     \expandafter{\Hy@testname};%
9433   a=<%
9434     \ifHy@pdfa /F 4\fi
9435     \Hy@setpdfborder
9436     \ifx\CurrentBorderColor\relax
9437     \else
9438       /C [\CurrentBorderColor]%
9439     \fi
9440   >%
9441 }%
9442 \expandafter
9443 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9444 \special{!endaref}%
9445 }
9446 \def\hyper@image#1#2{%
9447 \hyper@linkurl{#2}{#1}%
9448 }
9449 \def\@hyper@launch run:#1\#2#3{%
9450 \Hy@pstringdef\Hy@pstringF{#1}%
9451 \Hy@pstringdef\Hy@pstringP{#3}%

```

```

9452 \leavevmode
9453 \special{!aref %
9454 <u=%
9455 /Type/Action%
9456 /S/Launch%
9457 /F(\Hy@pstringF)%
9458 \Hy@SetNewWindow
9459 \ifx\#3\%
9460 \else
9461 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9462 \fi%
9463 >;%
9464 a=<%
9465 \ifHy@pdfa /F 4\fi
9466 \Hy@setpdfborder
9467 \ifx\@runbordercolor\relax
9468 \else
9469 /C[\@runbordercolor]%
9470 \fi
9471 >%
9472 }%
9473 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9474 \special{!endaref}%
9475 }
9476 \def\Acrobatmenu#1#2{%
9477 \Hy@Acrobatmenu{#1}{#2}{%
9478 \special{!%
9479 aref <u=/S /Named /N /#1>;%
9480 a=<%
9481 \ifHy@pdfa /F 4\fi
9482 \Hy@setpdfborder
9483 \ifx\@menubordercolor\relax
9484 \else
9485 /C[\@menubordercolor]%
9486 \fi
9487 >%
9488 }%
9489 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9490 \special{!endaref}%
9491 }%
9492 }

```

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

The code below makes sense for \TeX 7.02 or later.

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

```

9493 \ifnum\Hy@VTeXversion<702 %
9494 \else
9495 \def\hyper@pagetransition{%
9496 \ifx\@pdfpagetransition\relax
9497 \else
9498 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9499 \else
9500 \hvtex@parse@trans\@pdfpagetransition
9501 \fi
9502 \fi

```

9503 }%

I have to write an “honest” parser to convert raw PDF code into VT_EX \special.
(AVK)

Syntax of VT_EX \special{!trans <transition_effect>}:

```
<transition_effect> ::= <transition_style>[,<transition_duration>]
<transition_style> ::= <Blinds_effect> | <Box_effect> |
                        <Dissolve_effect> | <Glitter_effect> |
                        <Split_effect> | <Wipe_effect>
<Blinds_effect> ::= B[<effect_dimension>]
<Box_effect> ::= X[<effect_motion>]
<Dissolve_effect> ::= D
<Glitter_effect> ::= G[<effect_direction>]
<Split_effect> ::= S[<effect_motion>][<effect_dimension>]
<Wipe_effect> ::= W[<effect_direction>]
<Replace_effect> ::= R
<effect_direction> ::= <number>
<effect_dimension> ::= H | V
<effect_motion> ::= I | O
<transition_duration> ::= <number>
```

Transition codes:

```
9504 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9505 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
9506 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
9507 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
9508 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
9509 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
9510 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
9511 \def\hvtex@param@dimension{/Dm}%
9512 \def\hvtex@param@direction{/Di}%
9513 \def\hvtex@param@duration{/D}%
9514 \def\hvtex@param@motion{/M}%
```

Tokenizer:

```
9515 \def\hvtex@gettoken{%
9516   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9517 }%
```

Notice that tokens in the input buffer must be space delimited.

```
9518 \def\hvtex@gettoken@#1 #2\@nil{%
9519   \edef\hvtex@token{#1}%
9520   \edef\hvtex@buffer{#2}%
9521 }%
9522 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
9523 \let\hvtex@trans@code\@empty
9524 \let\hvtex@param@dimension\@empty
9525 \let\hvtex@param@direction\@empty
9526 \let\hvtex@param@duration\@empty
9527 \let\hvtex@param@motion\@empty
9528 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
9529 \hvtex@gettoken
9530 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
9531 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
9532 \else
9533 \hvtex@gettoken
9534 \fi
9535 \fi
9536 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
9537 \hvtex@trans@params
9538 }%
```

Reentrant macro to parse optional parameters.

```
9539 \def\hvtex@trans@params{%
9540 \ifx\hvtex@buffer\@empty
9541 \else
9542 \hvtex@gettoken
9543 \let\hvtex@trans@par\hvtex@token
9544 \ifx\hvtex@buffer\@empty
9545 \else
9546 \hvtex@gettoken
9547 \ifx\hvtex@trans@par\hvtex@par@duration
```

/D is the effect duration in seconds. V_T_EX special takes it in milliseconds.

```
9548 \let\hvtex@param@duration\hvtex@token
9549 \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
9550 \expandafter\edef\expandafter\hvtex@param@motion
9551 \expandafter{\expandafter\@gobble\hvtex@token}%
9552 \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
9553 \expandafter\edef\expandafter\hvtex@param@dimension
9554 \expandafter{\expandafter\@gobble\hvtex@token}%
9555 \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).

```
9556 \let\hvtex@param@direction\hvtex@token
9557 \fi\fi\fi
9558 \fi
9559 \fi
9560 \ifx\hvtex@buffer\@empty
9561 \let\next\hvtex@produce@trans
9562 \else
9563 \let\next\hvtex@trans@params
9564 \fi
9565 \next
9566 }%
```

Merge <transition__effect> and issue the special when possible. Too lazy to validate optional parameters.

```
9567 \def\hvtex@produce@trans{%
9568 \let\vtex@trans@special\@empty
9569 \if S\hvtex@trans@code
9570 \edef\vtex@trans@special{\hvtex@trans@code
9571 \hvtex@param@dimension\hvtex@param@motion}%
```

```

9572 \else\if B\hvtex@trans@code
9573 \edef\vtex@trans@special{%
9574 \hvtex@trans@code\hvtex@param@dimension
9575 }%
9576 \else\if X\hvtex@trans@code
9577 \edef\vtex@trans@special{%
9578 \hvtex@trans@code\hvtex@param@motion
9579 }%
9580 \else\if W\hvtex@trans@code
9581 \edef\vtex@trans@special{%
9582 \hvtex@trans@code\hvtex@param@direction
9583 }%
9584 \else\if D\hvtex@trans@code
9585 \let\vtex@trans@special\hvtex@trans@code
9586 \else\if R\hvtex@trans@code
9587 \let\vtex@trans@special\hvtex@trans@code
9588 \else\if G\hvtex@trans@code
9589 \edef\vtex@trans@special{%
9590 \hvtex@trans@code\hvtex@param@direction
9591 }%
9592 \fi\fi\fi\fi\fi\fi
9593 \ifx\vtex@trans@special\@empty
9594 \else
9595 \ifx\hvtex@param@duration\@empty
9596 \else
9597 \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9598 \multiply\dimen@\@m
9599 \edef\vtex@trans@special{%
9600 \vtex@trans@special,\strip@pt\dimen@
9601 }%
9602 \fi

```

And all the mess is just for this.

```

9603 \special{!trans \vtex@trans@special}%
9604 \fi
9605 }%
9606 \def\hyper@pageduration{%
9607 \ifx\@pdfpageduration\relax
9608 \else
9609 \ifx\@pdfpageduration\@empty
9610 \special{!duration-}%
9611 \else
9612 \special{!duration \@pdfpageduration}%
9613 \fi
9614 \fi
9615 }%
9616 \def\hyper@pagehidden{%
9617 \ifHy@useHidKey
9618 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9619 \fi
9620 }%
9621 \g@addto@macro\Hy@EveryPageBoxHook{%
9622 \hyper@pagetransition
9623 \hyper@pageduration
9624 \hyper@pagehidden
9625 }%

```

9626 \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

```

9627 \ifx\@pdfproducer\relax
9628   \def\@pdfproducer{VTeX}%
9629   \ifnum\Hy@VTeXversion>\z@
9630     \count@\VTeXversion
9631     \divide\count@ 100 %
9632     \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9633     \multiply\count@ -100 %
9634     \advance\count@\VTeXversion
9635     \edef\@pdfproducer{%
9636       \@pdfproducer
9637       .\ifnum\count@<10 0\fi\the\count@
9638       \ifx\VTeXOS\@undefined\else
9639         \ifnum\VTeXOS>0 %
9640           \ifnum\VTeXOS<6 %
9641             \space(%
9642             \ifcase\VTeXOS
9643               \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9644             \fi
9645             )%
9646           \fi
9647         \fi
9648       \fi
9649       ,\space
9650       \ifnum\OpMode=\@ne PDF\else PS\fi
9651       \space backend%
9652       \ifx\gexmode\@undefined\else
9653         \ifnum\gexmode>\z@\space with GeX\fi
9654       \fi
9655     }%
9656   \fi
9657 \fi

```

Current `!pdfinfo` key syntax:

Key	Field	Type
a	Author	String
b	CropBox	String
c	Creator	String
k	Keywords	String
l	PageLayout	PS
p	PageMode	PS
r	Producer	String
s	Subject	String
t	Title	String
u	URI	PS
v	ViewPreferences	PS

Note: PS objects that are dicts are in <<<...>>> (yuck; no choice).

```
9658 \def\PDF@SetupDoc{%
9659   \ifx\@pdfpagescrop\@empty
9660   \else
9661     \special{!pdfinfo b=<\@pdfpagescrop>}%
9662   \fi
9663   \ifx\@pdfstartpage\@empty
9664   \else
9665     \ifx\@pdfstartview\@empty
9666     \else
9667       \special{!onopen Page\@pdfstartpage}%
9668     \fi
9669   \fi
9670   \special{!pdfinfo p=</\@pdfpagemode>}%
9671   \ifx\@baseurl\@empty
9672   \else
9673     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9674   \fi
9675   \special{!pdfinfo v=<<<%
9676     \ifHy@toolbar\else /HideToolbar true\fi
9677     \ifHy@menubar\else /HideMenubar true\fi
9678     \ifHy>windowui\else /HideWindowUI true\fi
9679     \ifHy@fitwindow /FitWindow true\fi
9680     \ifHy@centerwindow /CenterWindow true\fi
9681     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9682     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9683     \Hy@UseNameKey{Direction}\@pdfdirection
9684     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9685     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9686     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9687     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9688     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9689     \Hy@UseNameKey{Duplex}\@pdfduplex
9690     \ifx\@pdfpicktraybypdfsize\@empty
9691     \else
9692       /PickTrayByPDFSize \@pdfpicktraybypdfsize
9693     \fi
9694     \ifx\@pdfprintpagerange\@empty
9695     \else
9696       /PrintPageRange[\@pdfprintpagerange]%
9697     \fi
9698     \ifx\@pdfnumcopies\@empty
9699     \else
9700       /NumCopies \@pdfnumcopies
9701     \fi
9702   >>>}%
9703   \ifx\@pdfpagelayout\@empty
9704   \else
9705     \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9706   \fi
9707 }%
9708 \HyInfo@AddonUnsupportedtrue
9709 \def\PDF@FinishDoc{%
9710   \Hy@UseMaketitleInfos
9711   \HyInfo@TrappedUnsupported
9712   \special{!pdfinfo a=<\@pdfauthor>}%
9713   \special{!pdfinfo t=<\@pdftitle>}%
```

```

9714 \special{!pdfinfo s=<\@pdfsubject>}%
9715 \special{!pdfinfo c=<\@pdfcreator>}%
9716 \ifx\@pdfproducer\relax
9717 \else
9718 \special{!pdfinfo r=<\@pdfproducer>}%
9719 \fi
9720 \special{!pdfinfo k=<\@pdfkeywords>}%
9721 \Hy@DisableOption{pdfauthor}%
9722 \Hy@DisableOption{pdftitle}%
9723 \Hy@DisableOption{pdfsubject}%
9724 \Hy@DisableOption{pdfcreator}%
9725 \Hy@DisableOption{pdfcreationdate}%
9726 \Hy@DisableOption{pdfmoddate}%
9727 \Hy@DisableOption{pdfproducer}%
9728 \Hy@DisableOption{pdfkeywords}%
9729 \Hy@DisableOption{pdftrapped}%
9730 \Hy@DisableOption{pdfinfo}%
9731 }
9732 </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.

```

9733 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
9734 <package>\providecommand*{\Hy@DistillerDestFix}{-}
9735 <*pdfmark | dviwindo>
9736 \def\Hy@DistillerDestFix{%
9737 \begingroup
9738 \let\x\literalps@out

```

The fix has to be passed unchanged through GeX, if VTeX in PostScript mode with GeX is used.

```

9739 \ifnum \@ifundefined{OpMode}{0}{%
9740 \ifundefined{gexmode}{0}{%
9741 \ifnum\gexmode>0 \OpMode\else 0\fi
9742 }}>1 %
9743 \def\x##1{%
9744 \immediate\special{!##1}%
9745 }%
9746 \fi
9747 \x{%
9748 /product where{%
9749 pop %
9750 product(Distiller)search{%
9751 pop pop pop %
9752 version(.)search{%
9753 exch pop exch pop%
9754 (3011)eq{%
9755 gsave %

```



```

9756      newpath 0 0 moveto closepath clip%
9757      /Courier findfont 10 scalefont setfont %
9758      72 72 moveto(.)show %
9759      grestore%
9760      }if%
9761      }{pop}ifelse%
9762      }{pop}ifelse%
9763      }if%
9764      }%
9765      \endgroup
9766  }
9767  </pdfmark | dviwindo>

```

46.8 Direct pdfmark support

Drivers that load pdfmark.def have to provide the correct macro definitions of

\@pdfproducer	for document information
\literalps@out	PostScript output
\headerps@out	PostScript output that goes in the header area

and the correct definitions of the following PostScript procedures:

H.S	start of anchor, link or rect
#1 H.A	end of anchor, argument=baselineskip in pt
#1 H.L	end of link, argument=baselineskip in pt
H.R	end of rect
H.B	raw rect code

```

9768 <*pdfmark>
9769 \Hy@breaklinks@unsupported
9770 \def\hyper@anchor#1{%
9771   \Hy@SaveLastskip
9772   \Hy@VerboseAnchor{#1}%
9773   \begingroup
9774   \pdfmark[\anchor@spot]{%
9775     pdfmark=/DEST,%
9776     linktype=anchor,%
9777     View=/\@pdfview \@pdfviewparams,%
9778     DestAnchor={#1}%
9779   }%
9780   \endgroup
9781   \Hy@RestoreLastskip
9782 }
9783 \ifundefined{hyper@anchorstart}{-}{\endinput}
9784 \def\hyper@anchorstart#1{%
9785   \Hy@SaveLastskip
9786   \Hy@VerboseAnchor{#1}%
9787   \literalps@out{H.S}%
9788   \Hy@AllowHyphens
9789   \xdef\hyper@currentanchor{#1}%
9790   \Hy@activeanchortrue
9791 }
9792 \def\hyper@anchorend{%
9793   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9794   \pdfmark{%
9795     pdfmark=/DEST,%
9796     linktype=anchor,%

```

```

9797 View=\/@pdfview \@pdfviewparams,%
9798 DestAnchor=\hyper@currentanchor,%
9799 }%
9800 \Hy@activeanchorfalse
9801 \Hy@RestoreLastskip
9802 }
9803 \def\hyper@linkstart#1#2{%
9804 \Hy@VerboseLinkStart{#1}{#2}%
9805 \ifHy@breaklinks
9806 \else
9807 \leavevmode\hbox\bgroup
9808 \fi
9809 \expandafter\Hy@colorlink\csname @#1color\endcsname
9810 \literalps@out{H.S}%
9811 \Hy@AllowHyphens
9812 \xdef\hyper@currentanchor{#2}%
9813 \gdef\hyper@currentlinktype{#1}%
9814 }
9815 \def\hyper@linkend{%
9816 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9817 \@ifundefined{@\hyper@currentlinktype bordercolor}{%
9818 \let\Hy@tempcolor\relax
9819 }{%
9820 \edef\Hy@tempcolor{%
9821 \csname @\hyper@currentlinktype bordercolor\endcsname
9822 }%
9823 }%
9824 \pdfmark{%
9825 pdfmark=/ANN,%
9826 linktype=link,%
9827 Subtype=/Link,%
9828 PDFAFlags=4,%
9829 Dest=\hyper@currentanchor,%
9830 AcroHighlight=\@pdfhighlight,%
9831 Border=\@pdfborder,%
9832 BorderStyle=\@pdfborderstyle,%
9833 Color=\Hy@tempcolor,%
9834 Raw=H.B%
9835 }%
9836 \Hy@endcolorlink
9837 \ifHy@breaklinks
9838 \else
9839 \egroup
9840 \fi
9841 }

```

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.

```

9842 \begingroup
9843 \catcode'P=12 %
9844 \catcode'T=12 %
9845 \lowercase{\endgroup
9846 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
9847 }
9848 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```
9849 \def\hyper@pagetransition{%
9850   \ifx\@pdfpagetransition\relax
9851   \else
9852     \ifx\@pdfpagetransition\@empty
9853       % 1. Does an old entry have to be deleted?
9854       % 2. If 1=yes, how to delete?
9855     \else
9856       \pdfmark{%
9857         pdfmark=/PUT,%
9858         Raw={%
9859           \string{ThisPage\string}%
9860           <</Trans << /S /\@pdfpagetransition\space >> >>%
9861         }%
9862       }%
9863     \fi
9864   \fi
9865 }
```

\hyper@pageduration

```
9866 \def\hyper@pageduration{%
9867   \ifx\@pdfpageduration\relax
9868   \else
9869     \ifx\@pdfpageduration\@empty
9870       % 1. Does an old entry have to be deleted?
9871       % 2. If 1=yes, how to delete?
9872     \else
9873       \pdfmark{%
9874         pdfmark=/PUT,%
9875         Raw={%
9876           \string{ThisPage\string}%
9877           <</Dur \@pdfpageduration>>%
9878         }%
9879       }%
9880     \fi
9881   \fi
9882 }
```

\hyper@pagehidden

```
9883 \def\hyper@pagehidden{%
9884   \ifHy@useHidKey
9885     \pdfmark{%
9886       pdfmark=/PUT,%
9887       Raw={%
9888         \string{ThisPage\string}%
9889         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
9890       }%
9891     }%
9892   \fi
9893 }

9894 \g@addto@macro\Hy@EveryPageBoxHook{%
9895   \hyper@pagetransition
9896   \hyper@pageduration
9897   \hyper@pagehidden
9898 }
```

```

9899 \def\hyper@image#1#2{%
9900   \hyper@linkurl{#2}{#1}%
9901 }
9902 \def\Hy@undefinedname{UNDEFINED}
9903 \def\hyper@link#1#2#3{%
9904   \Hy@VerboseLinkStart{#1}{#2}%
9905   \@ifundefined{#1bordercolor}{%
9906     \let\Hy@tempcolor\relax
9907   }{%
9908     \edef\Hy@tempcolor{\csname #1bordercolor\endcsname}%
9909   }%
9910   \begingroup
9911     \protected@edef\Hy@testname{#2}%
9912     \ifx\Hy@testname\@empty
9913       \Hy@Warning{%
9914         Empty destination name,\MessageBreak
9915         using '\Hy@undefinedname'%
9916       }%
9917     \let\Hy@testname\Hy@undefinedname
9918   \fi
9919   \pdfmark[{#3}]{%
9920     Color=\Hy@tempcolor,%
9921     linktype={#1},%
9922     AcroHighlight=\@pdfhighlight,%
9923     Border=\@pdfborder,%
9924     BorderStyle=\@pdfborderstyle,%
9925     pdfmark=/ANN,%
9926     Subtype=/Link,%
9927     PDFAFlags=4,%
9928     Dest=\Hy@testname
9929   }%
9930   \endgroup
9931 }
9932 \newtoks\pdf@docset
9933 \def\PDF@FinishDoc{%
9934   \Hy@UseMaketitleInfos
9935   \Hy@Info@GenerateAddons
9936   \let\Hy@temp\@empty
9937   \ifx\@pdfcreationdate\@empty
9938   \else
9939     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
9940   \fi
9941   \ifx\@pdfmoddate\@empty
9942   \else
9943     \expandafter\def\expandafter\Hy@temp\expandafter{%
9944       \Hy@temp
9945       ModDate=\@pdfmoddate,%
9946     }%
9947   \fi
9948   \ifx\@pdfproducer\relax
9949   \else
9950     \expandafter\def\expandafter\Hy@temp\expandafter{%
9951       \Hy@temp
9952       Producer=\@pdfproducer,%
9953     }%
9954   \fi
9955   \expandafter

```

```

9956 \pdfmark\expandafter{%
9957   \Hy@temp
9958   pdfmark=/DOCINFO,%
9959   Title=\@pdftitle,%
9960   Subject=\@pdfsubject,%
9961   Creator=\@pdfcreator,%
9962   Author=\@pdfauthor,%
9963   Keywords=\@pdfkeywords,%
9964   Trapped=\@pdftrapped
9965 }%
9966 \ifx\HyInfo@Addons\@empty
9967 \else
9968   \pdfmark{%
9969     pdfmark=/DOCINFO,%
9970     Raw={\HyInfo@Addons}%
9971   }%
9972 \fi
9973 \Hy@DisableOption{pdfauthor}%
9974 \Hy@DisableOption{pdftitle}%
9975 \Hy@DisableOption{pdfsubject}%
9976 \Hy@DisableOption{pdfcreator}%
9977 \Hy@DisableOption{pdfcreationdate}%
9978 \Hy@DisableOption{pdfmoddate}%
9979 \Hy@DisableOption{pdfproducer}%
9980 \Hy@DisableOption{pdfkeywords}%
9981 \Hy@DisableOption{pdftrapped}%
9982 \Hy@DisableOption{pdfinfo}%
9983 }
9984 \def\PDF@SetupDoc{%
9985   \def\Hy@temp{%
9986     \ifx\@pdfstartpage\@empty
9987     \else
9988       \ifx\@pdfstartview\@empty
9989       \else
9990         \edef\Hy@temp{%
9991           ,Page=\@pdfstartpage
9992           ,View=\@pdfstartview
9993         }%
9994       \fi
9995     \fi
9996     \edef\Hy@temp{%
9997       \noexpand\pdfmark{%
9998         pdfmark=/DOCVIEW,%
9999         PageMode=/\@pdfpagemode
10000       }\Hy@temp
10001     }%
10002   }%
10003   \Hy@temp
10004   \ifx\@pdfpagescrop\@empty
10005   \else
10006     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10007   \fi
10008   \edef\Hy@temp{%
10009     \ifHy@toolbar\else /HideToolbar true\fi
10010     \ifHy@menubar\else /HideMenubar true\fi
10011     \ifHy>windowui\else /HideWindowUI true\fi
10012     \ifHy@fitwindow /FitWindow true\fi

```

```

10013 \ifHy@centerwindow /CenterWindow true\fi
10014 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10015 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10016 \Hy@UseNameKey{Direction}\@pdfdirection
10017 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10018 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10019 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10020 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10021 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10022 \Hy@UseNameKey{Duplex}\@pdfduplex
10023 \ifx\@pdfpicktraybypdfsize\@empty
10024 \else
10025 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10026 \fi
10027 \ifx\@pdfprintpagerange\@empty
10028 \else
10029 /PrintPageRange[\@pdfprintpagerange]%
10030 \fi
10031 \ifx\@pdfnumcopies\@empty
10032 \else
10033 /NumCopies \@pdfnumcopies
10034 \fi
10035 }%
10036 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10037 \pdfmark{%
10038 pdfmark=/PUT,%
10039 Raw={%
10040 \string{Catalog\string}<<%
10041 \ifx\Hy@temp\@empty
10042 \else
10043 /ViewerPreferences<<\Hy@temp>>%
10044 \fi
10045 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10046 \ifx\@pdflang\@empty
10047 \else
10048 /Lang(\@pdflang)%
10049 \fi
10050 \ifx\@baseurl\@empty
10051 \else
10052 /URI<</Base(\Hy@pstringB)>>%
10053 \fi
10054 >>%
10055 }%
10056 }%
10057 }
10058 </pdfmark>
10059 <*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.

```

10060 \newif\ifHy@pdfmarkerror
10061 \def\pdfmark{\@ifnextchar{\@pdfmark@}{\pdfmark@[]}}
10062 \def\pdfmark@[#1]#2{%
10063 \Hy@pdfmarkerrorfalse

```

```

10064 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10065 \@processme
10066 \let\pdf@type\relax
10067 \setkeys{PDF}{#2}%
10068 \ifHy@pdfmarkerror
10069 \else
10070 \ifx\pdf@type\relax
10071 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10072 \ifx\#1\%
10073 \else
10074 \pdf@rect{#1}%
10075 \fi
10076 \else
10077 \ifx\#1\%
10078 \literalps@out{%
10079 [\the\pdf@toks\space\pdf@type\space pdfmark%
10080 }%
10081 \else
10082 \@ifundefined{@\pdf@linktype color}{%
10083 \Hy@colorlink\@linkcolor
10084 }{%
10085 \expandafter\Hy@colorlink
10086 \csname @\pdf@linktype color\endcsname
10087 }%
10088 \pdf@rect{#1}%
10089 \literalps@out{%
10090 [\the\pdf@toks\space\pdf@type\space pdfmark%
10091 }%
10092 \Hy@endcolorlink
10093 \fi
10094 \fi
10095 \fi
10096 }

```

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}

```

```

10097 \newsavebox{\pdf@box}
10098 \providecommand*{\Hy@setouterhbox}{\sbox}
10099 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10100 \def\Hy@DEST{/DEST}
10101 \def\pdf@rect#1{%
10102 \leavevmode
10103 \ifHy@breaklinks
10104 \Hy@setouterhbox\pdf@box{\Hy@AllowHyphens#1}%
10105 \else
10106 \sbox\pdf@box{#1}%
10107 \fi
10108 \dimen@\ht\pdf@box
10109 \ifdim\dp\pdf@box=\z@

```

```

10110 \literalps@out{H.S}%
10111 \else
10112 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
10113 \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...).

```

10114 \ifHy@breaklinks
10115 \expandafter\Hy@breaklinksunhbox
10116 \else
10117 \expandafter\box
10118 \fi
10119 \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

10120 \ifdim\dimen@=\z@
10121 \literalps@out{H.R}%
10122 \else
10123 \raise\dimen@\hbox{\literalps@out{H.R}}%
10124 \fi
10125 \ifx\pdf@type\Hy@DEST
10126 \else
10127 \pdf@addtoksx{H.B}%
10128 \fi
10129 }

```

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.

```

10130 \newtoks\pdf@toks
10131 \newtoks\pdf@defaulttoks
10132 \pdf@defaulttoks={}%
10133 \def\pdf@addtoks#1#2{%
10134 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10135 \@processme
10136 }
10137 \def\pdf@addtoksx#1{%
10138 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10139 \@processme
10140 }
10141 \def\PDFdefaults#1{%
10142 \pdf@defaulttoks={#1}%
10143 }

```

This is the list of allowed keys. See the Acrobat manual for an explanation.

```

10144 % what is the type of pdfmark?
10145 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10146 % what is the link type?
10147 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10148 \def\pdf@linktype{link}
10149 % parameter is a stream of PDF
10150 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
10151 % parameter is a name
10152 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10153 % parameter is a array

```



```

10154 \define@key{PDF}{Border}{%
10155   \edef\Hy@temp{#1}%
10156   \ifx\Hy@temp\@empty
10157     \else
10158       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10159     \fi
10160 }
10161 \let\Hy@BorderArrayPatch\@empty
10162 % parameter is a dictionary
10163 \define@key{PDF}{BorderStyle}{%
10164   \edef\Hy@temp{#1}%
10165   \ifx\Hy@temp\@empty
10166     \else
10167       \pdf@addtoks{<<#1>>}{BS}%
10168     \fi
10169 }
10170 % parameter is a array
10171 \define@key{PDF}{Color}{%
10172   \ifx\relax#1\relax
10173     \else
10174       \pdf@addtoks{[#1]}{Color}% hash-ok
10175     \fi
10176 }
10177 % parameter is a string
10178 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10179 % parameter is a integer
10180 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10181 % parameter is a array
10182 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10183 % parameter is a string
10184 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10185 % parameter is a string or file
10186 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10187 % parameter is a destination
10188 \define@key{PDF}{Dest}{%
10189   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10190   \ifx\Hy@pstringDest\@empty
10191     \Hy@pdfmarkerrortrue
10192     \Hy@Warning{Destination with empty name ignored}%
10193   \else
10194     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10195   \fi
10196 }
10197 \define@key{PDF}{DestAnchor}{%
10198   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10199   \ifx\Hy@pstringDest\@empty
10200     \Hy@pdfmarkerrortrue
10201     \Hy@Warning{Destination with empty name ignored}%
10202   \else
10203     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10204   \fi
10205 }
10206 % parameter is a string
10207 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
10208 % parameter is a string
10209 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
10210 % parameter is a int

```

```

10211 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
10212 \define@key{PDF}{PDFAFlags}{%
10213   \ifHy@pdfa
10214     \pdf@addtoks{#1}{F}%
10215   \fi
10216 }
10217 % parameter is a name
10218 \define@key{PDF}{AcroHighlight}{%
10219   \begingroup
10220     \edef\x{#1}%
10221     \expandafter\endgroup\ifx\x@empty
10222     \else
10223       \pdf@addtoks{#1}{H}%
10224     \fi
10225 }
10226 % parameter is a string
10227 \define@key{PDF}{ID}{\pdf@addtoks{#1}{ID}}% hash-ok
10228 % parameter is a string
10229 \define@key{PDF}{MacFile}{\pdf@addtoks{#1}{MacFile}}
10230 % parameter is a string
10231 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
10232 % parameter is a string
10233 \define@key{PDF}{Op}{\pdf@addtoks{#1}{Op}}
10234 % parameter is a Boolean
10235 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
10236 % parameter is an integer or name
10237 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
10238 % parameter is a name
10239 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
10240 % parameter is a string
10241 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
10242 % parameter is an array
10243 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
10244 % parameter is an integer
10245 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
10246 % parameter is a name
10247 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
10248 % parameter is a string
10249 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
10250 % parameter is a string
10251 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
10252 % parameter is a string
10253 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
10254 % parameter is an array
10255 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
10256 % parameter is a string
10257 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

10258 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
10259 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
10260 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
10261 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
10262 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
10263 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
10264 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
10265 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
10266 \define@key{PDF}{Base}{\pdf@addtoks{#1}{Base}}

```

```

10267 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
10268 \define@key{PDF}{Trapped}{%
10269   \edef\Hy@temp{#1}%
10270   \ifx\Hy@temp\@empty
10271   \else
10272     \pdf@addtoks{/#1}{Trapped}%
10273   \fi
10274 }
10275
10276 </pdfmarkbase>
10277 <*pdfmark>
10278 \def\Acrobatmenu#1#2{%
10279   \Hy@Acrobatmenu{#1}{#2}{%
10280     \pdfmark[{#2}]{%
10281       linktype=menu,%
10282       pdfmark=/ANN,%
10283       AcroHighlight=\@pdfhighlight,%
10284       Border=\@pdfborder,%
10285       BorderStyle=\@pdfborderstyle,%
10286       Action={<< /Subtype /Named /N /#1 >>},%
10287       Subtype=/Link,%
10288       PDFAFlags=4%
10289     }%
10290   }%
10291 }

```

And now for some useful examples:

```

10292 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
10293 \def\PDFNextPage@[#1]#2{%
10294   \pdfmark[{#2}]{%
10295     #1,%
10296     Border=\@pdfborder,%
10297     BorderStyle=\@pdfborderstyle,%
10298     Color=.2 .1 .5,%
10299     pdfmark=/ANN,%
10300     Subtype=/Link,%
10301     PDFAFlags=4,%
10302     Page=/Next%
10303   }%
10304 }
10305 \def\PDFPreviousPage{%
10306   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10307 }
10308 \def\PDFPreviousPage@[#1]#2{%
10309   \pdfmark[{#2}]{%
10310     #1,%
10311     Border=\@pdfborder,%
10312     BorderStyle=\@pdfborderstyle,%
10313     Color=.4 .4 .1,%
10314     pdfmark=/ANN,%
10315     Subtype=/Link,%
10316     PDFAFlags=4,%
10317     Page=/Prev%
10318   }%
10319 }
10320 \def\PDFOpen#1{%
10321   \pdfmark{#1,pdfmark=/DOCVIEW}%
10322 }

```

This will only work if you use Distiller 2.1 or higher.

```
10323 \def\hyper@linkurl#1#2{%
10324   \begingroup
10325   \Hy@pstringdef\Hy@pstringURI{#2}%
10326   \hyper@chars
10327   \leavevmode
10328   \pdfmark[{#1}]{%
10329     pdfmark=/ANN,%
10330     linktype=url,%
10331     AcroHighlight=\@pdfhighlight,%
10332     Border=\@pdfborder,%
10333     BorderStyle=\@pdfborderstyle,%
10334     Color=\@urlbordercolor,%
10335     Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10336     Subtype=/Link,%
10337     PDFAFlags=4%
10338   }%
10339 \endgroup
10340 }
10341 \def\hyper@linkfile#1#2#3{%
10342   \begingroup
10343   \Hy@pstringdef\Hy@pstringF{#2}%
10344   \Hy@pstringdef\Hy@pstringD{#3}%
10345   \leavevmode
10346   \pdfmark[{#1}]{%
10347     pdfmark=/ANN,%
10348     Subtype=/Link,%
10349     PDFAFlags=4,%
10350     AcroHighlight=\@pdfhighlight,%
10351     Border=\@pdfborder,%
10352     BorderStyle=\@pdfborderstyle,%
10353     linktype=file,%
10354     Color=\@filebordercolor,%
10355     Action={%
10356       <<%
10357         /S/GoToR%
10358         \Hy@SetNewWindow
10359         /F(\Hy@pstringF)%
10360         /D\ifx\#3\[\[0 \@pdfstartview\]\else(\Hy@pstringD)cvn\fi
10361       >>%
10362     }%
10363   }%
10364 \endgroup
10365 }
10366 \def\@hyper@launch run:#1\#2#3{%
10367   \begingroup
10368   \Hy@pstringdef\Hy@pstringF{#1}%
10369   \Hy@pstringdef\Hy@pstringP{#3}%
10370   \leavevmode
10371   \pdfmark[{#2}]{%
10372     pdfmark=/ANN,%
10373     Subtype=/Link,%
10374     PDFAFlags=4,%
10375     AcroHighlight=\@pdfhighlight,%
10376     Border=\@pdfborder,%
10377     BorderStyle=\@pdfborderstyle,%
10378     linktype=run,%
```

```

10379     Color=\@runbordercolor,%
10380     Action={%
10381     <<%
10382         /S/Launch%
10383         \Hy@SetNewWindow
10384         /F(\Hy@pstringF)%
10385         \ifx\#3\%
10386         \else
10387             /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10388         \fi
10389     >>%
10390     }%
10391 }%
10392 \endgroup
10393 }
10394 </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.

```

10395 < *dvips>
10396 \providecommand*{\XR@ext}{pdf}
10397 \def\Hy@raisedlink{}
10398 \def\literals@out#1{\special{ps:SDict begin #1 end}}%
10399 \def\headerps@out#1{\special{! #1}}%
10400 \input{pdfmark.def}%
10401 \ifx\@pdfproducer\relax
10402   \def\@pdfproducer{dvips + Distiller}%
10403 \fi
10404 \providecommand*\@pdfborder{0 0 1}
10405 \providecommand*\@pdfborderstyle{}
10406 \providecommand*\@pdfview{XYZ}
10407 \providecommand*\@pdfviewparams{ H.V}
10408 \def\Hy@BorderArrayPatch{BorderArrayPatch}
10409 \g@addto@macro\Hy@FirstPageHook{%
10410   \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.

```

10411 /DvipsToPDF{72.27 mul Resolution div} def%
10412 /PDFToDvips{72.27 div Resolution mul} def%
10413 /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.

```
10414 /BorderArrayPatch{%
10415   [exch{%
10416     dup dup type/integertype eq exch type/realtype eq or%
10417     {BPToDvips}if%
10418   }forall]%
10419 }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.

```
10420 /HyperBorder {1 PDFToDvips} def%
10421 /H.V {pdf@hoff pdf@voff null} def%
10422 /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

```
10423 /H.S {%
10424   currentpoint %
10425   HyperBorder add /pdf@lly exch def %
10426   dup DvipsToPDF 72 add /pdf@hoff exch def %
10427   HyperBorder sub /pdf@llx exch def%
10428 } def%
```

The calculation of upper left y is done without raising the point in \TeX , by simply adding on the current `\baselineskip` to the current y . This is usually too much, so we remove a notional 2 points.

We have to see what the current `baselineskip` is, and convert it to the dvips coordinate system.

Argument: `baselineskip` in pt. The x and y coordinates of the current point, minus the `baselineskip`

```
10429 /H.L {%
10430   2 sub dup%
10431   /HyperBasePt exch def %
10432   PDFToDvips /HyperBaseDvips exch def %
10433   currentpoint %
10434   HyperBaseDvips sub /pdf@ury exch def%
10435   /pdf@urx exch def%
10436 } def%
10437 /H.A {%
10438   H.L %
10439 % |pdf@voff| = the distance from the top of the page to a point
10440 % |\baselineskip| above the current point in PDF coordinates
10441   currentpoint exch pop %
10442   vsize 72 sub exch DvipsToPDF %
10443   HyperBasePt sub % baseline skip
10444   sub /pdf@voff exch def%
10445 } def%
10446 /H.R {%
10447   currentpoint %
10448   HyperBorder sub /pdf@ury exch def %
10449   HyperBorder add /pdf@urx exch def %
10450 % |pdf@voff| = the distance from the top of the page to the current point, in
10451 % PDF coordinates
10452   currentpoint exch pop vsize 72 sub %
10453   exch DvipsToPDF sub /pdf@voff exch def%
10454 } def%
```

```

10455 }%
10456 }
10457 \AtBeginShipoutFirst{%
10458   \ifHy@setpagesize
10459     \begingroup
10460       \ifundefined{stockwidth}{%
10461         \ifdim\paperwidth>\z@
10462           \ifdim\paperheight>\z@
10463             \special{papersize=\the\paperwidth,\the\paperheight}%
10464           \fi
10465         \fi
10466       }{%
10467         \ifdim\stockwidth>\z@
10468           \ifdim\stockheight>\z@
10469             \special{papersize=\the\stockwidth,\the\stockheight}%
10470           \fi
10471         \fi
10472       }%
10473     \endgroup
10474   \fi
10475   \Hy@DisableOption{setpagesize}%
10476 }
10477 </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.

```

10478 <*vtexpdfmark>
10479 \providecommand*{\XR@ext}{pdf}
10480 \def\Hy@raisedlink{}
10481 \def\literalps@out#1{\special{pS:#1}}%
10482 \def\headerps@out#1{\immediate\special{pS:#1}}%
10483 \input{pdfmark.def}%
10484 \ifx\@pdfproducer\relax
10485   \ifnum\OpMode=\@ne
10486     \def\@pdfproducer{VTeX}%
10487   \else
10488     \def\@pdfproducer{VTeX + Distiller}%
10489   \fi
10490 \fi
10491 \providecommand*\@pdfborder{0 0 1}
10492 \providecommand*\@pdfborderstyle{}
10493 \providecommand*\@pdfview{XYZ}
10494 \providecommand*\@pdfviewparams{ H.V}
10495 \g@addto@macro\Hy@FirstPageHook{%
10496   \headerps@out{%
10497     /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.

```

10498   /HyperBorder {1} def%
10499   /H.V {pdf@hoff pdf@voff null} def%
10500   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

10501 /H.S {%
10502   currentpoint %
10503   HyperBorder sub%
10504   /pdf@lly exch def %
10505   dup 72 add /pdf@hoff exch def %
10506   HyperBorder sub%
10507   /pdf@llx exch def%
10508 } def%

```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

10509 /H.L {%
10510   2 sub%
10511   /HyperBasePt exch def %
10512   currentpoint %
10513   HyperBasePt add HyperBorder add%
10514   /pdf@ury exch def %
10515   HyperBorder add%
10516   /pdf@urx exch def%
10517 } def%
10518 /H.A {%
10519   H.L %
10520   currentpoint exch pop %
10521   vsize 72 sub exch %
10522   HyperBasePt add add%
10523   /pdf@voff exch def%
10524 } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

10525 /H.R {%
10526   currentpoint %
10527   HyperBorder add%
10528   /pdf@ury exch def %
10529   HyperBorder add%
10530   /pdf@urx exch def %
10531   currentpoint exch pop vsize 72 sub add%
10532   /pdf@voff exch def%
10533 } def%
10534 }%
10535 }
10536 </vtxpdfmark>

```

46.11 Textures

```

10537 <*textures>
10538 \providecommand*{\XR@ext}{pdf}

```

At the suggestion of Jacques Distler (distler@golem.ph.utexas.edu), try to derive a suitable driver for Textures. This was initially a copy of dvips, with some guesses about Textures behaviour. Ross Moore (ross@maths.mq.edu.au) has added modifications for better compatibility, and to support use of pdfmark.

Start by defining a macro that expands to the end-of-line character. This will be used to format the appearance of PostScript code, to enhance readability, and avoid excessively long lines which might otherwise become broken to bad places.

\Hy@ps@CR The macro \Hy@ps@CR contains the end-of-line character.

```
10539 \begingroup
10540 \obeylines %
10541 \gdef\Hy@ps@CR{\noexpand
10542 }%
10543 \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.

```
10544 \def\literalps@out#1{%
10545   \special{postscript 0 0 transform}%
10546   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10547 }%
10548 %
```

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.

```
10549 \def\headerps@out#1{%
10550   \special{%
10551     prepostscript TeXdict begin\Hy@ps@CR
10552       #1\Hy@ps@CR
10553     end%
10554   }%
10555 }%
10556 %
```

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.

```
10557 \g@addto@macro\Hy@FirstPageHook{%
10558   \headerps@out{%
10559     /betterpdfmark {%
10560       systemdict begin %
10561       dup /BP eq%
10562       {cleartomark gsave nulldevice []}%
10563       {dup /EP eq%
10564         {cleartomark cleartomark grestore}%
10565         {cleartomark}%
10566       }ifelse%
10567     }ifelse %
10568   end%
10569 }def\Hy@ps@CR
10570 ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10571 }% end of \headerps@out
10572 }% end of \AtBeginShipoutFirst
10573 %
10574 \input{pdfmark.def}%
10575 %
10576 \ifx\@pdfproducer\relax
```

```

10577 \def\@pdfproducer{Textures + Distiller}%
10578 \fi
10579 \providecommand*\@pdfborder{0 0 1}
10580 \providecommand*\@pdfborderstyle{}
10581 \providecommand*\@pdfview{XYZ}
10582 \providecommand*\@pdfviewparams{ H.V}
10583 %

```

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 .

```

10584 \AfterBeginDocument{%
10585 \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

10586 /vsize {\Hy@pageheight} def%
10587 /DvipsToPDF {} def%
10588 /PDFToDvips {} def%
10589 /BPToDvips {} def%
10590 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10591 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
10592 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10593 /H.S {%
10594 currentpoint %
10595 HyperBorder add /pdf@lly exch def %
10596 dup DvipsToPDF 72 add /pdf@hoff exch def %
10597 HyperBorder sub /pdf@llx exch def%
10598 } def\Hy@ps@CR
10599 /H.L {%
10600 2 sub %
10601 PDFToDvips /HyperBase exch def %
10602 currentpoint %
10603 HyperBase sub /pdf@ury exch def%
10604 /pdf@urx exch def%
10605 } def\Hy@ps@CR
10606 /H.A {%
10607 H.L %
10608 currentpoint exch pop %
10609 vsize 72 sub exch DvipsToPDF %
10610 HyperBase sub % baseline skip
10611 sub /pdf@voff exch def%
10612 } def\Hy@ps@CR
10613 /H.R {%
10614 currentpoint %
10615 HyperBorder sub /pdf@ury exch def %
10616 HyperBorder add /pdf@urx exch def %
10617 currentpoint exch pop vsize 72 sub %
10618 exch DvipsToPDF sub /pdf@voff exch def%
10619 } def\Hy@ps@CR
10620 }%
10621 }

10622 \AfterBeginDocument{%
10623 \ifHy@colorlinks
10624 \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10625 \fi

```

10626 }

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.

```
10627 \expandafter\let\expandafter\keepPDF@SetupDoc
10628   \csname PDF@SetupDoc\endcsname
10629 \def\PDF@SetupDoc{%
10630   \ifx\@baseurl\@empty
10631   \else
10632     \special{html:<base href="\@baseurl">}%
10633   \fi
10634   \keepPDF@SetupDoc
10635 }
10636 \def\hyper@anchor#1{%
10637   \Hy@SaveLastskip
10638   \Hy@VerboseAnchor{#1}%
10639   \begingroup
10640     \let\protect=\string
10641     \special{html:<a name=%
10642       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10643   \endgroup
10644   \Hy@activeanchortrue
10645   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10646   \special{html:</a>}%
10647   \Hy@activeanchorfalse
10648   \Hy@RestoreLastskip
10649 }
10650 \def\hyper@anchorstart#1{%
10651   \Hy@SaveLastskip
10652   \Hy@VerboseAnchor{#1}%
10653   \begingroup
10654     \hyper@chars
10655     \special{html:<a name=%
10656       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10657   \endgroup
10658   \Hy@activeanchortrue
10659 }
10660 \def\hyper@anchorend{%
10661   \special{html:</a>}%
10662   \Hy@activeanchorfalse
10663   \Hy@RestoreLastskip
10664 }
10665 \def\@urlltype{url}
10666 \def\hyper@linkstart#1#2{%
10667   \Hy@VerboseLinkStart{#1}{#2}%
10668   \expandafter\Hy@colorlink\csname @#1color\endcsname
10669   \def\Hy@tempa{#1}%
10670   \ifx\Hy@tempa\@urlltype
10671     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10672   \else
10673     \begingroup
10674       \hyper@chars
10675       \special{%
10676         html:<a href=%
10677           \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>
10678         }%
10679     \endgroup
10680   \fi
```

```

10681 }
10682 \def\hyper@linkend{%
10683   \special{html:</a>}%
10684   \Hy@endcolorlink
10685 }
10686 \def\hyper@linkfile#1#2#3{%
10687   \hyper@linkurl{#1}{%
10688     \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10689   }%
10690 }
10691 \def\hyper@linkurl#1#2{%
10692   \leavevmode
10693   \ifHy@raiselinks
10694     \setbox\@tempboxa=\color@hbox #1\color@endbox
10695     \@linkdim\dp\@tempboxa
10696     \lower\@linkdim\hbox{%
10697       \hyper@chars
10698       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10699     }%
10700     \Hy@colorlink\@urlcolor#1%
10701     \@linkdim\ht\@tempboxa
10702     \advance\@linkdim by -6.5\p@
10703     \raise\@linkdim\hbox{\special{html:</a>}}%
10704     \Hy@endcolorlink
10705   \else
10706     \begingroup
10707     \hyper@chars
10708     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10709     \Hy@colorlink\@urlcolor#1%
10710     \special{html:</a>}%
10711     \Hy@endcolorlink
10712   \endgroup
10713 \fi
10714 }

```

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

```

10715 \def\hyper@link#1#2#3{%
10716   \Hy@VerboseLinkStart{#1}{#2}%
10717   \hyper@linkurl{#3}{\#\Hy@HyperDestNameFilter{#2}}%
10718 }
10719 \def\hyper@image#1#2{%
10720   \begingroup
10721   \hyper@chars
10722   \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10723   \endgroup
10724 }
10725 </textures>

```

46.12 dvipsone

```

10726 % \subsection{dvipsone driver}
10727 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
10728 % |\special| commands.
10729 <*dvipsone>
10730 \providecommand*\XR@ext}{pdf}
10731 \def\Hy@raisedlink{}
10732 \providecommand*\@pdfborder{0 0 1}
10733 \providecommand*\@pdfborderstyle{}

```

```

10734 \def\literalps@out#1{\special{ps:#1}}%
10735 \def\headerps@out#1{\special{headertext=#1}}%
10736 \input{pdfmark.def}%
10737 \ifx\@pdfproducer\relax
10738   \def\@pdfproducer{dvipsone + Distiller}%
10739 \fi
10740 \HyInfo@AddonUnsupportedtrue
10741 \def\PDF@FinishDoc{%
10742   \Hy@UseMaketitleInfos
10743   \HyInfo@TrappedUnsupported
10744   \special{PDF: Keywords \@pdfkeywords}%
10745   \special{PDF: Title \@pdftitle}%
10746   \special{PDF: Creator \@pdfcreator}%
10747   \ifx\@pdfcreationdate\@empty
10748     \else
10749     \special{PDF: CreationDate \@pdfcreationdate}%
10750   \fi
10751   \ifx\@pdfmoddate\@empty
10752     \else
10753     \special{PDF: ModDate \@pdfmoddate}%
10754   \fi
10755   \special{PDF: Author \@pdfauthor}%
10756   \ifx\@pdfproducer\relax
10757     \else
10758     \special{PDF: Producer \@pdfproducer}%
10759   \fi
10760   \special{PDF: Subject \@pdfsubject}%
10761   \Hy@DisableOption{pdfauthor}%
10762   \Hy@DisableOption{pdftitle}%
10763   \Hy@DisableOption{pdfsubject}%
10764   \Hy@DisableOption{pdfcreator}%
10765   \Hy@DisableOption{pdfcreationdate}%
10766   \Hy@DisableOption{pdfmoddate}%
10767   \Hy@DisableOption{pdfproducer}%
10768   \Hy@DisableOption{pdfkeywords}%
10769   \Hy@DisableOption{pdftrapped}%
10770   \Hy@DisableOption{pdfinfo}%
10771 }
10772 \def\PDF@SetupDoc{%
10773   \def\Hy@temp{}%
10774   \ifx\@pdfstartpage\@empty
10775     \else
10776     \ifx\@pdfstartview\@empty
10777       \else
10778       \edef\Hy@temp{%
10779         ,Page=\@pdfstartpage
10780         ,View=\@pdfstartview
10781       }%
10782     \fi
10783   \fi
10784   \edef\Hy@temp{%
10785     \noexpand\pdfmark{%
10786       pdfmark=/DOCVIEW,%
10787       PageMode=/\@pdfpagemode
10788     }\Hy@temp
10789   }%
10790 }%

```

```

10791 \Hy@temp
10792 \ifx\@pdfpagescrop\@empty
10793 \else
10794 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10795 \fi
10796 \edef\Hy@temp{%
10797 \ifHy@toolbar\else /HideToolbar true\fi
10798 \ifHy@menubar\else /HideMenubar true\fi
10799 \ifHy>windowui\else /HideWindowUI true\fi
10800 \ifHy@fitwindow /FitWindow true\fi
10801 \ifHy@centerwindow /CenterWindow true\fi
10802 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10803 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10804 \Hy@UseNameKey{Direction}\@pdfdirection
10805 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10806 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10807 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10808 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10809 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10810 \Hy@UseNameKey{Duplex}\@pdfduplex
10811 \ifx\@pdfpicktraybypdfsize\@empty
10812 \else
10813 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10814 \fi
10815 \ifx\@pdfprintpagerange\@empty
10816 \else
10817 /PrintPageRange[\@pdfprintpagerange]%
10818 \fi
10819 \ifx\@pdfnumcopies\@empty
10820 \else
10821 /NumCopies \@pdfnumcopies
10822 \fi
10823 }%
10824 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10825 \pdfmark{%
10826 pdfmark=/PUT,%
10827 Raw={%
10828 \string{Catalog}\string}<<%
10829 \ifx\Hy@temp\@empty
10830 \else
10831 /ViewerPreferences<<\Hy@temp>>%
10832 \fi
10833 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10834 \ifx\@pdflang\@empty
10835 \else
10836 /Lang(\@pdflang)%
10837 \fi
10838 \ifx\@baseurl\@empty
10839 \else
10840 /URI<</Base(\Hy@pstringB)>>%
10841 \fi
10842 >>%
10843 }%
10844 }%
10845 }
10846 \providecommand*\@pdfview{XYZ}
10847 \providecommand*\@pdfviewparams{ %

```

```

10848  gsave revscl currentpoint grestore %
10849  72 add exch pop null exch null%
10850  }
10851  \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_EX.

```

10852  \g@addto@macro\Hy@FirstPageHook{%
10853  \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

10854  /DvipsToPDF { 65781 div } def%
10855  /PDFToDvips { 65781 mul } def%
10856  /BPToDvips{65781 mul}def%
10857  /HyperBorder { 1 PDFToDvips } def%
10858  /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.

```

10859  /BorderArrayPatch{%
10860    [exch{%
10861      dup dup type/integertype eq exch type/realtype eq or%
10862      {BPToDvips}if%
10863    }forall]%
10864  }def%
10865  /H.S {%
10866    currentpoint %
10867    HyperBorder add /pdf@lly exch def %
10868    dup DvipsToPDF 72 add /pdf@hoff exch def %
10869    HyperBorder sub /pdf@llx exch def%
10870  } def%
10871  /H.L {%
10872    2 sub %
10873    PDFToDvips /HyperBase exch def %
10874    currentpoint %
10875    HyperBase sub /pdf@ury exch def%
10876    /pdf@urx exch def%
10877  } def%
10878  /H.A {%
10879    H.L %
10880    currentpoint exch pop %
10881    HyperBase sub % baseline skip
10882    DvipsToPDF /pdf@voff exch def%
10883  } def%
10884  /H.R {%
10885    currentpoint %
10886    HyperBorder sub /pdf@ury exch def %
10887    HyperBorder add /pdf@urx exch def %
10888    currentpoint exch pop DvipsToPDF /pdf@voff exch def%
10889  } def%
10890  }%
10891  }
10892  \</dvipsone>

```

46.13 TeX4ht

```

10893 <*tex4ht>
10894 \providecommand*{\XR@ext}{html}
10895 \def\Hy@raisedlink{}
10896 \@ifpackageloaded{tex4ht}{%
10897   \typeout{hyperref tex4ht: tex4ht already loaded}%
10898 }{%
10899   \RequirePackage[htex4ht]{tex4ht}%
10900 }
10901 \hyperlinkfileprefix{}
10902 \def\PDF@FinishDoc{}
10903 \def\PDF@SetupDoc{%
10904   \ifx\@baseurl\@empty
10905     \else
10906       \special{t4ht=<base href="\@baseurl">}%
10907     \fi
10908 }
10909 \def\hyper@anchor#1{%
10910   \Hy@SaveLastskip
10911   \Hy@VerboseAnchor{#1}%
10912   \begingroup
10913     \let\protect=\string
10914     \special{t4ht=<a name=%
10915       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10916   \endgroup
10917   \Hy@activeanchortrue
10918   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10919   \special{t4ht=</a>}%
10920   \Hy@activeanchorfalse
10921   \Hy@RestoreLastskip
10922 }
10923 \def\hyper@anchorstart#1{%
10924   \Hy@SaveLastskip
10925   \Hy@VerboseAnchor{#1}%
10926   \begingroup
10927     \hyper@chars\special{t4ht=<a name=%
10928       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10929   \endgroup
10930   \Hy@activeanchortrue
10931 }
10932 \def\hyper@anchorend{%
10933   \special{t4ht=</a>}%
10934   \Hy@activeanchorfalse
10935   \Hy@RestoreLastskip
10936 }
10937 \def\@urlltype{url}
10938 \def\hyper@linkstart#1#2{%
10939   \Hy@VerboseLinkStart{#1}{#2}%
10940   \expandafter\Hy@colorlink\csname @#1color\endcsname
10941   \def\Hy@tempa{#1}%
10942   \ifx\Hy@tempa\@urlltype
10943     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10944   \else
10945     \begingroup
10946       \hyper@chars
10947       \special{t4ht=<a href=%
10948         \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
10949     \endgroup

```



```

10950 \fi
10951 }
10952 \def\hyper@linkend{%
10953 \special{t4ht=</a>}%
10954 \Hy@endcolorlink
10955 }
10956 \def\hyper@linkfile#1#2#3{%
10957 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
10958 }
10959 \def\hyper@linkurl#1#2{%
10960 \leavevmode
10961 \ifHy@raiselinks
10962 \setbox\@tempboxa=\color@hbox #1\color@endbox
10963 \@linkdim\dp\@tempboxa
10964 \lower\@linkdim\hbox{%
10965 \begingroup
10966 \hyper@chars
10967 \special{%
10968 t4ht=<a href=\hyper@quote#2\hyper@quote>%
10969 }%
10970 \endgroup
10971 }%
10972 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10973 \@linkdim\ht\@tempboxa
10974 \advance\@linkdim by -6.5p@
10975 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
10976 \else
10977 \begingroup
10978 \hyper@chars
10979 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10980 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10981 \special{t4ht=</a>}%
10982 \endgroup
10983 \fi
10984 }

Poor implementation of \hyper@link without considering #1.
10985 \def\hyper@link#1#2#3{%
10986 \Hy@VerboseLinkStart{#1}{#2}%
10987 \hyper@linkurl{#3}{\# \Hy@DestNameFilter{#2}}%
10988 }
10989 \def\hyper@image#1#2{%
10990 \begingroup
10991 \hyper@chars
10992 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
10993 \endgroup
10994 }
10995 \let\autoref\ref
10996 \ifx \rEfLiNK \UnDef
10997 \def\rEfLiNK #1#2{#2}%
10998 \fi
10999 \def\backref#1{}
11000 </tex4ht>
11001 <*tex4htcfg>
11002 \IfFileExists{\jobname.cfg}{\endinput}{}
11003 \Preamble{html}
11004 \begin{document}%
11005 \EndPreamble

```

```

11006 \def\TeX{\TeX}
11007 \def\OMEGA{\Omega}
11008 \def\LaTeX{\LaTeX}
11009 \def\LaTeXe{\LaTeX2e}
11010 \def\TeXe{\TeX}
11011 \def\MF{Metafont}
11012 \def\MP{MetaPost}
11013 \</tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

11014 <*pdfmark>
11015 \long\def\@Form[#1]{%
11016 \g@addto@macro\Hy@FirstPageHook{%
11017 \headerps@out{%
11018 [%
11019 /__objdef{pdfDocEncoding}%
11020 /type/dict%
11021 /OBJ pdfmark%
11022 [%
11023 {pdfDocEncoding}%
11024 <<%
11025 /Type/Encoding%
11026 /Differences[%
11027 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11028 /tilde %
11029 39/quotesingle %
11030 96/grave %
11031 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11032 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11033 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11034 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
11035 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11036 164/currency %
11037 166/brokenbar %
11038 168/dieresis/copyright/ordfeminine %
11039 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11040 /twosuperior/threesuperior/acute/mu %
11041 183/periodcentered/cedilla/onesuperior/ordmasculine %
11042 188/onequarter/onehalf/threequarters %
11043 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11044 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11045 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11046 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11047 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11048 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11049 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11050 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11051 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11052 /ucircumflex/udieresis/yacute/thorn/ydieresis%
11053 ]%
11054 >>%
11055 /PUT pdfmark%
11056 [%
11057 /__objdef{ZaDb}%
11058 /type/dict%

```

```

11059 /OBJ pdfmark%
11060 [%
11061   {ZaDb}%
11062   <<%
11063     /Type/Font%
11064     /Subtype/Type1%
11065     /Name/ZaDb%
11066     /BaseFont/ZapfDingbats%
11067   >>%
11068 /PUT pdfmark%
11069 [%
11070   /_objdef{Helv}%
11071   /type/dict%
11072 /OBJ pdfmark%
11073 [%
11074   {Helv}%
11075   <<%
11076     /Type/Font%
11077     /Subtype/Type1%
11078     /Name/Helv%
11079     /BaseFont/Helvetica%
11080     /Encoding{pdfDocEncoding}%
11081   >>%
11082 /PUT pdfmark%
11083 [%
11084   /_objdef{aform}%
11085   /type/dict%
11086 /OBJ pdfmark%
11087 [%
11088   /_objdef{afields}%
11089   /type/array%
11090 /OBJ pdfmark%
11091 {%
11092   [%
11093     /BBox[0 0 100 100]%
11094     /_objdef{Check}%
11095   /BP pdfmark %
11096   1 0 0 setrgbcolor%
11097   /ZapfDingbats 80 selectfont %
11098   20 20 moveto%
11099   (4)show%
11100 [/EP pdfmark%
11101 [%
11102   /BBox[0 0 100 100]%
11103   /_objdef{Cross}%
11104 /BP pdfmark %
11105   1 0 0 setrgbcolor%
11106   /ZapfDingbats 80 selectfont %
11107   20 20 moveto%
11108   (8)show%
11109 [/EP pdfmark%
11110 [%
11111   /BBox[0 0 250 100]%
11112   /_objdef{Submit}%
11113 /BP pdfmark %
11114   0.6 setgray %
11115   0 0 250 100 rectfill %

```

```

11116 1 setgray %
11117 2 2 moveto %
11118 2 98 lineto %
11119 248 98 lineto %
11120 246 96 lineto %
11121 4 96 lineto %
11122 4 4 lineto %
11123 fill %
11124 0.34 setgray %
11125 248 98 moveto %
11126 248 2 lineto %
11127 2 2 lineto %
11128 4 4 lineto %
11129 246 4 lineto %
11130 246 96 lineto %
11131 fill%
11132 /Helvetica 76 selectfont %
11133 0 setgray %
11134 8 22.5 moveto%
11135 (Submit)show%
11136 [/EP pdfmark%
11137 [%
11138 /BBox[0 0 250 100]%
11139 /_objdef{SubmitP}%
11140 /BP pdfmark %
11141 0.6 setgray %
11142 0 0 250 100 rectfill %
11143 0.34 setgray %
11144 2 2 moveto %
11145 2 98 lineto %
11146 248 98 lineto %
11147 246 96 lineto %
11148 4 96 lineto %
11149 4 4 lineto %
11150 fill %
11151 1 setgray %
11152 248 98 moveto %
11153 248 2 lineto %
11154 2 2 lineto %
11155 4 4 lineto %
11156 246 4 lineto %
11157 246 96 lineto %
11158 fill%
11159 /Helvetica 76 selectfont %
11160 0 setgray %
11161 10 20.5 moveto%
11162 (Submit)show%
11163 [/EP pdfmark%
11164 } ?pdfmark%
11165 [%
11166 {aform}%
11167 <<%
11168 /Fields{afields}%
11169 /DR<<%
11170 /Font<<%
11171 /ZaDb{ZaDb}%
11172 /Helv{Helv}%

```

```

11173    >>%
11174    >>%
11175    /DA(/Helv 10 Tf 0 g)%
11176    /CO{corder}%
11177    \ifHy@pdfa
11178    \else
11179    /NeedAppearances true%
11180    \fi
11181    >>%
11182 /PUT pdfmark%
11183 [%
11184 {Catalog}%
11185 <<%
11186 /AcroForm{aform}%
11187 >>%
11188 /PUT pdfmark%
11189 [%
11190 /__objdef{corder}%
11191 /type/array%
11192 /OBJ pdfmark% dps
11193 }}%
11194 \setkeys{Form}{#1}%
11195 }
11196 \def\@endForm{}
11197 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11198 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
11199 }
11200 \def\@TextField[#1]#2{% parameters, label
11201 \def\Fld@name{#2}%
11202 \def\Fld@default{}%
11203 \let\Fld@value\@empty
11204 \def\Fld@width{\DefaultWidthofText}%
11205 \def\Fld@height{%
11206 \ifFld@multiline
11207 \DefaultHeightofTextMultiline
11208 \else
11209 \DefaultHeightofText
11210 \fi
11211 }%
11212 \begingroup
11213 \Field@toks={ }%
11214 \expandafter\HyField@SetKeys\expandafter{%
11215 \DefaultOptionsofText,#1%
11216 }%
11217 \HyField@FlagsText
11218 \ifFld@hidden\def\Fld@width{1sp}\fi
11219 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11220 \LayoutTextField{#2}{%
11221 \Hy@escapeform\PDFForm@Text
11222 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
11223 pdfmark=/ANN,Raw={\PDFForm@Text}%
11224 }%
11225 }%
11226 \endgroup
11227 }
11228 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11229 \def\Fld@name{#2}%

```

```

11230 \let\Fld@default\relax
11231 \let\Fld@value\relax
11232 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11233 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11234 \begingroup
11235   \Fld@menulength=0 %
11236   \@tempdima\z@
11237   \@for\@curropt:=#3\do{%
11238     \expandafter\Fld@checkequals\@curropt==\\%
11239     \Hy@StepCount\Fld@menulength
11240     \settowidth{\@tempdimb}{\@currDisplay}%
11241     \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11242   }%
11243   \advance\@tempdima by 15\p@
11244   \Field@toks={ }%
11245   \begingroup
11246     \HyField@SetKeys{#1}%
11247   \edef\x{\endgroup
11248     \noexpand\expandafter
11249     \noexpand\HyField@SetKeys
11250     \noexpand\expandafter{%
11251       \expandafter\noexpand\csname DefaultOptionsof%
11252         \ifFld@radio
11253           Radio%
11254         \else
11255           \ifFld@combo
11256             \ifFld@popdown
11257               PopdownBox%
11258             \else
11259               ComboBox%
11260             \fi
11261           \else
11262             ListBox%
11263           \fi
11264         \fi
11265       \endcsname
11266     }%
11267   }\x
11268   \HyField@SetKeys{#1}%
11269   \ifFld@hidden\def\Fld@width{1sp}\fi
11270   \ifx\Fld@value\relax
11271     \let\Fld@value\Fld@default
11272   \fi
11273   \LayoutChoiceField{#2}{%
11274     \ifFld@radio
11275       \HyField@FlagsRadioButton
11276       \@@Radio{#3}%
11277     \else
11278       \begingroup
11279       \HyField@FlagsChoice
11280       \ifdim\Fld@width<\@tempdima
11281         \ifdim\@tempdima<1cm\@tempdima1cm\fi
11282         \edef\Fld@width{\the\@tempdima}%
11283       \fi
11284       \ifFld@combo
11285       \else
11286         \@tempdima=\the\Fld@menulength\Fld@charsize

```

```

11287         \advance\@tempdima by \Fld@borderwidth bp %
11288         \advance\@tempdima by \Fld@borderwidth bp %
11289         \edef\Fld@height{\the\@tempdima}%
11290         \fi
11291         \@@ListBox{#3}%
11292     \endgroup
11293     \fi
11294 }%
11295 \endgroup
11296 }
11297 \def\@@Radio#1{%
11298     \Fld@listcount=0 %
11299     \@for\@curropt:=#1\do{%
11300         \expandafter\Fld@checkequals\@curropt==\%
11301         \Hy@StepCount\Fld@listcount
11302         \@currDisplay\space
11303         \Hy@escapeform\PDFForm@Radio
11304         \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11305             pdfmark=/ANN,%
11306             Raw={%
11307                 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
11308             }%
11309         } % deliberate space between radio buttons
11310     }%
11311 }
11312 \newcount\Fld@listcount
11313 \def\@@ListBox#1{%
11314     \HyField@PDFChoices{#1}%
11315     \Hy@escapeform\PDFForm@List
11316     \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11317         pdfmark=/ANN,Raw={\PDFForm@List}%
11318     }%
11319 }
11320 \def\@PushButton[#1]#2{% parameters, label
11321     \def\Fld@name{#2}%
11322     \begingroup
11323     \Field@toks={ }%
11324     \expandafter\HyField@SetKeys\expandafter{%
11325         \DefaultOptionsofPushButton,#1%
11326     }%
11327     \ifHy@pdfa
11328         \PackageError{hyperref}{%
11329             PDF/A: Push button with JavaScript is prohibited%
11330         }\@ehc
11331         \LayoutPushButtonField{%
11332             \leavevmode
11333             \MakeButtonField{#2}%
11334         }%
11335     \else
11336         \HyField@FlagsPushButton
11337         \ifFld@hidden\def\Fld@width{1sp}\fi
11338         \LayoutPushButtonField{%
11339             \leavevmode
11340             \Hy@escapeform\PDFForm@Push
11341             \pdfmark[\MakeButtonField{#2}]{%
11342                 pdfmark=/ANN,Raw={\PDFForm@Push}%
11343             }%

```

```

11344     }%
11345     \fi
11346 \endgroup
11347 }
11348 \def\@Submit[#1]#2{%
11349   \Field@toks={ }%
11350   \def\Fld@width{\DefaultWidthofSubmit}%
11351   \def\Fld@height{\DefaultHeightofSubmit}%
11352   \begingroup
11353     \expandafter\HyField@SetKeys\expandafter{%
11354       \DefaultOptionsofSubmit,#1%
11355     }%
11356     \HyField@FlagsPushButton
11357     \HyField@FlagsSubmit
11358     \ifFld@hidden\def\Fld@width{1sp}\fi
11359     \Hy@escapeform\PDFForm@Submit
11360     \pdfmark[\MakeButtonField{#2}]{%
11361       pdfmark=/ANN,%
11362       Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11363     }%
11364 \endgroup
11365 }
11366 \def\@Reset[#1]#2{%
11367   \Field@toks={ }%
11368   \def\Fld@width{\DefaultWidthofReset}%
11369   \def\Fld@height{\DefaultHeightofReset}%
11370   \begingroup
11371     \expandafter\HyField@SetKeys\expandafter{%
11372       \DefaultOptionsofReset,#1%
11373     }%
11374     \leavevmode
11375     \ifHy@pdfa
11376       \PackageError{hyperref}{%
11377         PDF/A: Reset action is prohibited%
11378       }\@ehc
11379       \MakeButtonField{#2}%
11380     \else
11381       \HyField@FlagsPushButton
11382       \ifFld@hidden\def\Fld@width{1sp}\fi
11383       \Hy@escapeform\PDFForm@Reset
11384       \pdfmark[\MakeButtonField{#2}]{%
11385         pdfmark=/ANN,Raw={\PDFForm@Reset}%
11386       }%
11387     \fi
11388 \endgroup
11389 }%
11390 \def\@CheckBox[#1]#2{% parameters, label
11391   \def\Fld@name{#2}%
11392   \def\Fld@default{0}%
11393   \begingroup
11394     \def\Fld@width{\DefaultWidthofCheckBox}%
11395     \def\Fld@height{\DefaultHeightofCheckBox}%
11396     \Field@toks={ }%
11397     \expandafter\HyField@SetKeys\expandafter{%
11398       \DefaultOptionsofCheckBox,#1%
11399     }%
11400     \HyField@FlagsCheckBox

```



```

11401 \ifFld@hidden\def\Fld@width{1sp}\fi
11402 \LayoutCheckField{#2}{%
11403 \Hy@escapeform\PDFForm@Check
11404 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11405 pdfmark=/ANN,Raw={\PDFForm@Check}%
11406 }%
11407 }%
11408 \endgroup
11409 }
11410 \pdfmark>

```

47.2 HyperTeX

```

11411 <*hypertex>
11412 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11413 \def\@endForm{}
11414 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11415 \typeout{Sorry, HyperTeX does not support FORM gauges}%
11416 }
11417 \def\@TextField[#1]#2{% parameters, label
11418 \typeout{Sorry, HyperTeX does not support FORM text fields}%
11419 }
11420 \def\@CheckBox[#1]#2{% parameters, label
11421 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11422 }
11423 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11424 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11425 }
11426 \def\@PushButton[#1]#2{% parameters, label
11427 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11428 }
11429 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11430 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11431 </hypertex>

```

47.3 TeX4ht

```

11432 <*tex4ht>
11433 \def\@Form[#1]{%
11434 \setkeys{Form}{#1}%
11435 \HCode{<form action="\Form@action" method="\Form@method">}%
11436 }
11437 \def\@endForm{\HCode{</form>}}
11438 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11439 \typeout{Sorry, TeX4ht does not support gauges}%
11440 }
11441 \def\@TextField[#1]#2{% parameters, label
11442 \let\Hy@reserved@a\@empty
11443 \def\Fld@name{#2}%
11444 \def\Fld@default{}%
11445 \bgroup
11446 \Field@toks={ }%
11447 \setkeys{Field}{#1}%
11448 \HCode{<label for="\Fld@name">#2</label>}%
11449 \ifFld@password
11450 \@@PasswordField
11451 \else
11452 \@@TextField
11453 \fi

```

```

11454 \egroup
11455 }
11456 \def\@@PasswordField{%
11457   \HCode{%
11458     <input type="password" %
11459     id="\Fld@name" %
11460     name="\Fld@name" %
11461     \ifFld@hidden type="hidden" \fi
11462     value="\Fld@default" %
11463     \the\Field@toks
11464     >%
11465   }%
11466 }
11467 \def\@@TextField{%
11468   \ifFld@multiline
11469     \HCode{<textarea %
11470       \ifFld@readonly readonly \fi
11471       id="\Fld@name" %
11472       name="\Fld@name" %
11473       \ifFld@hidden type="hidden" \fi
11474       \the\Field@toks>%
11475   }%
11476   \Fld@default
11477   \HCode{</textarea>}%
11478   \else
11479     \HCode{<input type="text" %
11480       \ifFld@readonly readonly \fi
11481       id="\Fld@name" %
11482       name="\Fld@name" %
11483       \ifFld@hidden type="hidden" \fi
11484       value="\Fld@default" %
11485       \the\Field@toks>%
11486   }%
11487   \fi
11488 }
11489 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11490   \def\Fld@name{#2}%
11491   \def\Fld@default{#3}%
11492   \let\Hy@reserved@a\relax
11493   \begingroup
11494     \expandafter\Fld@findlength#3\\%
11495     \Field@toks={ }%
11496     \setkeys{Field}{#1}%
11497     #2%
11498     \ifFld@radio
11499       \expandafter\@@Radio#3\\%
11500     \else
11501       \expandafter\@@Menu#3\\%
11502     \fi
11503   \endgroup
11504 }
11505 \def\Fld@findlength#1\\{%
11506   \Fld@menulength=0 %
11507   \@for\@currupt:=#1\do{\Hy@StepCount\Fld@menulength}%
11508 }
11509 \def\@@Menu#1\\{%
11510   \HCode{<select size="\the\Fld@menulength" %

```

```

11511     name="\Fld@name" %
11512     \the\Field@toks>%
11513 }%
11514 \@for\@curropt:=#1\do{%
11515     \expandafter\Fld@checkequals\@curropt==\\%
11516     \HCode{<option %
11517         \ifx\@curropt\Fld@default selected \fi
11518         value="\@currValue">\@currDisplay</option>%
11519     }%
11520 }%
11521 \HCode{</select>}}%
11522 }
11523 \def\@@Radio#1\\{%
11524     \@for\@curropt:=#1\do{%
11525         \expandafter\Fld@checkequals\@curropt==\\%
11526         \HCode{<input type="radio" %
11527             \ifx\@curropt\Fld@default checked \fi
11528             name="\Fld@name" %
11529             value="\@currValue" %
11530             \the\Field@toks>%
11531         }%
11532         \@currDisplay
11533     }%
11534 }
11535 \def\@PushButton[#1]#2{% parameters, label
11536     \def\Fld@name{#2}%
11537     \bgroup
11538     \Field@toks={ }%
11539     \setkeys{Field}{#1}%
11540     \HCode{<input type="button" %
11541         name="\Fld@name" %
11542         value="#2" %
11543         \the\Field@toks>%
11544     }%
11545     \HCode{</button>}}%
11546     \egroup
11547 }
11548 \def\@Submit[#1]#2{%
11549     \HCode{<button type="submit">#2</button>}}%
11550 }
11551 \def\@Reset[#1]#2{%
11552     \HCode{<button type="reset">#2</button>}}%
11553 }
11554 \def\@CheckBox[#1]#2{% parameters, label
11555     \let\Hy@reserved@a\@empty
11556     \def\Fld@name{#2}%
11557     \def\Fld@default{0}%
11558     \bgroup
11559     \Field@toks={ }%
11560     \setkeys{Field}{#1}%
11561     \HCode{<input type="checkbox" %
11562         \ifFld@checked checked \fi
11563         \ifFld@disabled disabled \fi
11564         \ifFld@readonly readonly \fi
11565         name="\Fld@name" %
11566         \ifFld@hidden type="hidden" \fi
11567         value="\Fld@default" %

```

```

11568 \the\Field@toks>%
11569 #2%
11570 }%
11571 \egroup
11572 }
11573 </tex4ht>

```

47.4 pdfTeX

```

11574 <*pdfTeX>
11575 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11576 \typeout{Sorry, pdfTeX does not support FORM gauges}%
11577 }
11578 \def\MakeFieldObject#1#2{\sbox0{#1}%
11579 \immediate\pdfxform0 %
11580 \expandafter\edef\csname #2Object\endcsname{%
11581 \the\pdfastxform\space 0 R%
11582 }%
11583 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}%
11584 }%
11585 \def\HyField@afields{}
11586 \begingroup\expandafter\expandafter\expandafter\endgroup
11587 \expandafter\ifx\csname pdfastlink\endcsname\relax
11588 \let\HyField@AddToFields\relax
11589 \PackageInfo{hyperref}{%
11590 You need pdfTeX 1.40.0 for setting the /Fields entry.%
11591 \MessageBreak
11592 Adobe Reader/Acrobat accepts an empty /Field array,%
11593 \MessageBreak
11594 but other PDF viewers might complain%
11595 }%
11596 \else
11597 \def\HyField@AuxAddToFields#1{%
11598 \def\HyField@AfterAuxOpen{\AtBeginDocument}%
11599 \AtBeginDocument{%
11600 \if@filesw
11601 \immediate\write\@mainaux{%
11602 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
11603 }%
11604 \fi
11605 \let\HyField@AfterAuxOpen\@firstofone
11606 \def\HyField@AuxAddToFields#1{%
11607 \xdef\HyField@afields{%
11608 \ifx\HyField@afields\@empty
11609 \else
11610 \HyField@afields
11611 \space
11612 \fi
11613 #1 0 R%
11614 }%
11615 }%
11616 }%
11617 \def\HyField@AddToFields{%
11618 \expandafter\HyField@@AddToFields\expandafter{%
11619 \the\pdfastlink
11620 }%
11621 }%
11622 \def\HyField@@AddToFields#1{%

```

```

11623 \HyField@AfterAuxOpen{%
11624 \if@filesw
11625 \write\@mainaux{%
11626 \string\HyField@AuxAddToFields{#1}%
11627 }%
11628 \fi
11629 }%
11630 }%
11631 \fi
11632 \def\@Form[#1]{%
11633 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11634 \setkeys{Form}{#1}%
11635 \Hy@FormObjects
11636 \ifnum\pdfTeXversion>13 %
11637 \pdfrefobj\OBJ@pdfdocencoding
11638 \pdfrefobj\OBJ@ZaDb
11639 \pdfrefobj\OBJ@Helv
11640 \fi
11641 \AtVeryEndDocument{%
11642 \immediate\pdfobj{%
11643 <<%
11644 /Fields[\HyField@afields]%
11645 /DR<<%
11646 /Font<<%
11647 /ZaDb \OBJ@ZaDb\space 0 R%
11648 /Helv \OBJ@Helv\space 0 R%
11649 >>%
11650 >>%
11651 /DA(/Helv 10 Tf 0 g)%
11652 \ifHy@pdfa
11653 \else
11654 /NeedAppearances true%
11655 \fi
11656 >>%
11657 }%
11658 \edef\OBJ@acroform{\the\pdflastobj}%
11659 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11660 }%
11661 \MakeFieldObject{%
Same as \ding{123} of package pifont.
11662 \begingroup
11663 \fontfamily{pzd}%
11664 \fontencoding{U}%
11665 \fontseries{m}%
11666 \fontshape{n}%
11667 \selectfont
11668 \char123 %
11669 \endgroup
11670 }{Ding}%
11671 \MakeFieldObject{%
11672 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11673 }{Submit}%
11674 \MakeFieldObject{%
11675 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11676 }{SubmitP}%
11677 }
11678 \def\@endForm{}

```

```

11679 \def\@TextField[#1]#2{% parameters, label
11680   \def\Fld@name{#2}%
11681   \def\Fld@default{}%
11682   \let\Fld@value\@empty
11683   \def\Fld@width{\DefaultWidthofText}%
11684   \def\Fld@height{%
11685     \ifFld@multiline
11686       \DefaultHeightofTextMultiline
11687     \else
11688       \DefaultHeightofText
11689     \fi
11690   }%
11691   \begingroup
11692     \Field@toks={ }%
11693     \expandafter\HyField@SetKeys\expandafter{%
11694       \DefaultOptionsofText,#1%
11695     }%
11696     \PDFForm@Name
11697     \HyField@FlagsText
11698     \ifFld@hidden\def\Fld@width{1sp}\fi
11699     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11700     \LayoutTextField{#2}{%
11701       \Hy@escapeform\PDFForm@Text
11702       \pdfstartlink user {\PDFForm@Text}\relax
11703       \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11704       \HyField@AddToFields
11705     }%
11706   \endgroup
11707 }
11708 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11709   \def\Fld@name{#2}%
11710   \let\Fld@default\relax
11711   \let\Fld@value\relax
11712   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11713   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11714   \begingroup
11715     \Fld@menulength=0 %
11716     \@tempdima\z@
11717     \@for\@curropt:=#3\do{%
11718       \expandafter\Fld@checkequals\@curropt==\%
11719       \Hy@StepCount\Fld@menulength
11720       \settowidth{\@tempdimb}{\@currDisplay}%
11721       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11722     }%
11723     \advance\@tempdima by 15\p@
11724     \Field@toks={ }%
11725     \begingroup
11726       \HyField@SetKeys{#1}%
11727     \edef\x{\endgroup
11728       \noexpand\expandafter
11729       \noexpand\HyField@SetKeys
11730       \noexpand\expandafter{%
11731         \expandafter\noexpand\csname DefaultOptionsof%
11732           \ifFld@radio
11733             Radio%
11734           \else
11735             \ifFld@combo

```

```

11736         \ifFld@popdown
11737             PopdownBox%
11738         \else
11739             ComboBox%
11740         \fi
11741     \else
11742         ListBox%
11743     \fi
11744 \fi
11745 \endcsname
11746 }%
11747 } \x
11748 \HyField@SetKeys{#1}%
11749 \PDFForm@Name
11750 \ifFld@hidden\def\Fld@width{1sp}\fi
11751 \ifx\Fld@value\relax
11752     \let\Fld@value\Fld@default
11753 \fi
11754 \LayoutChoiceField{#2}{%
11755     \ifFld@radio
11756         \HyField@FlagsRadioButton
11757         \@@Radio{#3}%
11758     \else
11759         \begingroup
11760         \HyField@FlagsChoice
11761         \ifdim\Fld@width<\@tempdima
11762             \ifdim\@tempdima<1cm\@tempdima1cm\fi
11763             \edef\Fld@width{\the\@tempdima}%
11764         \fi
11765         \ifFld@combo
11766         \else
11767             \@tempdima=\the\Fld@menulength\Fld@charsize
11768             \advance\@tempdima by \Fld@borderwidth bp %
11769             \advance\@tempdima by \Fld@borderwidth bp %
11770             \edef\Fld@height{\the\@tempdima}%
11771         \fi
11772         \@@ListBox{#3}%
11773     \endgroup
11774 \fi
11775 }%
11776 \endgroup
11777 }
11778 \def\@@Radio#1{%
11779     \Fld@listcount=0 %
11780     \@for\@curropt:=#1\do{%
11781         \expandafter\Fld@checkequals\@curropt==\%
11782         \Hy@StepCount\Fld@listcount
11783         \@currDisplay\space
11784         \leavevmode
11785         \Hy@escapeform\PDFForm@Radio
11786         \pdfstartlink user {%
11787             \PDFForm@Radio
11788             /AP<<%
11789             /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.

```

11790      /\@currValue\space \DingObject
11791      >>%
11792      >>%
11793      }%
11794      \relax
11795      \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11796      \ifnum\Fld@listcount=1 %
11797      \HyField@AddToFields
11798      \fi
11799      \space % deliberate space between radio buttons
11800      }%
11801      }
11802      \newcount\Fld@listcount
11803      \def\@@ListBox#1{%
11804      \HyField@PDFChoices{#1}%
11805      \leavevmode
11806      \Hy@escapeform\PDFForm@List
11807      \pdfstartlink user {\PDFForm@List}\relax
11808      \MakeChoiceField{\Fld@width}{\Fld@height}%
11809      \pdfendlink
11810      \HyField@AddToFields
11811      }
11812      \def\@PushButton[#1]#2{% parameters, label
11813      \def\Fld@name{#2}%
11814      \begingroup
11815      \Field@toks={ }%
11816      \expandafter\HyField@SetKeys\expandafter{%
11817      \DefaultOptionsofPushButton,#1%
11818      }%
11819      \PDFForm@Name
11820      \ifHy@pdfa
11821      \PackageError{hyperref}{%
11822      PDF/A: Push button with JavaScript is prohibited%
11823      }\@ehc
11824      \LayoutPushButtonField{%
11825      \leavevmode
11826      \MakeButtonField{#2}%
11827      }%
11828      \else
11829      \HyField@FlagsPushButton
11830      \ifFld@hidden\def\Fld@width{1sp}\fi
11831      \LayoutPushButtonField{%
11832      \leavevmode
11833      \Hy@escapeform\PDFForm@Push
11834      \pdfstartlink user {\PDFForm@Push}\relax
11835      \MakeButtonField{#2}%
11836      \pdfendlink
11837      \HyField@AddToFields
11838      }%
11839      \fi
11840      \endgroup
11841      }
11842      \def\@Submit[#1]#2{%
11843      \Field@toks={ }%
11844      \def\Fld@width{\DefaultWidthofSubmit}%
11845      \def\Fld@height{\DefaultHeightofSubmit}%
11846      \begingroup

```



```

11847 \expandafter\HyField@SetKeys\expandafter{%
11848   \DefaultOptionsofSubmit,#1%
11849 }%
11850 \HyField@FlagsPushButton
11851 \HyField@FlagsSubmit
11852 \ifFld@hidden\def\Fld@width{1sp}\fi
11853 \leavevmode
11854 \Hy@escapeform\PDFForm@Submit
11855 \pdfstartlink user {%
11856   \PDFForm@Submit
11857   /AP<</N \SubmitObject/D \SubmitPObject>>%
11858 }%
11859 \relax
11860 \MakeButtonField{#2}%
11861 \pdfendlink
11862 \HyField@AddToFields
11863 \endgroup
11864 }
11865 \def\@Reset[#1]#2{%
11866   \Field@toks={ }%
11867   \def\Fld@width{\DefaultWidthofReset}%
11868   \def\Fld@height{\DefaultHeightofReset}%
11869   \begingroup
11870     \expandafter\HyField@SetKeys\expandafter{%
11871       \DefaultOptionsofReset,#1%
11872     }%
11873     \leavevmode
11874     \ifHy@pdfa
11875       \PackageError{hyperref}{%
11876         PDF/A: Reset action is prohibited%
11877       }\@ehc
11878       \MakeButtonField{#2}%
11879     \else
11880       \HyField@FlagsPushButton
11881       \ifFld@hidden\def\Fld@width{1sp}\fi
11882       \Hy@escapeform\PDFForm@Reset
11883       \pdfstartlink user {\PDFForm@Reset}\relax
11884       \MakeButtonField{#2}%
11885       \pdfendlink
11886       \HyField@AddToFields
11887     \fi
11888   \endgroup
11889 }
11890 \def\@CheckBox[#1]#2{% parameters, label
11891   \def\Fld@name{#2}%
11892   \def\Fld@default{0}%
11893   \begingroup
11894     \def\Fld@width{\DefaultWidthofCheckBox}%
11895     \def\Fld@height{\DefaultHeightofCheckBox}%
11896     \Field@toks={ }%
11897     \expandafter\HyField@SetKeys\expandafter{%
11898       \DefaultOptionsofCheckBox,#1%
11899     }%
11900     \PDFForm@Name
11901     \HyField@FlagsCheckBox
11902     \ifFld@hidden\def\Fld@width{1sp}\fi
11903     \LayoutCheckField{#2}{%

```

```

11904 \Hy@escapeform\PDFForm@Check
11905 \pdfstartlink user {\PDFForm@Check}\relax
11906 \MakeCheckField{\Fld@width}{\Fld@height}%
11907 \pdfendlink
11908 \HyField@AddToFields
11909 }%
11910 \endgroup
11911 }
11912 \def\Hy@FormObjects{%
11913 \pdfobj {%
11914 <<%
11915 /Type/Encoding%
11916 /Differences[%
11917 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
11918 /ring/tilde %
11919 39/quotesingle %
11920 96/grave %
11921 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11922 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11923 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11924 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
11925 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11926 164/currency %
11927 166/brokenbar %
11928 168/dieresis/copyright/ordfeminine %
11929 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11930 /twosuperior/threesuperior/acute/mu %
11931 183/periodcentered/cedilla/onesuperior/ordmasculine %
11932 188/onequarter/onehalf/threequarters %
11933 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11934 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11935 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11936 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11937 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11938 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11939 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11940 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11941 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
11942 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
11943 ]%
11944 >>%
11945 }%
11946 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
11947 \pdfobj{%
11948 <<%
11949 /Type/Font%
11950 /Subtype/Type1%
11951 /Name/ZaDb%
11952 /BaseFont/ZapfDingbats%
11953 >>%
11954 }%
11955 \xdef\OBJ@ZaDb{\the\pdflastobj}%
11956 \pdfobj{%
11957 <<%
11958 /Type/Font%
11959 /Subtype/Type1%
11960 /Name/Helv%

```

```

11961 /BaseFont/Helvetica%
11962 /Encoding \OBJ@pdfdocencoding\space 0 R%
11963 >>%
11964 }%
11965 \xdef\OBJ@Helv{\the\pdfastobj}%
11966 \global\let\Hy@FormObjects\relax
11967 }
11968 \pdfTeX

```

47.5 dvipdfm, xetex

D. P. Story adapted the pdf_TE_X forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

11969 \*dvipdfm | xetex

```

\@Gauge

```

11970 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11971 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
11972 }

```

\@Form

```

11973 \def\@Form[#1]{%
11974 \ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11975 \setkeys{Form}{#1}%
11976 \Hy@FormObjects
11977 \@pdfm@mark{obj @afields []}%
11978 \@pdfm@mark{obj @corder []}%
11979 \@pdfm@mark{%
11980 obj @aform <<%
11981 /Fields @afields%
11982 /DR<<%
11983 /Font<<%
11984 /ZaDb @OBJZaDb%
11985 /Helv @OBJHelv%
11986 >>%
11987 >>%
11988 /DA(/Helv 10 Tf 0 g)%
11989 /CO @corder%
11990 \ifHy@pdfa
11991 \else
11992 /NeedAppearances true%
11993 \fi
11994 >>%
11995 }%
11996 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
11997 }

```

\@endForm

```

11998 \def\@endForm{}

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

11999 \def\dvipdfm@setdim{%
12000 height \the\ht\pdfm@box\space
12001 width \the\wd\pdfm@box\space
12002 depth \the\dp\pdfm@box\space
12003 }

```

\HyField@AnnotCount

```
12004 \newcount\HyField@AnnotCount
12005 \HyField@AnnotCount=\z@
```

\HyField@AdvanceAnnotCount

```
12006 \def\HyField@AdvanceAnnotCount{%
12007   \global\advance\HyField@AnnotCount\@ne
12008 }
```

\HyField@TheAnnotCount

```
12009 \def\HyField@TheAnnotCount{%
12010   \the\HyField@AnnotCount
12011 }
```

\@TextField

```
12012 \def\@TextField[#1]#2{% parameters, label
12013   \def\Fld@name{#2}%
12014   \def\Fld@default{}%
12015   \let\Fld@value\@empty
12016   \def\Fld@width{\DefaultWidthofText}%
12017   \def\Fld@height{%
12018     \ifFld@multiline
12019       \DefaultHeightofTextMultiline
12020     \else
12021       \DefaultHeightofText
12022     \fi
12023   }%
12024   \begingroup
12025     \Field@toks={ }%
12026     \expandafter\HyField@SetKeys\expandafter{%
12027       \DefaultOptionsofText,#1%
12028     }%
12029     \PDFForm@Name
12030     \HyField@FlagsText
12031     \ifFld@hidden\def\Fld@width{1sp}\fi
12032     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12033     \setbox\pdfm@box=\hbox{%
12034       \MakeTextField{\Fld@width}{\Fld@height}%
12035     }%
12036     \HyField@AdvanceAnnotCount
12037     \LayoutTextField{#2}{%
12038       \Hy@escapeform\PDFForm@Text
12039       \@pdfm@mark{%
12040         ann @text\HyField@TheAnnotCount\space
12041         \dvipdfm@setdim << \PDFForm@Text >>%
12042       }%
12043     }%
12044     \unhbox\pdfm@box
12045     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12046     % record in @afields array
12047   \endgroup
12048 }
```

\@ChoiceMenu

```
12049 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12050   \def\Fld@name{#2}%
```

```

12051 \let\Fld@default\relax
12052 \let\Fld@value\relax
12053 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12054 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12055 \begingroup
12056 \Fld@menulength=0 %
12057 \@tempdima\z@
12058 \@for\@curropt:=#3\do{%
12059 \expandafter\Fld@checkequals\@curropt==\%
12060 \Hy@StepCount\Fld@menulength
12061 \settowidth{\@tempdimb}{\@currDisplay}%
12062 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12063 }%
12064 \advance\@tempdima by 15\p@
12065 \Field@toks={ }%
12066 \begingroup
12067 \HyField@SetKeys{#1}%
12068 \edef\x{\endgroup
12069 \noexpand\expandafter
12070 \noexpand\HyField@SetKeys
12071 \noexpand\expandafter{%
12072 \expandafter\noexpand\csname DefaultOptionsof%
12073 \ifFld@radio
12074 Radio%
12075 \else
12076 \ifFld@combo
12077 \ifFld@popdown
12078 PopdownBox%
12079 \else
12080 ComboBox%
12081 \fi
12082 \else
12083 ListBox%
12084 \fi
12085 \fi
12086 \endcsname
12087 }%
12088 }\x
12089 \HyField@SetKeys{#1}%
12090 \PDFForm@Name
12091 \ifFld@hidden\def\Fld@width{1sp}\fi
12092 \ifx\Fld@value\relax
12093 \let\Fld@value\Fld@default
12094 \fi
12095 \LayoutChoiceField{#2}{%
12096 \ifFld@radio
12097 \HyField@FlagsRadioButton
12098 @@Radio{#3}%
12099 \else
12100 \begingroup
12101 \HyField@FlagsChoice
12102 \ifdim\Fld@width<\@tempdima
12103 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12104 \edef\Fld@width{\the\@tempdima}%
12105 \fi
12106 \ifFld@combo
12107 \else

```

```

12108      \@tempdima=\the\Fld@menulength\Fld@charsize
12109      \advance\@tempdima by \Fld@borderwidth bp %
12110      \advance\@tempdima by \Fld@borderwidth bp %
12111      \edef\Fld@height{\the\@tempdima}%
12112      \fi
12113      \@@ListBox{#3}%
12114      \endgroup
12115      \fi
12116      }%
12117      \endgroup
12118      }

```

\@@Radio

```

12119 \def\@@Radio#1{%
12120   \Fld@listcount=0 %
12121   \setbox\pdfm@box=\hbox{%
12122     \MakeRadioField{\Fld@width}{\Fld@height}%
12123   }%
12124   \@for\@curropt:=#1\do{%
12125     \expandafter\Fld@checkequals\@curropt==\%
12126     \Hy@StepCount\Fld@listcount
12127     \@currDisplay\space
12128     \leavevmode
12129     \Hy@escapeform\PDFForm@Radio
12130     \ifnum\Fld@listcount=1 %
12131       \HyField@AdvanceAnnotCount
12132     \fi
12133     \@pdfm@mark{%
12134       ann %
12135       \ifnum\Fld@listcount=1 %
12136         @radio\HyField@TheAnnotCount%
12137       \space
12138     \fi
12139     \dviptdfm@setdim
12140     <<%
12141     \PDFForm@Radio
12142     /AP<</N<</\@currValue /null>>>>%
12143     >>%
12144   }%
12145   \unhcopy\pdfm@box\space% deliberate space between radio buttons
12146   \ifnum\Fld@listcount=1 %
12147     \@pdfm@mark{%
12148       put @afields @radio\HyField@TheAnnotCount
12149     }%
12150   \fi
12151   }%
12152 }

```

\Fld@listcount

```

12153 \newcount\Fld@listcount

```

\@@ListBox

```

12154 \def\@@ListBox#1{%
12155   \HyField@PDFChoices{#1}%
12156   \setbox\pdfm@box=\hbox{%
12157     \MakeChoiceField{\Fld@width}{\Fld@height}%
12158   }%

```

```

12159 \leavevmode
12160 \Hy@escapeform\PDFForm@List
12161 \HyField@AdvanceAnnotCount
12162 \@pdfm@mark{%
12163   ann @list\HyField@TheAnnotCount\space
12164   \dvipdfm@setdim
12165   <<\PDFForm@List>>%
12166 }%
12167 \unhbox\pdfm@box
12168 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
12169 }

```

\@PushButton

```

12170 \def\@PushButton[#1]#2{% parameters, label
12171   \def\Fld@name{#2}%
12172   \begingroup
12173     \Field@toks={ }%
12174     \expandafter\HyField@SetKeys\expandafter{%
12175       \DefaultOptionsofPushButton,#1%
12176     }%
12177     \PDFForm@Name
12178     \ifHy@pdfa
12179       \PackageError{hyperref}{%
12180         PDF/A: Push button with JavaScript is prohibited%
12181       }\@ehc
12182       \LayoutPushButtonField{%
12183         \leavevmode
12184         \MakeButtonField{#2}%
12185       }%
12186     \else
12187       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12188       \HyField@FlagsPushButton
12189       \ifFld@hidden\def\Fld@width{1sp}\fi
12190       \HyField@AdvanceAnnotCount
12191       \LayoutPushButtonField{%
12192         \leavevmode
12193         \Hy@escapeform\PDFForm@Push
12194         \@pdfm@mark{%
12195           ann @push\HyField@TheAnnotCount\space
12196           \dvipdfm@setdim
12197           <<\PDFForm@Push>>%
12198         }%
12199       }%
12200       \unhbox\pdfm@box
12201       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
12202     \fi
12203   \endgroup
12204 }

```

\@Submit

```

12205 \def\@Submit[#1]#2{%
12206   \Field@toks={ }%
12207   \def\Fld@width{\DefaultWidthofSubmit}%
12208   \def\Fld@height{\DefaultHeightofSubmit}%
12209   \begingroup
12210     \expandafter\HyField@SetKeys\expandafter{%
12211       \DefaultOptionsofSubmit,#1%

```

```

12212 }%
12213 \HyField@FlagsPushButton
12214 \HyField@FlagsSubmit
12215 \ifFld@hidden\def\Fld@width{1sp}\fi
12216 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12217 \leavevmode
12218 \Hy@escapeform\PDFForm@Submit
12219 \HyField@AdvanceAnnotCount
12220 \@pdfm@mark{%
12221   ann @submit\HyField@TheAnnotCount\space
12222   \dvipdfm@setdim
12223   <<\PDFForm@Submit>>%
12224 }%
12225 \unhbox\pdfm@box%
12226 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
12227 \endgroup
12228 }

```

\@Reset

```

12229 \def\@Reset[#1]#2{%
12230   \Field@toks={ }%
12231   \def\Fld@width{\DefaultWidthofReset}%
12232   \def\Fld@height{\DefaultHeightofReset}%
12233   \begingroup
12234     \expandafter\HyField@SetKeys\expandafter{%
12235       \DefaultOptionsofReset,#1%
12236     }%
12237     \leavevmode
12238     \ifHy@pdfa
12239       \PackageError{hyperref}{%
12240         PDF/A: Reset action is prohibited%
12241       }\@ehc
12242       \MakeButtonField{#2}%
12243     \else
12244       \HyField@FlagsPushButton
12245       \ifFld@hidden\def\Fld@width{1sp}\fi
12246       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
12247       \Hy@escapeform\PDFForm@Reset
12248       \HyField@AdvanceAnnotCount
12249       \@pdfm@mark{%
12250         ann @reset\HyField@TheAnnotCount\space
12251         \dvipdfm@setdim
12252         <<\PDFForm@Reset>>%
12253       }%
12254       \unhbox\pdfm@box
12255       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
12256     \fi
12257   \endgroup
12258 }

```

\@CheckBox

```

12259 \def\@CheckBox[#1]#2{% parameters, label
12260   \def\Fld@name{#2}%
12261   \def\Fld@default{0}%
12262   \begingroup
12263     \def\Fld@width{\DefaultWidthofCheckBox}%
12264     \def\Fld@height{\DefaultHeightofCheckBox}%

```



```

12265 \Field@toks={ }%
12266 \expandafter\HyField@SetKeys\expandafter{%
12267 \DefaultOptionsOfCheckBox,#1%
12268 }%
12269 \PDFForm@Name
12270 \HyField@FlagsCheckBox
12271 \ifFld@hidden\def\Fld@width{1sp}\fi
12272 \setbox\pdfm@box=\hbox{%
12273 \MakeCheckField{\Fld@width}{\Fld@height}%
12274 }%
12275 \HyField@AdvanceAnnotCount
12276 \LayoutCheckField{#2}{%
12277 \Hy@escapeform\PDFForm@Check
12278 \@pdfm@mark{%
12279 ann @check\HyField@TheAnnotCount\space
12280 \dvipdfm@setdim
12281 <<\PDFForm@Check>>%
12282 }%
12283 \unhbox\pdfm@box
12284 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
12285 }%
12286 \endgroup
12287 }

12288 \def\Hy@FormObjects{%
12289 \@pdfm@mark{obj @OBJpdfdocencoding%
12290 <<%
12291 /Type/Encoding%
12292 /Differences%
12293 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
12294 39/quotesingle %
12295 96/grave %
12296 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12297 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12298 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
12299 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
12300 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12301 164/currency %
12302 166/brokenbar %
12303 168/dieresis/copyright/ordfeminine %
12304 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12305 /twosuperior/threesuperior/acute/mu %
12306 183/periodcentered/cedilla/onesuperior/ordmasculine %
12307 188/onequarter/onehalf/threequarters %
12308 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12309 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
12310 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
12311 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
12312 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
12313 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
12314 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
12315 /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
12316 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
12317 /thorn/ydieresis%
12318 ]%
12319 >>%
12320 }%
12321 \@pdfm@mark{obj @OBJZaDb%

```

```

12322 <<%
12323 /Type/Font%
12324 /Subtype/Type1%
12325 /Name/ZaDb%
12326 /BaseFont/ZapfDingbats%
12327 >>%
12328 }%
12329 \@pdfm@mark{obj @OBJHelv%
12330 <<%
12331 /Type/Font%
12332 /Subtype/Type1%
12333 /Name/Helv%
12334 /BaseFont/Helvetica%
12335 /Encoding @OBJpdfdocencoding%
12336 >>%
12337 }%
12338 \global\let\Hy@FormObjects\relax
12339 }
12340 </dvipdfm | xetex>

```

47.6 Common forms part

```

12341 <*pdfform>

```

\Hy@escapestring

```

12342 \begingroup\expandafter\expandafter\expandafter\endgroup
12343 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12344 \let\Hy@escapestring\@firstofone
12345 \def\Hy@escapeform#1{%
12346 \ifHy@escapeform
12347 \def\Hy@escapestring##1{%
12348 \noexpand\Hy@escapestring{\noexpand##1}%
12349 }%
12350 \edef\Hy@temp{#1}%
12351 \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{ }\@nil
12352 \def\Hy@escapestring##1{%
12353 \@ifundefined{Hy@esc@\string##1}{%
12354 ##1%
12355 \ThisShouldNotHappen
12356 }{%
12357 \csname Hy@esc@\string##1\endcsname
12358 }%
12359 }%
12360 \else
12361 \let\Hy@escapestring\@firstofone
12362 \fi
12363 }%
12364 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
12365 \ifx\#3\%
12366 \else
12367 \expandafter
12368 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12369 \Hy@ReturnAfterFi{%
12370 \Hy@@escapeform#3\@nil
12371 }%
12372 \fi
12373 }%

```

```

12374 \else
12375   \def\Hy@escapeform#1{%
12376     \ifHy@escapeform
12377       \let\Hy@escapestring\pdfescapestring
12378     \else
12379       \let\Hy@escapestring\@firstofone
12380     \fi
12381   }%
12382   \Hy@escapeform{}}%
12383 \fi

```

\PDFForm@Name

```

12384 \def\PDFForm@Name{%
12385   \begingroup
12386   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
12387     \ifHy@unicode
12388       \Hy@unicodedefalse
12389     \fi
12390   \fi
12391   \HyPsd@XeTeXBigCharstrue
12392   \pdfstringdef\Hy@gtemp\Fld@name
12393 \endgroup
12394 \let\Fld@name\Hy@gtemp
12395 }

```

\PDFForm@Check

```

12396 \def\PDFForm@Check{%
12397   /Subtype/Widget%
12398   \Fld@annotflags
12399   /T(\Fld@name)%
12400   /FT/Btn%
12401   \Fld@flags
12402   /Q \Fld@align
12403   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12404   /MK<<%
12405     \ifnum\Fld@rotation=\z@
12406     \else
12407       /R \Fld@rotation
12408     \fi
12409     \ifx\Fld@bordercolor\relax
12410     \else
12411       /BC[\Fld@bordercolor]%
12412     \fi
12413     \ifx\Fld@bcolor\relax
12414     \else
12415       /BG[\Fld@bcolor]%
12416     \fi
12417     /CA(\Hy@escapestring{\Fld@cbsymbol})}%
12418   >>%
12419   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12420     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12421   /H/P%
12422   \ifFld@checked /V/Yes\else /V/Off\fi
12423 }

```

\PDFForm@Push

```

12424 \ifHy@pdfa

```

```

12425 \else
12426   \def\PDFForm@Push{%
12427     /Subtype/Widget%
12428     \Fld@annotflags
12429     /T(\Fld@name)%
12430     /FT/Btn%
12431     \Fld@flags
12432     /H/P%
12433     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12434     \ifcase0\ifnum\Fld@rotation=\z@   \else 1\fi
12435       \ifx\Fld@bordercolor\relax\else 1\fi
12436       \space
12437     \else
12438       /MK<<%
12439       \ifnum\Fld@rotation=\z@
12440       \else
12441         /R \Fld@rotation
12442       \fi
12443       \ifx\Fld@bordercolor\relax
12444       \else
12445         /BC[\Fld@bordercolor]%
12446       \fi
12447       >>%
12448     \fi
12449     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12450   }%
12451 \fi

```

\Fld@additionalactions

```

12452 \def\Fld@@additionalactions{%
K input (keystroke) format
12453 \ifx\Fld@keystroke@code\@empty
12454 \else
12455   /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12456 \fi
F display format
12457 \ifx\Fld@format@code\@empty
12458 \else
12459   /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12460 \fi
V validation
12461 \ifx\Fld@validate@code\@empty
12462 \else
12463   /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12464 \fi
C calculation
12465 \ifx\Fld@calculate@code\@empty
12466 \else
12467   /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12468 \fi
Fo receiving the input focus
12469 \ifx\Fld@onfocus@code\@empty
12470 \else
12471   /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12472 \fi

```

Bl loosing the input focus (blurred)

```
12473 \ifx\Fld@onblur@code\@empty
12474 \else
12475 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12476 \fi
```

D pressing the mouse button (down)

```
12477 \ifx\Fld@onmousedown@code\@empty
12478 \else
12479 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12480 \fi
```

U releasing the mouse button (up)

```
12481 \ifx\Fld@onmouseup@code\@empty
12482 \else
12483 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12484 \fi
```

E cursor enters the annotation's active area.

```
12485 \ifx\Fld@onenter@code\@empty
12486 \else
12487 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12488 \fi
```

X cursor exits the annotation's active area.

```
12489 \ifx\Fld@onexit@code\@empty
12490 \else
12491 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12492 \fi
12493 }
12494 \def\Fld@additionalactions{%
12495 \if\Fld@@additionalactions-%
12496 \else
12497 \ifHy@pdfa
12498 \else
12499 /AA<<\Fld@@additionalactions>>%
12500 \fi
12501 \fi
12502 }
```

\PDFForm@List

```
12503 \def\PDFForm@List{%
12504 /Subtype/Widget%
12505 \Fld@annotflags
12506 /T(\Fld@name)%
12507 /FT/Ch%
12508 \Fld@flags
12509 /Q \Fld@align
12510 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12511 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12512 \ifx\Fld@bordercolor\relax\else 1\fi
12513 \ifx\Fld@bcolor\relax \else 1\fi
12514 \space
12515 \else
12516 /MK<<%
12517 \ifnum\Fld@rotation=\z@
12518 \else
12519 /R \Fld@rotation
12520 \fi
```

```

12521     \ifx\Fld@bordercolor\relax
12522     \else
12523         /BC[\Fld@bordercolor]%
12524     \fi
12525     \ifx\Fld@bcolor\relax
12526     \else
12527         /BG[\Fld@bcolor]%
12528     \fi
12529     >>%
12530 \fi
12531 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12532     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12533 \Fld@choices
12534 \Fld@additionalactions
12535 }

```

\PDFForm@Radio

```

12536 \def\PDFForm@Radio{%
12537 /Subtype/Widget%
12538 \Fld@annotflags
12539 /T(\Fld@name)%
12540 /FT/Btn%
12541 \Fld@flags
12542 /H/P%
12543 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12544 /MK<<%
12545     \ifnum\Fld@rotation=\z@
12546     \else
12547         /R \Fld@rotation
12548     \fi
12549     \ifx\Fld@bordercolor\relax
12550     \else
12551         /BC[\Fld@bordercolor]%
12552     \fi
12553     \ifx\Fld@bcolor\relax
12554     \else
12555         /BG[\Fld@bcolor]%
12556     \fi
12557     /CA(\Fld@radiosymbol)%
12558 >>%
12559 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12560     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12561 \ifx\@currValue\Fld@default
12562     /V/\Fld@default
12563 \else
12564     /V/Off%
12565 \fi
12566 \Fld@additionalactions
12567 }

```

\PDFForm@Text

```

12568 \def\PDFForm@Text{%
12569 /Subtype/Widget%
12570 \Fld@annotflags
12571 /T(\Fld@name)%
12572 /FT/Tx%
12573 \Fld@flags

```

```

12574 /Q \Fld@align
12575 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12576 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12577     \ifx\Fld@bordercolor\relax\else 1\fi
12578     \ifx\Fld@bcolor\relax \else 1\fi
12579     \space
12580 \else
12581 /MK<<%
12582     \ifnum\Fld@rotation=\z@
12583     \else
12584     /R \Fld@rotation
12585     \fi
12586     \ifx\Fld@bordercolor\relax
12587     \else
12588     /BC[\Fld@bordercolor]%
12589     \fi
12590     \ifx\Fld@bcolor\relax
12591     \else
12592     /BG[\Fld@bcolor]%
12593     \fi
12594 >>%
12595 \fi
12596 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12597     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12598 /DV(\Hy@escapestring{\Fld@default})%
12599 /V(\Hy@escapestring{\Fld@value})%
12600 \Fld@additionalactions
12601 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12602 }

```

\PDFForm@Submit

```

12603 \def\PDFForm@Submit{%
12604 /Subtype/Widget%
12605 \Fld@annotflags
12606 /T(\Fld@name)%
12607 /FT/Btn%
12608 \Fld@flags
12609 /H/P%
12610 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12611 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12612     \ifx\Fld@bordercolor\relax\else 1\fi
12613     \space
12614 \else
12615 /MK<<%
12616     \ifnum\Fld@rotation=\z@
12617     \else
12618     /R \Fld@rotation
12619     \fi
12620     \ifx\Fld@bordercolor\relax
12621     \else
12622     /BC[\Fld@bordercolor]%
12623     \fi
12624 >>%
12625 \fi
12626 /A<<%
12627 /S/SubmitForm%
12628 /F<<%

```

```

12629 /FS/URL%
12630 /F(\Hy@escapestring{\Form@action})%
12631 >>%
12632 \Fld@submitflags
12633 >>%
12634 }

```

\PDFForm@Reset

```

12635 \ifHy@pdfa
12636 \else
12637 \def\PDFForm@Reset{%
12638 /Subtype/Widget%
12639 \Fld@annotflags
12640 /T(\Fld@name)%
12641 /FT/Btn%
12642 \Fld@flags
12643 /H/P%
12644 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12645 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12646 \ifx\Fld@bordercolor\relax\else 1\fi
12647 \space
12648 \else
12649 /MK<<%
12650 \ifnum\Fld@rotation=\z@
12651 \else
12652 /R \Fld@rotation
12653 \fi
12654 \ifx\Fld@bordercolor\relax
12655 \else
12656 /BC[\Fld@bordercolor]%
12657 \fi
12658 % /CA (Clear)
12659 % /AC (Done)
12660 >>%
12661 \fi
12662 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12663 /A<</S/ResetForm>>%
12664 }%
12665 \fi

12666 </pdfform>
12667 <*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`

```

12668 \def\phantomsection{%
12669 \Hy@GlobalStepCount\Hy@linkcounter
12670 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12671 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%

```



```

12672 }
12673 </package>

```

48.1 Bookmarks

```

12674 <*outlines>

```

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -TeX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -TeX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```

12675 \def\Hy@writebookmark#1#2#3#4#5{%
12676   % section number, text, label, level, file
12677   \ifx\WriteBookmarks\relax%
12678   \else
12679     \ifnum#4>\Hy@bookmarksdepth\relax
12680     \else
12681       \@writetorep{#1}{#2}{#3}{#4}{#5}%
12682     \fi
12683   \fi
12684 }
12685 \def\Hy@currentbookmarklevel{0}
12686 \def\Hy@numberline#1{#1 }
12687 \def\@writetorep#1#2#3#4#5{%
12688   \begingroup
12689   \edef\Hy@tempa{#5}%
12690   \ifx\Hy@tempa\Hy@bookmarkstype
12691     \edef\Hy@level{#4}%
12692     \ifx\Hy@levelcheck Y%
12693       \@tempcnta\Hy@level\relax
12694       \advance\@tempcnta by -1 %
12695       \ifnum\Hy@currentbookmarklevel<\@tempcnta
12696         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12697         \advance\@tempcnta by 1 %
12698         \Hy@Warning{%
12699           Difference (\the\@tempcnta) between bookmark levels is %
12700           greater \MessageBreak than one, level fixed%
12701         }%
12702         \@tempcnta\Hy@currentbookmarklevel
12703         \advance\@tempcnta by 1 %
12704         \edef\Hy@level{\the\@tempcnta}%
12705       \fi
12706     \else
12707       \global\let\Hy@levelcheck Y%
12708     \fi
12709     \global\let\Hy@currentbookmarklevel\Hy@level
12710     \@tempcnta\Hy@level\relax

```

```

12711 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12712 \advance\@tempcnta by -1 %
12713 \edef\Hy@tempa{#3}%
12714 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12715 \ifx\Hy@tempa\Hy@tempb
12716 \Hy@Warning{%
12717 The anchor of a bookmark and its parent's must not%
12718 \MessageBreak be the same. Added a new anchor%
12719 }%
12720 \phantomsection
12721 \fi
12722 \ifHy@bookmarksnumbered
12723 \let\numberline\Hy@numberline
12724 \let\partnumberline\Hy@numberline
12725 \let\chapternumberline\Hy@numberline
12726 \else
12727 \let\numberline\@gobble
12728 \let\partnumberline\@gobble
12729 \let\chapternumberline\@gobble
12730 \fi
12731 \HyPsd@XeTeXBigCharstrue
12732 \pdfstringdef\Hy@tempa{#2}%
12733 \if@filesw
12734 \stepcounter{bookmark@seq@number}%
12735 \@ifundefined{@outlinefile}{%
12736 }{%
12737 \protected@write\@outlinefile{}{%
12738 \protect\BOOKMARK
12739 [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12740 {\Hy@tempa}{\Hy@tempb}%
12741 \@percentchar\space\thebookmark@seq@number
12742 }%
12743 }%
12744 \fi
12745 \fi
12746 \endgroup
12747 }
12748 \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 `]`.

```

12749 \newcommand{\currentpdfbookmark}{%
12750 \pdfbookmark[\Hy@currentbookmarklevel]%
12751 }
12752 \newcommand{\subpdfbookmark}{%
12753 \@tempcnta\Hy@currentbookmarklevel
12754 \Hy@StepCount\@tempcnta
12755 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12756 }
12757 \newcommand{\belowpdfbookmark}[2]{%
12758 \@tempcnta\Hy@currentbookmarklevel
12759 \Hy@StepCount\@tempcnta
12760 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12761 \advance\@tempcnta by -1 %
12762 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
12763 }

```

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.

```

12764 \renewcommand\pdfbookmark[3][0]{%
12765   \Hy@writebookmark{#{#2}{#3.#1}{#1}{toc}%
12766   \hyper@anchorstart{#3.#1}\hyper@anchorend
12767 }
12768 \def\BOOKMARK{%
12769   \@ifnextchar[{\@BOOKMARK}{\@BOOKMARK[1][-]}%
12770 }
12771 \def\@BOOKMARK[#1]{%
12772   \@ifnextchar[{\@BOOKMARK[{#1}]}{\@BOOKMARK[{#1}][-]}%
12773 }

```

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`

```

12774 \RequirePackage{rerunfilecheck}[2009/12/10]
12775 \def\Hy@OutlineRerunCheck{%
12776   \RerunFileCheck{\jobname.out}{%
12777     \immediate\closeout\@outlinefile
12778   }{%
12779     Rerun to get outlines right\MessageBreak
12780     or use package 'bookmark'%
12781   }%
12782 }

```

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.

```

12783 \< *vtex>
12784 \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.

```

12785 \begingroup
12786   \catcode'\'=12 %
12787   \ifnum\Hy@VTeXversion<650 %
12788     \catcode'\ "=12 %
12789     \gdef\hv@pdf@char#1#2#3{%
12790       \char
12791       \ifcase'#1#2#3 %
12792         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
12793         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
12794         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
12795         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
12796         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
12797         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
12798         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
12799         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
12800         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
12801         \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%

```

```

12802 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
12803 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
12804 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
12805 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
12806 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
12807 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
12808 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
12809 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
12810 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
12811 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
12812 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
12813 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
12814 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
12815 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
12816 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
12817 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
12818 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
12819 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
12820 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
12821 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
12822 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
12823 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
12824 \fi
12825 }%
12826 \else
12827 \gdef\hv@pdf@char{\char'}%
12828 \fi
12829 \endgroup

```

\@@BOOKMARK

```

12830 \def\@@BOOKMARK[#1][#2]#3#4#5{%
12831 \expandafter\edef\csname @count@#3\endcsname{%
12832 \the\@serial@counter
12833 }%
12834 \edef\@mycount{\the\@serial@counter}%
12835 \Hy@StepCount\@serial@counter
12836 \edef\@parcount{%
12837 \expandafter\ifx\csname @count@#5\endcsname\relax
12838 0%
12839 \else
12840 \csname @count@#5\endcsname
12841 \fi
12842 }%
12843 \immediate\special{%
12844 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
12845 s=\ifx#2-c\else o\fi,t=#4%
12846 }%
12847 }%

```

\ReadBookmarks

```

12848 \def\ReadBookmarks{%
12849 \begingroup
12850 \def\0{\hv@pdf@char 0}%
12851 \def\1{\hv@pdf@char 1}%
12852 \def\2{\hv@pdf@char 2}%
12853 \def\3{\hv@pdf@char 3}%
12854 \def\{({}%

```

```

12855 \def\)}%
12856 \def\do##1{%
12857 \ifnum\the\catcode'\##1=\active
12858 \@makeother'\##1%
12859 \fi
12860 }%
12861 \dospecials
12862 \InputIfFileExists{\jobname.out}{-}{-}%
12863 \endgroup
12864 \ifx\WriteBookmarks\relax
12865 \else
12866 \if@files
12867 \newwrite\@outlinefile
12868 \Hy@OutlineRerunCheck
12869 \immediate\openout\@outlinefile=\jobname.out\relax
12870 \ifHy@typexml
12871 \immediate\write\@outlinefile{<relaxxml>\relax}%
12872 \fi
12873 \fi
12874 \fi
12875 }

12876 </vtex>
12877 <!*vtex>
12878 \def\ReadBookmarks{%
12879 \begingroup
12880 \escapechar='\'%
12881 \let\escapechar\@gobble %
12882 \def\@@BOOKMARK[##1][##2]##3##4##5{%
12883 \calc@bm@number{##5}%
12884 }%
12885 \InputIfFileExists{\jobname.out}{-}{-}%
12886 \ifx\WriteBookmarks\relax
12887 \global\let\WriteBookmarks\relax
12888 \fi
12889 \def\@@BOOKMARK[##1][##2]##3##4##5{%
12890 \def\Hy@temp{##4}%
12891 <*pdftex>
12892 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12893 \Hy@OutlineName{\Hy@pstringName}%
12894 ##2\check@bm@number{##3}%
12895 }{%
12896 \expandafter\strip@prefix\meaning\Hy@temp
12897 }%
12898 </pdftex>
12899 <*pdfmark>
12900 \pdfmark{%
12901 pdfmark=/OUT,%
12902 Count={##2\check@bm@number{##3}},%
12903 Dest={##3},%
12904 Title=\expandafter\strip@prefix\meaning\Hy@temp
12905 }%
12906 </pdfmark>
12907 <*dvi pdfm | xetex>
12908 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12909 \@pdfm@mark{%
12910 outline \ifHy@DvipdfmxOutlineOpen
12911 [%

```

```

12912         \ifnum##21>\z@
12913         \else
12914         -%
12915         \fi
12916     ] %
12917     \fi
12918     ##1<<%
12919     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
12920     /A<<%
12921     /S/GoTo%
12922     /D(\Hy@pstringName)%
12923     >>%
12924     >>%
12925     }%
12926 </dvi pdfm | xetex>
12927 }%
12928 {%
12929     \def\WriteBookmarks{0}%
12930     \InputIfFileExists{\jobname.out}{-}{-}%
12931 }%
12932 {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
12933 \ifx\WriteBookmarks\relax
12934 \else
12935     \if@filesw
12936         \newwrite\@outlinefile
12937         \Hy@OutlineRerunCheck
12938         \immediate\openout\@outlinefile=\jobname.out\relax
12939         \ifHy@typexml
12940             \immediate\write\@outlinefile{<relaxxml>\relax}%
12941         \fi
12942     \fi
12943     \fi
12944 \endgroup
12945 }
12946 <*pdf tex>
12947 \def\Hy@OutlineName#1#2#3#4{%
12948     \pdfoutline goto name{#2}count#3{#4}%
12949 }
12950 </pdf tex>
12951 \def\check@bm@number#1{%
12952     \expandafter\ifx\csname B_#1\endcsname\relax
12953     0%
12954     \else
12955         \csname B_#1\endcsname
12956     \fi
12957 }
12958 \def\calc@bm@number#1{%
12959     \@tempcnta=\check@bm@number{#1}\relax
12960     \advance\@tempcnta by 1 %
12961     \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
12962 }
12963 </!vtex>
12964 \ifHy@implicit
12965 \else
12966     \expandafter\endinput
12967 \fi
12968 </outlines>

```

```

12969 (*outlines | hypertex)
12970 \newlength\Hy@SectionHShift
12971 \def\Hy@SectionAnchorHref#1{%
12972   \ifx\protect\@typeset@protect
12973     \Hy@@SectionAnchor{#1}%
12974   \fi
12975 }
12976 \DeclareRobustCommand*\Hy@@SectionAnchor}[1]{%
12977   \leavevmode
12978   \hbox to 0pt{%
12979     \kern-\Hy@SectionHShift
12980     \Hy@raisedlink{%
12981       \hyper@anchorstart{#1}\hyper@anchorend
12982     }%
12983     \hss
12984   }%
12985 }
12986 \let\H@old@ssect\@ssect
12987 \def\@ssect#1#2#3#4#5{%
12988   \Hy@GlobalStepCount\Hy@linkcounter
12989   \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12990   \setlength{\Hy@SectionHShift}{#1}%
12991   \begingroup
12992     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
12993     \toks\tw@\expandafter{%
12994       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
12995       #5%
12996     }%
12997   \edef\x{\endgroup
12998     \the\toks@{\the\toks\tw@}}%
12999   }\x
13000 }
13001 \let\H@old@schapter\@schapter
13002 \def\@schapter#1{%
13003   \begingroup
13004     \let\@mkboth\@gobbletwo
13005     \Hy@GlobalStepCount\Hy@linkcounter
13006     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
13007     \Hy@raisedlink{%
13008       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13009     }%
13010   \endgroup
13011   \H@old@schapter{#1}%
13012 }

```

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:

```

13013 \ifundefined{@chapter}{-}{-}%
13014 \let\Hy@org@chapter\@chapter
13015 \def\@chapter{%
13016   \def\Hy@next{%
13017     \Hy@GlobalStepCount\Hy@linkcounter
13018     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
13019     \Hy@raisedlink{%
13020       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13021     }%

```

```

13022 }%
13023 \ifnum\c@secnumdepth>\m@ne
13024 \@ifundefined{if@mainmatter}%
13025 \iftrue{\csname if@mainmatter\endcsname}%
13026 \let\Hy@next\relax
13027 \fi
13028 \fi
13029 \Hy@next
13030 \Hy@org@chapter
13031 }%
13032 }

13033 \let\H@old@part\@part
13034 \begingroup\expandafter\expandafter\expandafter\endgroup
13035 \expandafter\ifx\csname chapter\endcsname\relax
13036 \let\Hy@secnum@part\z@
13037 \else
13038 \let\Hy@secnum@part\m@ne
13039 \fi
13040 \def\@part{%
13041 \ifnum\Hy@secnum@part>\c@secnumdepth
13042 \phantomsection
13043 \fi
13044 \H@old@part
13045 }

13046 \let\H@old@spart\@spart
13047 \def\@spart#1{%
13048 \Hy@GlobalStepCount\Hy@linkcounter
13049 \xdef\@currentHref{part*.\the\Hy@linkcounter}%
13050 \Hy@raisedlink{%
13051 \hyper@anchorstart{\@currentHref}\hyper@anchorend
13052 }%
13053 \H@old@spart{#1}%
13054 }

13055 \let\H@old@sect\@sect
13056 \def\@sect#1#2#3#4#5#6[#7]#8{%
13057 \ifnum #2>\c@secnumdepth
13058 \expandafter\@firstoftwo
13059 \else
13060 \expandafter\@secondoftwo
13061 \fi
13062 {%
13063 \Hy@GlobalStepCount\Hy@linkcounter
13064 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
13065 \setlength{\Hy@SectionHShift}{#3}%
13066 \begingroup
13067 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
13068 \toks\tw@\expandafter{%
13069 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13070 #8%
13071 }%
13072 \edef\x{\endgroup
13073 \the\toks@{\the\toks\tw@}}%
13074 }\x
13075 }{%
13076 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13077 }%
13078 }

```



```

13079 </outlines | hypertex>
13080 <*outlines>

13081 \expandafter\def\csname Parent-4\endcsname{}
13082 \expandafter\def\csname Parent-3\endcsname{}
13083 \expandafter\def\csname Parent-2\endcsname{}
13084 \expandafter\def\csname Parent-1\endcsname{}
13085 \expandafter\def\csname Parent0\endcsname{}
13086 \expandafter\def\csname Parent1\endcsname{}
13087 \expandafter\def\csname Parent2\endcsname{}
13088 \expandafter\def\csname Parent3\endcsname{}
13089 \expandafter\def\csname Parent4\endcsname{}

13090 </outlines>

```

49 Compatibility with koma-script classes

```

13091 <*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.

```

13092 \def\Hy@tempa{%
13093   \def\@addchap{##1}##2{%
13094     \typeout{##2}%
13095     \if@twoside
13096       \@mkboth{##1}{}%
13097     \else
13098       \@mkboth{}{##1}%
13099     \fi
13100     \addtocontents{lof}{\protect\addvspace{10\p@}}%
13101     \addtocontents{lot}{\protect\addvspace{10\p@}}%
13102     \Hy@GlobalStepCount\Hy@linkcounter
13103     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
13104     \Hy@raisedlink{%
13105       \hyper@anchorstart{\@currentHref}\hyper@anchorend
13106     }%
13107     \if@twocolumn
13108       \@topnewpage[\@makeschapterhead{##2}]%
13109     \else
13110       \@makeschapterhead{##2}%
13111       \@afterheading
13112     \fi
13113     \addcontentsline{toc}{chapter}{##1}%
13114   }%
13115 }
13116 \@ifclassloaded{scrbook}{%
13117   \@ifclasslater{scrbook}{2001/01/01}{%
13118     \let\Hy@tempa\@empty
13119   }{}%
13120 }{%
13121   \@ifclassloaded{scrreprt}{%
13122     \@ifclasslater{scrreprt}{2001/01/01}{%
13123       \let\Hy@tempa\@empty
13124     }{}%
13125   }{%
13126     \let\Hy@tempa\@empty

```

```

13127 }%
13128 }%
13129 \Hy@tempa
13130 </outlines | hypertext>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```

13131 <*pd1enc>
13132 \DeclareFontEncoding{PD1}{-}{-}

Accents
13133 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
13134 \DeclareTextAccent{\'}{PD1}{\textacute}
13135 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
13136 \DeclareTextAccent{\~}{PD1}{\texttilde}
13137 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
13138 \DeclareTextAccent{\r}{PD1}{\textring}
13139 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
13140 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
13141 \DeclareTextAccent{\c}{PD1}{\textcedilla}
13142 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
13143 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
13144 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
13145 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
13146 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
13147 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
13148 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
13149 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
13150 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
13151 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
13152 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
13153 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
13154 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
13155 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
13156 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
13157 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
13158 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
13159 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\textasciicircum}
13160 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
13161 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
13162 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
13163 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
13164 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
13165 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
13166 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
13167 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
13168 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
13169 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}{#1}}
13170 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}{#1}}
13171 \DeclareTextCommand{\newtie}{PD1}[1]{%
13172 \TextSymbolUnavailable{\newtie{#1}}{#1}%
13173 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

13174 % U+0009 (CHARACTER TABULATION)
 13175 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
 13176 % U+000A (LINE FEED)
 13177 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
 13178 % U+000D (CARRIAGE RETURN)
 13179 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D
 Accent glyph names
 13180 % U+02D8 BREVE; breve
 13181 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
 13182 % U+02C7 CARON; caron
 13183 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
 13184 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
 13185 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
 13186 % U+02D9 DOT ABOVE; dotaccent
 13187 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
 13188 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 13189 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
 13190 % U+02DB OGONEK; ogonek
 13191 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 13192 % U+02DA RING ABOVE; ring
 13193 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 13194 % U+02DC SMALL TILDE; ilde, *tilde
 13195 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 13196 % U+0022 QUOTATION MARK; quotedbl
 13197 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
 13198 % U+0023 NUMBER SIGN; numbersign
 13199 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 13200 % U+0024 DOLLAR SIGN; dollar
 13201 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 13202 % U+0025 PERCENT SIGN; percent
 13203 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 13204 % U+0026 AMPERSAND; ampersand
 13205 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle
 13206 % U+0028 LEFT PARENTHESIS; parenleft
 13207 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
 13208 % U+0029 RIGHT PARENTHESIS; parenright
 13209 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
 13210 % U+002E FULL STOP; period
 13211 \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
 13212 % U+003C LESS-THAN SIGN; less

13213 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 13214 % U+003E GREATER-THAN SIGN; greater
 13215 \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
 13216 % U+005C REVERSE SOLIDUS; backslash
 13217 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 13218 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13219 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 13220 % U+005F LOW LINE; underscore
 13221 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 13222 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 13223 % U+0060 GRAVE ACCENT; grave
 13224 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 13225 % U+0069 LATIN SMALL LETTER I; i
 13226 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 13227 % U+007B LEFT CURLY BRACKET; braceleft
 13228 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 13229 % U+007C VERTICAL LINE; *bar, verticalbar
 13230 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 13231 % U+007D RIGHT CURLY BRACKET; braceright
 13232 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 13233 % U+007E TILDE; asciitilde
 13234 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 13235 % U+2022 BULLET; bullet
 13236 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 13237 % U+2020 DAGGER; dagger
 13238 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 13239 % U+2021 DOUBLE DAGGER; daggerdbl
 13240 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 13241 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13242 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 13243 % U+2014 EM DASH; emdash
 13244 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 13245 % U+2013 EN DASH; endash
 13246 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 13247 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13248 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 13249 % U+2044 FRACTION SLASH; fraction
 13250 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 13251 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft

13252 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
13253 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
ingright
13254 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
13255 % U+2212 MINUS SIGN; minus
13256 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
13257 % U+2030 PER MILLE SIGN; perthousand
13258 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
13259 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
13260 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
13261 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
13262 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
13263 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
13264 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
13265 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
13266 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
13267 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
13268 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
13269 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
13270 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
13271 % U+2122 TRADE MARK SIGN; trademark
13272 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
13273 % U+FB01 LATIN SMALL LIGATURE FI; fi
13274 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
13275 % U+FB02 LATIN SMALL LIGATURE FL; fl
13276 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
13277 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
13278 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
13279 % U+0152 LATIN CAPITAL LIGATURE OE; OE
13280 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
13281 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13282 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
13283 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13284 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
13285 \DeclareTextCommand{\IJ}{PD1}{\230}
13286 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
13287 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
13288 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
13289 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
13290 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
13291 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
13292 % U+0153 LATIN SMALL LIGATURE OE; oe
13293 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
13294 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
13295 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
13296 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
13297 \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.
13298 % U+20AC EURO SIGN; *Euro, euro
13299 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
13300 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
13301 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
13302 % U+00A2 CENT SIGN; cent
13303 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
13304 % U+00A3 POUND SIGN; sterling
13305 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3

13306 % U+00A4 CURRENCY SIGN; currency
13307 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
13308 % U+00A5 YEN SIGN; yen
13309 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
13310 % U+00A6 BROKEN BAR; brokenbar
13311 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
13312 % U+00A7 SECTION SIGN; section
13313 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
13314 % U+00A8 DIAERESIS; dieresis
13315 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
13316 % U+00A9 COPYRIGHT SIGN; copyright
13317 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
13318 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
13319 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
13320 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motleft
13321 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
13322 % U+00AC NOT SIGN; logicalnot
13323 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
13324 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.
13325 % U+00AE REGISTERED SIGN; registered
13326 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
13327 % U+00AF MACRON; *macron, overscore
13328 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
13329 % U+00B0 DEGREE SIGN; degree
13330 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
13331 % U+00B1 PLUS-MINUS SIGN; plusminus
13332 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
13333 % U+00B2 SUPERSCRIFT TWO; twosuperior
13334 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
13335 % U+00B3 SUPERSCRIFT THREE; threesuperior
13336 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
13337 % U+00B4 ACUTE ACCENT; acute
13338 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
13339 % U+00B5 MICRO SIGN; mu, mul
13340 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
13341 % U+00B6 PILCROW SIGN; paragraph
13342 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
13343 % U+00B7 MIDDLE DOT; middot, *periodcentered
13344 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
13345 % U+00B8 CEDILLA; cedilla
13346 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
13347 % U+00B9 SUPERSCRIFT ONE; onesuperior
13348 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
13349 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13350 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
13351 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
13352 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
13353 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13354 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
13355 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13356 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
13357 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13358 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
13359 % U+00BF INVERTED QUESTION MARK; questiondown

13360 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
13361 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13362 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
13363 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13364 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
13365 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13366 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
13367 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13368 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
13369 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13370 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
13371 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13372 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13373 % U+00C6 LATIN CAPITAL LETTER AE; AE
13374 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13375 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13376 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13377 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13378 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13379 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13380 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13381 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13382 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13383 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13384 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
13385 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13386 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
13387 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13388 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
13389 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13390 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
13391 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13392 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
13393 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13394 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13395 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13396 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13397 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
13398 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13399 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13400 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13401 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13402 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13403 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
13404 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13405 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
13406 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13407 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
13408 % U+00D7 MULTIPLICATION SIGN; multiply
13409 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13410 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13411 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13412 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13413 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13414 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13415 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13416 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex

13417 \DeclareTextCompositeCommand{\~}{PD1}{U}{\333}% U+00DB
13418 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13419 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
13420 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13421 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13422 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13423 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13424 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13425 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
13426 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13427 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
13428 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13429 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
13430 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13431 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
13432 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13433 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13434 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13435 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
13436 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13437 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13438 % U+00E6 LATIN SMALL LETTER AE; ae
13439 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
13440 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13441 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13442 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13443 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13444 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13445 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13446 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13447 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13448 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13449 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
13450 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13451 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13452 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13453 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13454 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13455 \DeclareTextCompositeCommand{\^}{PD1}{i}{\355}% U+00ED
13456 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13457 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13458 \DeclareTextCompositeCommand{\~}{PD1}{i}{\356}% U+00EE
13459 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13460 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
13461 \DeclareTextCompositeCommand{\~}{PD1}{i}{\357}% U+00EF
13462 % U+00F0 LATIN SMALL LETTER ETH; eth
13463 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
13464 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13465 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
13466 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13467 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
13468 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13469 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
13470 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13471 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
13472 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13473 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5

13474 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 13475 \DeclareTextCompositeCommand{"}{PD1}{o}{\366}% U+00F6
 13476 % U+00F7 DIVISION SIGN; divide
 13477 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
 13478 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 13479 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
 13480 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 13481 \DeclareTextCompositeCommand{'}{PD1}{u}{\371}% U+00F9
 13482 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 13483 \DeclareTextCompositeCommand{'}{PD1}{u}{\372}% U+00FA
 13484 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 13485 \DeclareTextCompositeCommand{'}{PD1}{u}{\373}% U+00FB
 13486 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 13487 \DeclareTextCompositeCommand{"}{PD1}{u}{\374}% U+00FC
 13488 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 13489 \DeclareTextCompositeCommand{'}{PD1}{y}{\375}% U+00FD
 13490 % U+00FE LATIN SMALL LETTER THORN; thorn
 13491 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
 13492 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 13493 \DeclareTextCompositeCommand{"}{PD1}{y}{\377}% U+00FF
 13494 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

13495 \DeclareTextCommand{\SS}{PD1}{SS}
 13496 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

13497 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
 13498 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
 13499 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
 13500 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
 13501 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
 13502 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
 13503 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
 13504 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

13505 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
 13506 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
 13507 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
 13508 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
 13509 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
 13510 \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).

13511 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
 13512 \DeclareTextCompositeCommand{'}{PD1}{c}{c}% cacute
 13513 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
 13514 \DeclareTextCompositeCommand{'}{PD1}{n}{n}% nacute
 13515 \DeclareTextCompositeCommand{'}{PD1}{s}{s}% sacute
 13516 \DeclareTextCompositeCommand{'}{PD1}{z}{z}% zacute
 13517 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
 13518 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
 13519 \DeclareTextCompositeCommand{'}{PD1}{C}{C}% Cacute
 13520 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
 13521 \DeclareTextCompositeCommand{'}{PD1}{N}{N}% Nacute
 13522 \DeclareTextCompositeCommand{'}{PD1}{S}{S}% Sacute
 13523 \DeclareTextCompositeCommand{'}{PD1}{Z}{Z}% Zacute

13524 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
 13525 \end{pd1enc}

50.2 PU encoding

13526 \newcommand{*puenc}
 13527 \DeclareFontEncoding{PU}{}{}

50.2.1 NFSS2 accents

13528 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
 13529 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
 13530 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
 13531 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
 13532 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
 13533 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
 13534 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
 13535 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
 13536 % U+0304 COMBINING MACRON; macroncmb
 13537 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
 13538 % U+0306 COMBINING BREVE; brevecmb
 13539 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
 13540 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
 13541 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
 13542 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
 13543 % U+0308 COMBINING DIAERESIS; dieresiscmb
 13544 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
 13545 % U+030A COMBINING RING ABOVE; ringcmb
 13546 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
 13547 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
 13548 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
 13549 % U+030C COMBINING CARON; caroncmb
 13550 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
 13551 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13552 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
 13553 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
 13554 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13555 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
 13556 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 13557 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
 13558 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13559 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
 13560 % U+0327 COMBINING CEDILLA; cedillacmb
 13561 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
 13562 % U+0328 COMBINING OGONEK; ogonekcmb
 13563 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
 13564 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13565 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
 13566 % U+20DD COMBINING ENCLOSING CIRCLE
 13567 \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.

13568 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}
 13569 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
 13570 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
 13571 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
 13572 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciidieresis}
 13573 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}

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13574 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
13575 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
13576 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
13577 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
13578 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
13579 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
13580 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
13581 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
13582 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
13583 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13584 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13585 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13586 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
13587 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
13588 \DeclareTextCompositeCommand{\' }{PU}{\ }{\textacute}
13589 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
13590 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13591 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
13592 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13593 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13594 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13595 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13596 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13597 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13598 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
13599 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13600 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13601 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13602 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13603 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13604 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13605 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

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Accents for capitals (see encoding TS1)

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13606 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13607 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13608 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
13609 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
13610 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
13611 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13612 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\\"{#1}}
13613 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13614 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13615 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13616 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13617 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
13618 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
13619 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
13620 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

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50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

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13621 % U+0009 (CHARACTER TABULATION)
13622 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
13623 % U+000A (LINE FEED)
13624 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
13625 % U+000D (CARRIAGE RETURN)
13626 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

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\80\040: U+0020 SPACE; space, spacehackarabic
 \80\041: U+0021 EXCLAMATION MARK; exclam
 13627 % U+0022 QUOTATION MARK; quotedbl
 13628 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
 13629 % U+0023 NUMBER SIGN; numbersign
 13630 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 13631 % U+0024 DOLLAR SIGN; dollar
 13632 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 13633 % U+0025 PERCENT SIGN; percent
 13634 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 13635 % U+0026 AMPERSAND; ampersand
 13636 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 13637 % U+0027 APOSTROPHE; quotesingle
 13638 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 13639 % U+0028 LEFT PARENTHESIS; parenleft
 13640 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 13641 % U+0029 RIGHT PARENTHESIS; parenright
 13642 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 13643 % U+002A ASTERISK; asterisk
 13644 \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
 13645 % U+003C LESS-THAN SIGN; less
 13646 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 13647 % U+003E GREATER-THAN SIGN; greater
 13648 \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
 13649 % U+005C REVERSE SOLIDUS; backslash
 13650 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 13651 % U+005E CIRCUMFLEX ACCENT; asciicircum
 13652 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 13653 % U+005F LOW LINE; underscore
 13654 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 13655 % U+0060 GRAVE ACCENT; grave
 13656 \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

13657 % U+0069 LATIN SMALL LETTER I; i
 13658 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
 13659 \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
 13660 % U+007B LEFT CURLY BRACKET; braceleft
 13661 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 13662 % U+007C VERTICAL LINE; *bar, verticalbar
 13663 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 13664 % U+007D RIGHT CURLY BRACKET; braceright
 13665 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 13666 % U+007E TILDE; asciitilde
 13667 \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
 13668 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 13669 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 13670 % U+00A2 CENT SIGN; cent
 13671 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 13672 % U+00A3 POUND SIGN; sterling
 13673 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 13674 % U+00A4 CURRENCY SIGN; currency
 13675 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 13676 % U+00A5 YEN SIGN; yen
 13677 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 13678 % U+00A6 BROKEN BAR; brokenbar
 13679 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 13680 % U+00A7 SECTION SIGN; section
 13681 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 13682 % U+00A8 DIAERESIS; diaeresis
 13683 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 13684 % U+00A9 COPYRIGHT SIGN; copyright
 13685 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 13686 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 13687 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 13688 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 13689 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 13690 % U+00AC NOT SIGN; logicalnot
 13691 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 13692 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softhyphen
 13693 % U+00AE REGISTERED SIGN; registered
 13694 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 13695 % U+00AF MACRON; *macron, overscore
 13696 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 13697 % U+00B0 DEGREE SIGN; degree
 13698 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 13699 % U+00B1 PLUS-MINUS SIGN; plusminus
 13700 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 13701 % U+00B2 SUPERScript TWO; twosuperior
 13702 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 13703 % U+00B3 SUPERScript THREE; threesuperior

13704 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
13705 % U+00B4 ACUTE ACCENT; acute
13706 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
13707 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
13708 % U+00B5 MICRO SIGN; mu, mu1
13709 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
13710 % U+00B6 PILCROW SIGN; paragraph
13711 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
13712 % U+00B7 MIDDLE DOT; middot, *periodcentered
13713 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
13714 % U+00B8 CEDILLA; cedilla
13715 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
13716 % U+00B9 SUPERScript ONE; onesuperior
13717 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
13718 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
13719 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
13720 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
13721 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
13722 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13723 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
13724 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13725 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
13726 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13727 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
13728 % U+00BF INVERTED QUESTION MARK; questiondown
13729 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
13730 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13731 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
13732 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13733 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
13734 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13735 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
13736 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13737 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
13738 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13739 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
13740 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13741 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
13742 % U+00C6 LATIN CAPITAL LETTER AE; AE
13743 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
13744 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13745 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
13746 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13747 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
13748 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13749 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
13750 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13751 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
13752 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13753 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
13754 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13755 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
13756 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13757 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
13758 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13759 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE

13760 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13761 \DeclareTextCompositeCommand{"}{PU}{i}{\80\317}% U+00CF
13762 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13763 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
13764 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13765 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
13766 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13767 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
13768 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13769 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
13770 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13771 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
13772 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13773 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
13774 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13775 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
13776 % U+00D7 MULTIPLICATION SIGN; multiply
13777 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
13778 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13779 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
13780 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13781 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
13782 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13783 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
13784 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13785 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
13786 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13787 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
13788 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13789 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
13790 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13791 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
13792 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13793 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
13794 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13795 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
13796 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13797 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
13798 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13799 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
13800 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13801 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
13802 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13803 \DeclareTextCompositeCommand{"}{PU}{a}{\80\344}% U+00E4
13804 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13805 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
13806 % U+00E6 LATIN SMALL LETTER AE; ae
13807 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
13808 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13809 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
13810 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13811 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
13812 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13813 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
13814 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13815 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
13816 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis

13817 \DeclareTextCompositeCommand{"}{PU}{e}{\80\353}% U+00EB
13818 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13819 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC
13820 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}% U+00EC
13821 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13822 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED
13823 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}% U+00ED
13824 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13825 \DeclareTextCompositeCommand{~}{PU}{i}{\80\356}% U+00EE
13826 \DeclareTextCompositeCommand{~}{PU}{i}{\80\356}% U+00EE
13827 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13828 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
13829 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
13830 % U+00F0 LATIN SMALL LETTER ETH; eth
13831 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
13832 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13833 \DeclareTextCompositeCommand{~}{PU}{n}{\80\361}% U+00F1
13834 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13835 \DeclareTextCompositeCommand{'}{PU}{o}{\80\362}% U+00F2
13836 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13837 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}% U+00F3
13838 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13839 \DeclareTextCompositeCommand{~}{PU}{o}{\80\364}% U+00F4
13840 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13841 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}% U+00F5
13842 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13843 \DeclareTextCompositeCommand{"}{PU}{o}{\80\366}% U+00F6
13844 % U+00F7 DIVISION SIGN; divide
13845 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
13846 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
13847 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
13848 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
13849 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}% U+00F9
13850 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
13851 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}% U+00FA
13852 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
13853 \DeclareTextCompositeCommand{~}{PU}{u}{\80\373}% U+00FB
13854 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
13855 \DeclareTextCompositeCommand{"}{PU}{u}{\80\374}% U+00FC
13856 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
13857 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}% U+00FD
13858 % U+00FE LATIN SMALL LETTER THORN; thorn
13859 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
13860 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
13861 \DeclareTextCompositeCommand{"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

13862 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
13863 \DeclareTextCompositeCommand{=}{PU}{A}{\81\000}% U+0100
13864 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
13865 \DeclareTextCompositeCommand{=}{PU}{a}{\81\001}% U+0101
13866 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
13867 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
13868 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
13869 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
13870 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek

13871 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
13872 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
13873 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
13874 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
13875 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
13876 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
13877 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
13878 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
13879 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
13880 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
13881 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
13882 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
13883 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
13884 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
13885 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
13886 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
13887 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
13888 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
13889 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
13890 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
13891 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
13892 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
13893 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
13894 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
13895 \DeclareTextCompositeCommand{\DJ}{PU}{\81\020}% U+0110
13896 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
13897 \DeclareTextCompositeCommand{\dj}{PU}{\81\021}% U+0111
13898 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
13899 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
13900 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
13901 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
13902 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
13903 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
13904 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
13905 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
13906 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
13907 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
13908 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
13909 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
13910 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
13911 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
13912 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
13913 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
13914 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
13915 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
13916 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
13917 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
13918 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
13919 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
13920 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
13921 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
13922 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
13923 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
13924 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
13925 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
13926 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
13927 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120

13928 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
 13929 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
 13930 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
 13931 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
 13932 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
 13933 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
 13934 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
 13935 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
 13936 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
 13937 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
 13938 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
 13939 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
 13940 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
 13941 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
 13942 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
 13943 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
 13944 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
 13945 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 13946 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
 13947 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
 13948 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
 13949 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
 13950 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 13951 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
 13952 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
 13953 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
 13954 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
 13955 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 13956 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 13957 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
 13958 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
 13959 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
 13960 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 13961 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 13962 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
 13963 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
 13964 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 13965 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
 13966 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
 13967 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
 13968 % U+0133 LATIN SMALL LIGATURE IJ; ij
 13969 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 13970 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 13971 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 13972 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 13973 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 13974 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 13975 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 13976 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 13977 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 13978 \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`.

13979 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic

13980 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
13981 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
13982 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
13983 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
13984 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
13985 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
13986 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
13987 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
13988 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
13989 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
13990 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
13991 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
13992 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E

There seems to be no variants of letters ‘L’ and ‘l’ with a dot above (reasonable). Therefore the \. accent is reused instead of making a separate accent macro \textmiddledot.
13993 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
13994 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
13995 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
13996 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
13997 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
13998 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
13999 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
14000 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
14001 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
14002 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
14003 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
14004 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
14005 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
14006 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
14007 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
14008 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
14009 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
14010 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
14011 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
14012 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
14013 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
14014 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
14015 % U+014A LATIN CAPITAL LETTER ENG; Eng
14016 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
14017 % U+014B LATIN SMALL LETTER ENG; eng
14018 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
14019 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
14020 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
14021 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
14022 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
14023 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
14024 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
14025 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
14026 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
14027 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
14028 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
14029 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut

14030 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
14031 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14032 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
14033 % U+0153 LATIN SMALL LIGATURE OE; oe
14034 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
14035 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
14036 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
14037 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
14038 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
14039 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
14040 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
14041 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
14042 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
14043 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
14044 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
14045 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
14046 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
14047 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
14048 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
14049 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
14050 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
14051 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
14052 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
14053 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
14054 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
14055 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
14056 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
14057 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
14058 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
14059 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14060 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
14061 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
14062 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
14063 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
14064 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
14065 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
14066 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
14067 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
14068 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
14069 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
14070 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
14071 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
14072 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
14073 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
14074 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
14075 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
14076 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
14077 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
14078 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
14079 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
14080 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
14081 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
14082 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
14083 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
14084 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C

14085 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 14086 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 14087 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 14088 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 14089 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 14090 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 14091 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 14092 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 14093 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 14094 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 14095 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 14096 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 14097 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 14098 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 14099 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 14100 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 14101 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 14102 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 14103 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 14104 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 14105 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 14106 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 14107 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 14108 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 14109 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 14110 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 14111 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 14112 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 14113 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 14114 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 14115 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 14116 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 14117 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14118 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 14119 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 14120 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 14121 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 14122 \DeclareTextCommand{\textlong}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

14123 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 14124 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 14125 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 14126 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 14127 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 14128 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 14129 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 14130 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 14131 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 14132 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14133 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 14134 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 14135 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 14136 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 14137 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2

14138 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
14139 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
14140 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
14141 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
14142 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
14143 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
14144 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
14145 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
14146 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
14147 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
14148 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
14149 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
14150 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
14151 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
14152 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
14153 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
14154 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
14155 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
14156 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
14157 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
14158 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
14159 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14160 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
14161 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
14162 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
14163 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
14164 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
14165 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
14166 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
14167 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
14168 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
14169 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
14170 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
14171 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
14172 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
14173 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslasha-
acute, Ostrokeacut
14174 \DeclareTextCompositeCommand{\'}{PU}{\O}{\81\376}% U+01FE
14175 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslasha-
acute, ostrokeacute
14176 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
14177 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
14178 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
14179 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
14180 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
14181 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
14182 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
14183 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
14184 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
14185 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
14186 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
14187 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
14188 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14189 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
14190 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
14191 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
14192 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave

14193 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 14194 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 14195 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 14196 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 14197 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 14198 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 14199 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 14200 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 14201 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 14202 % U+021E LATIN CAPITAL LETTER H WITH CARON
 14203 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 14204 % U+021F LATIN SMALL LETTER H WITH CARON
 14205 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 14206 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 14207 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 14208 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 14209 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 14210 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 14211 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 14212 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 14213 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 14214 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 14215 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 14216 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 14217 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 14218 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 14219 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 14220 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 14221 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 14222 % U+0237 LATIN SMALL LETTER DOTLESS J
 14223 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

14224 % U+02C7 CARON; caron
 14225 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 14226 % U+02D8 BREVE; breve
 14227 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 14228 % U+02D9 DOT ABOVE; dotaccent
 14229 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 14230 % U+02DA RING ABOVE; ring
 14231 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 14232 % U+02DB OGONEK; ogonek
 14233 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 14234 % U+02DC SMALL TILDE; ilde, *tilde
 14235 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 14236 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 14237 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 14238 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 14239 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 14240 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 14241 % U+02F7 MODIFIER LETTER LOW TILDE
 14242 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

14243 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 14244 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 14245 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb

14246 \DeclareTextCommand{\textnewtie}{PU}{ \83\021}% U+0311
 14247 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 14248 \DeclareTextCommand{\textdotbelow}{PU}{ \83\043}% U+0323
 14249 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 14250 \DeclareTextCommand{\textmacronbelow}{PU}{ \83\061}% U+0331
 14251 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 14252 \DeclareTextCommand{\texttie}{PU}{ \83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

14253 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 14254 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 14255 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 14256 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 14257 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 14258 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 14259 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 14260 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 14261 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 14262 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 14263 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 14264 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 14265 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 14266 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 14267 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
 14268 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 14269 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 14270 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 14271 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; Iotadieresis
 14272 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 14273 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 14274 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 14275 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 14276 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 14277 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 14278 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 14279 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
 14280 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 14281 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 14282 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 14283 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 14284 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 14285 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 14286 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 14287 % U+0398 GREEK CAPITAL LETTER THETA; Theta
 14288 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
 14289 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 14290 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 14291 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
 14292 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
 14293 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
 14294 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
 14295 % U+039C GREEK CAPITAL LETTER MU; Mu
 14296 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
 14297 % U+039D GREEK CAPITAL LETTER NU; Nu
 14298 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D

14299 % U+039E GREEK CAPITAL LETTER XI; Xi
 14300 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
 14301 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
 14302 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
 14303 % U+03A0 GREEK CAPITAL LETTER PI; Pi
 14304 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
 14305 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
 14306 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
 14307 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
 14308 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
 14309 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
 14310 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
 14311 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
 14312 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
 14313 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
 14314 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
 14315 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
 14316 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
 14317 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
 14318 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
 14319 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
 14320 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
 14321 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
 14322 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
 14323 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
 14324 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Up-
 silondieresis
 14325 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
 14326 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphonos
 14327 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
 14328 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononon
 14329 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
 14330 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
 14331 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
 14332 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
 14333 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
 14334 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; up-
 silondieresisto
 14335 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
 14336 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
 14337 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
 14338 % U+03B2 GREEK SMALL LETTER BETA; beta
 14339 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
 14340 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
 14341 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
 14342 % U+03B4 GREEK SMALL LETTER DELTA; delta
 14343 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
 14344 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
 14345 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
 14346 % U+03B6 GREEK SMALL LETTER ZETA; zeta
 14347 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
 14348 % U+03B7 GREEK SMALL LETTER ETA; eta
 14349 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
 14350 % U+03B8 GREEK SMALL LETTER THETA; theta
 14351 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
 14352 % U+03B9 GREEK SMALL LETTER IOTA; iota
 14353 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9

14354 % U+03BA GREEK SMALL LETTER KAPPA; kappa
 14355 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
 14356 % U+03BB GREEK SMALL LETTER LAMDA; lambda
 14357 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
 14358 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
 14359 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
 14360 % U+03BD GREEK SMALL LETTER NU; nu
 14361 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
 14362 % U+03BE GREEK SMALL LETTER XI; xi
 14363 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
 14364 % U+03BF GREEK SMALL LETTER OMICRON; omicron
 14365 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
 14366 % U+03C0 GREEK SMALL LETTER PI; pi
 14367 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
 14368 % U+03C1 GREEK SMALL LETTER RHO; rho
 14369 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
 14370 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
 14371 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
 14372 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
 14373 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
 14374 % U+03C4 GREEK SMALL LETTER TAU; tau
 14375 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
 14376 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
 14377 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
 14378 % U+03C6 GREEK SMALL LETTER PHI; phi
 14379 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
 14380 % U+03C7 GREEK SMALL LETTER CHI; chi
 14381 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
 14382 % U+03C8 GREEK SMALL LETTER PSI; psi
 14383 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
 14384 % U+03C9 GREEK SMALL LETTER OMEGA; omega
 14385 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
 14386 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
 14387 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
 14388 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
 silondieresis
 14389 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
 14390 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
 14391 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
 14392 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
 14393 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
 14394 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
 14395 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
 14396 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
 14397 % U+03DA GREEK LETTER STIGMA; Stigmagreek
 14398 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
 14399 % U+03DB GREEK SMALL LETTER STIGMA
 14400 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
 14401 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 14402 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 14403 % U+03DD GREEK SMALL LETTER DIGAMMA
 14404 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 14405 % U+03DE GREEK LETTER KOPPA; Koppagreek
 14406 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 14407 % U+03DF GREEK SMALL LETTER KOPPA
 14408 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 14409 % U+03E0 GREEK LETTER SAMPI; Sampigreek

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14410 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
14411 % U+03E1 GREEK SMALL LETTER SAMPI
14412 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

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50.2.9 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

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14413 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
14414 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
14415 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrilic, *afii10023
14416 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
14417 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
14418 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
14419 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
14420 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
14421 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
14422 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrilic, *afii10053
14423 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
14424 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
14425 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
14426 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrril-
      lic, *afii10055
14427 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
14428 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrilic, *afii10056
14429 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
14430 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
14431 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
14432 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
14433 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
14434 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
14435 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
14436 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
14437 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
14438 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
14439 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
14440 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
14441 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
14442 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
14443 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrilic, *afii10062
14444 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
14445 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
14446 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
14447 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
14448 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
14449 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
14450 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
14451 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14452 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14453 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14454 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14455 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14456 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14457 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14458 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14459 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14460 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14461 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416

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14462 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14463 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14464 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
14465 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14466 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
14467 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14468 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14469 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
14470 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14471 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14472 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14473 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14474 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14475 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14476 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14477 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14478 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14479 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14480 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14481 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14482 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14483 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14484 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14485 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14486 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14487 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14488 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14489 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14490 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14491 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14492 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14493 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14494 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14495 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14496 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14497 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14498 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14499 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14500 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14501 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14502 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14503 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14504 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
14505 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14506 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14507 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14508 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14509 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14510 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14511 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14512 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14513 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14514 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
14515 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14516 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
14517 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14518 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432

14519 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14520 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
14521 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14522 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
14523 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14524 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
14525 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
14526 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
14527 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14528 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
14529 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14530 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
14531 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14532 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
14533 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
14534 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14535 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
14536 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14537 \DeclareTextCommand{\cyrll}{PU}{\84\073}% U+043B
14538 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
14539 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
14540 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14541 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
14542 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14543 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
14544 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14545 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
14546 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14547 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
14548 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14549 \DeclareTextCommand{\cyrse}{PU}{\84\101}% U+0441
14550 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14551 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
14552 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14553 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
14554 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
14555 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
14556 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14557 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
14558 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14559 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
14560 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14561 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
14562 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14563 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
14564 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
14565 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
14566 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14567 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
14568 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14569 \DeclareTextCommand{\cyryery}{PU}{\84\113}% U+044B
14570 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14571 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
14572 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14573 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
14574 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14575 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E

14576 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14577 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
14578 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14579 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
14580 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
14581 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
14582 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
14583 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
14584 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
14585 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14586 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14587 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14588 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
14589 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14590 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
14591 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
14592 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
14593 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14594 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
14595 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
14596 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14597 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
14598 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14599 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
14600 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14601 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
14602 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14603 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
14604 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14605 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14606 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14607 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
14608 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14609 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14610 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14611 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14612 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
14613 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14614 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14615 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
14616 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14617 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
14618 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14619 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
14620 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
14621 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
14622 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
14623 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
14624 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
14625 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
14626 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
14627 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
14628 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
14629 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
tifiedcyrillic
14630 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468

14631 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
 fiedcyrillic
 14632 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 14633 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 14634 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 14635 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 14636 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 14637 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 14638 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 14639 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyril-
 lic
 14640 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 14641 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 14642 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 14643 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 14644 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 14645 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 14646 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 14647 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 14648 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 14649 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 14650 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 14651 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 14652 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 14653 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 14654 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 14655 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 14656 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 14657 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE AC-
 CENT; Izhitsadblgravecyrillic
 14658 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
 14659 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE AC-
 CENT; izhitsadblgravecyrillic
 14660 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 14661 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 14662 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 14663 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 14664 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 14665 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
 lic
 14666 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 14667 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 14668 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 14669 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlo-
 cyrillic
 14670 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 14671 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
 cyrillic
 14672 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 14673 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 14674 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 14675 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 14676 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 14677 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 14678 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 14679 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic

14680 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 14681 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 14682 \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
 14683 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 14684 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 14685 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 14686 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 14687 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 14688 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 14689 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 14690 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 14691 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 14692 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 14693 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 14694 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 14695 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 14696 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 14697 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 14698 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 14699 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 14700 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 14701 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 14702 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 14703 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 14704 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 14705 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 14706 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 14707 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 14708 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 14709 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 14710 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 14711 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 14712 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 14713 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 14714 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 14715 \DeclareTextCommand{\cyrz}{PU}{\84\231}% U+0499
 14716 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499

14717 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 14718 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 14719 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadesendercyrillic
 14720 \DeclareTextCommand{\cyrkdesc}{PU}{\84\233}% U+049B
 14721 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic
 14722 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 14723 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-ticalstrokecyrillic
 14724 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 14725 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 14726 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 14727 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 14728 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 14729 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 14730 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 14731 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 14732 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 14733 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 14734 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 14735 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 14736 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 14737 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 14738 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 14739 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 14740 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 14741 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
 14742 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 14743 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 14744 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 14745 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 14746 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 14747 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 14748 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 14749 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 14750 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 14751 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 14752 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 14753 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 14754 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
 14755 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 14756 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 14757 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 14758 \DeclareTextCommand{\cyrtddsc}{PU}{\84\255}% U+04AD
 14759 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 14760 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE

14761 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
14762 \DeclareTextCommand{\cyrj}{PU}{\84\257}% U+04AF
14763 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraighstrokecyrillic
14764 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
14765 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraighstrokecyrillic
14766 \DeclareTextCommand{\cyrjhcrs}{PU}{\84\261}% U+04B1
14767 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
14768 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
14769 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
14770 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
14771 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
14772 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
14773 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
14774 \DeclareTextCommand{\cyrttetse}{PU}{\84\265}% U+04B5
14775 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
14776 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
14777 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
14778 \DeclareTextCommand{\cyrchrds}{PU}{\84\267}% U+04B7
14779 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chevverticalstrokecyrillic
14780 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
14781 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chevverticalstrokecyrillic
14782 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
14783 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
14784 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
14785 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
14786 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
14787 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
14788 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
14789 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
14790 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
14791 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
14792 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
14793 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
14794 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
14795 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
14796 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
14797 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
14798 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
14799 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
14800 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
14801 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
14802 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
14803 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
14804 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
14805 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic

14806 \DeclareTextCommand{\cyrrhk}{PU}{\84\304}% U+04C4
14807 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
14808 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
14809 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
14810 \DeclareTextCommand{\cyrljsc}{PU}{\84\306}% U+04C6
14811 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
14812 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
14813 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
14814 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
14815 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-cyrillic
14816 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
14817 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
14818 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
14819 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
14820 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
14821 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
14822 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
14823 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
14824 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
14825 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
14826 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
14827 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
14828 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
14829 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
14830 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
14831 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
14832 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
14833 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
14834 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
14835 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
14836 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
14837 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
14838 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
14839 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
14840 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
14841 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
14842 \DeclareTextCommand{\cyrswa}{PU}{\84\331}% U+04D9
14843 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-siscyrillic
14844 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
14845 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-siscyrillic
14846 \DeclareTextCompositeCommand{\U}{PU}{\cyrswa}{\84\333}% U+04DB
14847 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-siscyrillic
14848 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
14849 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
14850 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
14851 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
14852 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
14853 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic

14854 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
 14855 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-cyrillic
 14856 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
 14857 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
 14858 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
 14859 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
 14860 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
 14861 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
 14862 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
 14863 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
 14864 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
 14865 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
 14866 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
 14867 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
 14868 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
 14869 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
 14870 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
 14871 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
 14872 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
 14873 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
 14874 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
 14875 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
 14876 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
 14877 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
 14878 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
 14879 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 14880 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 14881 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 14882 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 14883 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 14884 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
 14885 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 14886 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
 14887 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 14888 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 14889 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 14890 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 14891 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 14892 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 14893 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 14894 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 14895 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 14896 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 14897 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 14898 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 14899 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 14900 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 14901 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 14902 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7

14903 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
siscyrillic
14904 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
14905 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
siscyrillic
14906 \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
14907 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
14908 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
14909 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
14910 \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

14911 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
14912 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

14913 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
14914 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
14915 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
14916 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
14917 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
14918 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
14919 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
14920 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
14921 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
14922 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
14923 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
14924 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
14925 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
14926 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
14927 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
14928 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
14929 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
14930 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
14931 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
14932 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
14933 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
14934 \DeclareTextCompositeCommand{.}{PU}{F}{\9036\036}% U+1E1E
14935 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
14936 \DeclareTextCompositeCommand{.}{PU}{f}{\9036\037}% U+1E1F
14937 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
14938 \DeclareTextCompositeCommand{=}{PU}{G}{\9036\040}% U+1E20
14939 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
14940 \DeclareTextCompositeCommand{=}{PU}{g}{\9036\041}% U+1E21
14941 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
14942 \DeclareTextCompositeCommand{.}{PU}{H}{\9036\042}% U+1E22
14943 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
14944 \DeclareTextCompositeCommand{.}{PU}{h}{\9036\043}% U+1E23
14945 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
14946 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
14947 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis

14948 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
14949 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
14950 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
14951 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
14952 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
14953 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
14954 \DeclareTextCompositeCommand{'}{PU}{K}{\9036\060}% U+1E30
14955 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
14956 \DeclareTextCompositeCommand{'}{PU}{k}{\9036\061}% U+1E31
14957 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
14958 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
14959 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
14960 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
14961 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
14962 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
14963 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
14964 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
14965 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
14966 \DeclareTextCompositeCommand{'}{PU}{M}{\9036\076}% U+1E3E
14967 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
14968 \DeclareTextCompositeCommand{'}{PU}{m}{\9036\077}% U+1E3F
14969 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
14970 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
14971 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
14972 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
14973 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
14974 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
14975 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
14976 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
14977 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
14978 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
14979 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
14980 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
14981 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
14982 \DeclareTextCompositeCommand{'}{PU}{P}{\9036\124}% U+1E54
14983 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
14984 \DeclareTextCompositeCommand{'}{PU}{p}{\9036\125}% U+1E55
14985 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
14986 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
14987 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
14988 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
14989 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
14990 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
14991 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
14992 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
14993 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
14994 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
14995 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
14996 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
14997 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
14998 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
14999 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15000 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
15001 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15002 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
15003 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15004 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F

15005 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15006 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
15007 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15008 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
15009 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15010 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
15011 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15012 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
15013 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
15014 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\202}% U+1E82
15015 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
15016 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\203}% U+1E83
15017 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
15018 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
15019 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
15020 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
15021 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
15022 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
15023 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
15024 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
15025 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
15026 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
15027 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
15028 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
15029 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
15030 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
15031 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
15032 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
15033 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
15034 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
15035 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
15036 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
15037 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
15038 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
15039 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
15040 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
15041 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
15042 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
15043 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
15044 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
15045 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
15046 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
15047 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
15048 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
15049 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
15050 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
15051 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
15052 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
15053 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
cent
15054 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
15055 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
15056 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
15057 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
15058 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
15059 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
15060 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2

15061 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15062 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 15063 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15064 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 15065 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15066 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

15067 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 15068 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 15069 % U+2013 EN DASH; endash
 15070 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 15071 % U+2014 EM DASH; emdash
 15072 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 15073 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 15074 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 15075 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15076 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 15077 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15078 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 15079 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 15080 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 15081 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 15082 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 15083 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 15084 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 15085 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 15086 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 15087 % U+2020 DAGGER; dagger
 15088 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 15089 % U+2021 DOUBLE DAGGER; daggerdbl
 15090 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 15091 % U+2022 BULLET; bullet
 15092 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 15093 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 15094 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 15095 % U+2030 PER MILLE SIGN; perthousand
 15096 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 15097 % U+2031 PER TEN THOUSAND SIGN
 15098 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 15099 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 15100 \DeclareTextCommand{\guilsingleft}{PU}{\9040\071}% U+2039
 15101 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 15102 \DeclareTextCommand{\guilsingright}{PU}{\9040\072}% U+203A
 15103 % U+203B REFERENCE MARK; referencemark
 15104 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 15105 % U+203D INTERROBANG
 15106 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 15107 % U+2044 FRACTION SLASH; fraction
 15108 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 15109 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 15110 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 15111 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 15112 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 15113 % U+2052 COMMERCIAL MINUS SIGN

15114 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

15115 % U+2070 SUPERSCRIPT ZERO; zerosuperior
15116 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
15117 % U+2074 SUPERSCRIPT FOUR; foursuperior
15118 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
15119 % U+2075 SUPERSCRIPT FIVE; fivesuperior
15120 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
15121 % U+2076 SUPERSCRIPT SIX; sixsuperior
15122 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
15123 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
15124 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
15125 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
15126 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
15127 % U+2079 SUPERSCRIPT NINE; ninesuperior
15128 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
15129 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
15130 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
15131 % U+207B SUPERSCRIPT MINUS
15132 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
15133 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
15134 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
15135 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
15136 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
15137 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
15138 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
15139 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
15140 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
15141 % U+2080 SUBSCRIPT ZERO; zeroinferior
15142 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
15143 % U+2081 SUBSCRIPT ONE; oneinferior
15144 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
15145 % U+2082 SUBSCRIPT TWO; twoinferior
15146 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
15147 % U+2083 SUBSCRIPT THREE; threeinferior
15148 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
15149 % U+2084 SUBSCRIPT FOUR; fourinferior
15150 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
15151 % U+2085 SUBSCRIPT FIVE; fiveinferior
15152 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
15153 % U+2086 SUBSCRIPT SIX; sixinferior
15154 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
15155 % U+2087 SUBSCRIPT SEVEN; seveninferior
15156 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
15157 % U+2088 SUBSCRIPT EIGHT; eightinferior
15158 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
15159 % U+2089 SUBSCRIPT NINE; nineinferior
15160 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
15161 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
15162 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
15163 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
15164 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

15165 % U+20A1 COLON SIGN; *colonmonetary, colonsign
15166 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1

15167 % U+20A4 LIRA SIGN; afii08941, *lira
 15168 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 15169 % U+20A6 NAIRA SIGN
 15170 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 15171 % U+20A7 PESETA SIGN; peseta
 15172 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 15173 % U+20A9 WON SIGN; won
 15174 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 15175 % U+20AB DONG SIGN; dong
 15176 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 15177 % U+20AC EURO SIGN; *Euro, euro
 15178 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 15179 % U+20B1 PESO SIGN
 15180 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 15181 % U+20B2 GUARANI SIGN
 15182 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

15183 % U+2103 DEGREE CELSIUS; centigrade
 15184 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 15185 % U+2116 NUMERO SIGN; *afii61352, numero
 15186 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 15187 % U+2117 SOUND RECORDING COPYRIGHT
 15188 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 15189 % U+211E PRESCRIPTION TAKE; prescription
 15190 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 15191 % U+2120 SERVICE MARK
 15192 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 15193 % U+2122 TRADE MARK SIGN; trademark
 15194 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 15195 % U+2126 OHM SIGN; Ohm, Omega
 15196 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 15197 % U+2127 INVERTED OHM SIGN
 15198 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 15199 % U+212B ANGSTROM SIGN; angstrom
 15200 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 15201 % U+212E ESTIMATED SYMBOL; estimated
 15202 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 15203 % U+2135 ALEF SYMBOL; aleph
 15204 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

15205 % U+2190 LEFTWARDS ARROW; arrowleft
 15206 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 15207 % U+2191 UPWARDS ARROW; arrowup
 15208 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 15209 % U+2192 RIGHTWARDS ARROW; arrowright
 15210 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 15211 % U+2193 DOWNWARDS ARROW; arrowdown
 15212 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

15213 % U+2212 MINUS SIGN; minus
 15214 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 15215 % U+221A SQUARE ROOT; radical
 15216 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

15217 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
15218 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
15219 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
15220 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

15221 % U+2422 BLANK SYMBOL
15222 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
15223 % U+2423 OPEN BOX; blank
15224 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

15225 % U+2460 CIRCLED DIGIT ONE; onecircle
15226 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
15227 % U+2461 CIRCLED DIGIT TWO; twocircle
15228 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
15229 % U+2462 CIRCLED DIGIT THREE; threecircle
15230 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
15231 % U+2463 CIRCLED DIGIT FOUR; fourcircle
15232 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
15233 % U+2464 CIRCLED DIGIT FIVE; fivecircle
15234 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
15235 % U+2465 CIRCLED DIGIT SIX; sixcircle
15236 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
15237 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
15238 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
15239 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
15240 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
15241 % U+2468 CIRCLED DIGIT NINE; ninecircle
15242 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
15243 % U+2469 CIRCLED NUMBER TEN; tencircle
15244 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
15245 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
15246 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
15247 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
15248 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
15249 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
15250 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
15251 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
15252 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
15253 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
15254 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
15255 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
15256 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
15257 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
15258 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
15259 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
15260 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
15261 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
15262 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
15263 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
15264 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
15265 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
15266 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
15267 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
15268 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7

15269 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 15270 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 15271 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 15272 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 15273 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 15274 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 15275 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 15276 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 15277 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 15278 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 15279 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 15280 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 15281 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 15282 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 15283 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 15284 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 15285 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 15286 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 15287 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 15288 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 15289 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 15290 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 15291 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 15292 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 15293 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 15294 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 15295 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 15296 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 15297 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 15298 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 15299 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 15300 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 15301 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 15302 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 15303 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 15304 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 15305 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 15306 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 15307 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 15308 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 15309 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 15310 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 15311 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 15312 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 15313 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 15314 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 15315 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 15316 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 15317 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 15318 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 15319 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 15320 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 15321 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 15322 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 15323 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 15324 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 15325 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle

15326 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 15327 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 15328 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 15329 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 15330 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 15331 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 15332 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 15333 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 15334 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 15335 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 15336 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 15337 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 15338 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 15339 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 15340 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 15341 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 15342 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 15343 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 15344 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 15345 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 15346 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 15347 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 15348 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 15349 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 15350 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 15351 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 15352 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 15353 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 15354 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 15355 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 15356 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 15357 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 15358 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 15359 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 15360 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 15361 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 15362 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 15363 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 15364 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 15365 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 15366 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 15367 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 15368 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 15369 % U+24EA CIRCLED DIGIT ZERO
 15370 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

15371 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 15372 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 15373 % U+25EF LARGE CIRCLE; largecircle
 15374 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

15375 % U+266A EIGHTH NOTE; musicalnote
 15376 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 15377 % U+26AD MARRIAGE SYMBOL
 15378 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD

15379 % U+26AE DIVORCE SYMBOL
 15380 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

15381 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 15382 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 15383 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 15384 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

15385 % U+FB01 LATIN SMALL LIGATURE FI; fi
 15386 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 15387 % U+FB02 LATIN SMALL LIGATURE FL; fl
 15388 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

15389 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

15390 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 15391 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 15392 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 15393 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 15394 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 15395 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 15396 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 15397 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

15398 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 15399 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
 15400 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
 15401 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
 15402 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
 15403 </puenc>

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

15404 <*puvnenc>
 15405 \DeclareTextCommand{\abreve}{PU}{\81\003}
 15406 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
 15407 \DeclareTextCommand{\dj}{PU}{\81\021}
 15408 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
 15409 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
 15410 \DeclareTextCommand{\ohorn}{PU}{\81\241}
 15411 \DeclareTextCommand{\uhorn}{PU}{\81\260}
 15412 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
 15413 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
 15414 \DeclareTextCommand{\DJ}{PU}{\81\020}
 15415 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
 15416 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
 15417 \DeclareTextCommand{\OHORN}{PU}{\81\240}
 15418 \DeclareTextCommand{\UHORN}{PU}{\81\257}

15419 \DeclareTextCompositeCommand{'}{PU}{a}{\80\341}
15420 \DeclareTextCompositeCommand{d}{PU}{a}{\9036\241}
15421 \DeclareTextCompositeCommand{'}{PU}{a}{\80\340}
15422 \DeclareTextCompositeCommand{h}{PU}{a}{\9036\243}
15423 \DeclareTextCompositeCommand{~}{PU}{a}{\80\343}
15424 \DeclareTextCompositeCommand{'}{PU}{\abreve}{\9036\257}
15425 \DeclareTextCompositeCommand{d}{PU}{\abreve}{\9036\267}
15426 \DeclareTextCompositeCommand{'}{PU}{\abreve}{\9036\261}
15427 \DeclareTextCompositeCommand{h}{PU}{\abreve}{\9036\263}
15428 \DeclareTextCompositeCommand{~}{PU}{\abreve}{\9036\265}
15429 \DeclareTextCompositeCommand{'}{PU}{\acircumflex}{\9036\245}
15430 \DeclareTextCompositeCommand{d}{PU}{\acircumflex}{\9036\255}
15431 \DeclareTextCompositeCommand{'}{PU}{\acircumflex}{\9036\247}
15432 \DeclareTextCompositeCommand{h}{PU}{\acircumflex}{\9036\251}
15433 \DeclareTextCompositeCommand{~}{PU}{\acircumflex}{\9036\253}
15434 \DeclareTextCompositeCommand{'}{PU}{e}{\80\351}
15435 \DeclareTextCompositeCommand{d}{PU}{e}{\9036\271}
15436 \DeclareTextCompositeCommand{'}{PU}{e}{\80\350}
15437 \DeclareTextCompositeCommand{h}{PU}{e}{\9036\273}
15438 \DeclareTextCompositeCommand{~}{PU}{e}{\9036\275}
15439 \DeclareTextCompositeCommand{'}{PU}{\ecircumflex}{\9036\277}
15440 \DeclareTextCompositeCommand{d}{PU}{\ecircumflex}{\9036\307}
15441 \DeclareTextCompositeCommand{'}{PU}{\ecircumflex}{\9036\301}
15442 \DeclareTextCompositeCommand{h}{PU}{\ecircumflex}{\9036\303}
15443 \DeclareTextCompositeCommand{~}{PU}{\ecircumflex}{\9036\305}
15444 \DeclareTextCompositeCommand{'}{PU}{i}{\80\355}
15445 \DeclareTextCompositeCommand{d}{PU}{i}{\9036\313}
15446 \DeclareTextCompositeCommand{'}{PU}{i}{\80\354}
15447 \DeclareTextCompositeCommand{h}{PU}{i}{\9036\311}
15448 \DeclareTextCompositeCommand{~}{PU}{i}{\81\051}
15449 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}
15450 \DeclareTextCompositeCommand{d}{PU}{o}{\9036\315}
15451 \DeclareTextCompositeCommand{'}{PU}{o}{\80\362}
15452 \DeclareTextCompositeCommand{h}{PU}{o}{\9036\317}
15453 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}
15454 \DeclareTextCompositeCommand{'}{PU}{\ocircumflex}{\9036\321}
15455 \DeclareTextCompositeCommand{d}{PU}{\ocircumflex}{\9036\331}
15456 \DeclareTextCompositeCommand{'}{PU}{\ocircumflex}{\9036\323}
15457 \DeclareTextCompositeCommand{h}{PU}{\ocircumflex}{\9036\325}
15458 \DeclareTextCompositeCommand{~}{PU}{\ocircumflex}{\9036\327}
15459 \DeclareTextCompositeCommand{'}{PU}{\ohorn}{\9036\333}
15460 \DeclareTextCompositeCommand{d}{PU}{\ohorn}{\9036\343}
15461 \DeclareTextCompositeCommand{'}{PU}{\ohorn}{\9036\335}
15462 \DeclareTextCompositeCommand{h}{PU}{\ohorn}{\9036\337}
15463 \DeclareTextCompositeCommand{~}{PU}{\ohorn}{\9036\341}
15464 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}
15465 \DeclareTextCompositeCommand{d}{PU}{u}{\9036\345}
15466 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}
15467 \DeclareTextCompositeCommand{h}{PU}{u}{\9036\347}
15468 \DeclareTextCompositeCommand{~}{PU}{u}{\81\151}
15469 \DeclareTextCompositeCommand{'}{PU}{\uhorn}{\9036\351}
15470 \DeclareTextCompositeCommand{d}{PU}{\uhorn}{\9036\361}
15471 \DeclareTextCompositeCommand{'}{PU}{\uhorn}{\9036\353}
15472 \DeclareTextCompositeCommand{h}{PU}{\uhorn}{\9036\355}
15473 \DeclareTextCompositeCommand{~}{PU}{\uhorn}{\9036\357}
15474 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}
15475 \DeclareTextCompositeCommand{d}{PU}{y}{\9036\365}

15476 \DeclareTextCompositeCommand{'}{PU}{y}{\9036\363}
15477 \DeclareTextCompositeCommand{h}{PU}{y}{\9036\367}
15478 \DeclareTextCompositeCommand{~}{PU}{y}{\9036\371}
15479 \DeclareTextCompositeCommand{'}{PU}{A}{\80\301}
15480 \DeclareTextCompositeCommand{d}{PU}{A}{\9036\240}
15481 \DeclareTextCompositeCommand{'}{PU}{A}{\80\300}
15482 \DeclareTextCompositeCommand{h}{PU}{A}{\9036\242}
15483 \DeclareTextCompositeCommand{~}{PU}{A}{\80\303}
15484 \DeclareTextCompositeCommand{'}{PU}{\ABREVE}{\9036\256}
15485 \DeclareTextCompositeCommand{d}{PU}{\ABREVE}{\9036\266}
15486 \DeclareTextCompositeCommand{'}{PU}{\ABREVE}{\9036\260}
15487 \DeclareTextCompositeCommand{h}{PU}{\ABREVE}{\9036\262}
15488 \DeclareTextCompositeCommand{~}{PU}{\ABREVE}{\9036\264}
15489 \DeclareTextCompositeCommand{'}{PU}{\ACIRCUMFLEX}{\9036\244}
15490 \DeclareTextCompositeCommand{d}{PU}{\ACIRCUMFLEX}{\9036\254}
15491 \DeclareTextCompositeCommand{'}{PU}{\ACIRCUMFLEX}{\9036\246}
15492 \DeclareTextCompositeCommand{h}{PU}{\ACIRCUMFLEX}{\9036\250}
15493 \DeclareTextCompositeCommand{~}{PU}{\ACIRCUMFLEX}{\9036\252}
15494 \DeclareTextCompositeCommand{'}{PU}{E}{\80\311}
15495 \DeclareTextCompositeCommand{d}{PU}{E}{\9036\270}
15496 \DeclareTextCompositeCommand{'}{PU}{E}{\80\310}
15497 \DeclareTextCompositeCommand{h}{PU}{E}{\9036\272}
15498 \DeclareTextCompositeCommand{~}{PU}{E}{\9036\274}
15499 \DeclareTextCompositeCommand{'}{PU}{\ECIRCUMFLEX}{\9036\276}
15500 \DeclareTextCompositeCommand{d}{PU}{\ECIRCUMFLEX}{\9036\306}
15501 \DeclareTextCompositeCommand{'}{PU}{\ECIRCUMFLEX}{\9036\300}
15502 \DeclareTextCompositeCommand{h}{PU}{\ECIRCUMFLEX}{\9036\302}
15503 \DeclareTextCompositeCommand{~}{PU}{\ECIRCUMFLEX}{\9036\304}
15504 \DeclareTextCompositeCommand{'}{PU}{I}{\80\315}
15505 \DeclareTextCompositeCommand{d}{PU}{I}{\9036\312}
15506 \DeclareTextCompositeCommand{'}{PU}{I}{\80\314}
15507 \DeclareTextCompositeCommand{h}{PU}{I}{\9036\310}
15508 \DeclareTextCompositeCommand{~}{PU}{I}{\81\050}
15509 \DeclareTextCompositeCommand{'}{PU}{O}{\80\323}
15510 \DeclareTextCompositeCommand{d}{PU}{O}{\9036\314}
15511 \DeclareTextCompositeCommand{'}{PU}{O}{\80\322}
15512 \DeclareTextCompositeCommand{h}{PU}{O}{\9036\316}
15513 \DeclareTextCompositeCommand{~}{PU}{O}{\80\325}
15514 \DeclareTextCompositeCommand{'}{PU}{\OCIRCUMFLEX}{\9036\320}
15515 \DeclareTextCompositeCommand{d}{PU}{\OCIRCUMFLEX}{\9036\330}
15516 \DeclareTextCompositeCommand{'}{PU}{\OCIRCUMFLEX}{\9036\322}
15517 \DeclareTextCompositeCommand{h}{PU}{\OCIRCUMFLEX}{\9036\324}
15518 \DeclareTextCompositeCommand{~}{PU}{\OCIRCUMFLEX}{\9036\326}
15519 \DeclareTextCompositeCommand{'}{PU}{\OHORN}{\9036\332}
15520 \DeclareTextCompositeCommand{d}{PU}{\OHORN}{\9036\342}
15521 \DeclareTextCompositeCommand{'}{PU}{\OHORN}{\9036\334}
15522 \DeclareTextCompositeCommand{h}{PU}{\OHORN}{\9036\336}
15523 \DeclareTextCompositeCommand{~}{PU}{\OHORN}{\9036\340}
15524 \DeclareTextCompositeCommand{'}{PU}{U}{\80\332}
15525 \DeclareTextCompositeCommand{d}{PU}{U}{\9036\344}
15526 \DeclareTextCompositeCommand{'}{PU}{U}{\80\331}
15527 \DeclareTextCompositeCommand{h}{PU}{U}{\9036\346}
15528 \DeclareTextCompositeCommand{~}{PU}{U}{\81\150}
15529 \DeclareTextCompositeCommand{'}{PU}{\UHORN}{\9036\350}
15530 \DeclareTextCompositeCommand{d}{PU}{\UHORN}{\9036\360}
15531 \DeclareTextCompositeCommand{'}{PU}{\UHORN}{\9036\352}
15532 \DeclareTextCompositeCommand{h}{PU}{\UHORN}{\9036\354}


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15533 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
15534 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
15535 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
15536 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
15537 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
15538 \DeclareTextCompositeCommand{\-}{PU}{Y}{\9036\370}

15539 </puvnc>

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50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

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15540 <*puarenc>

15541 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afi57409;ARABIC LET-
TER HAMZA
15542 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afi57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15543 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afi57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15544 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afi57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
15545 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afi57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
15546 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afi57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
15547 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afi57415;ARABIC LETTER ALEF
15548 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afi57416;ARABIC LETTER BEH
15549 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afi57417;ARABIC LETTER TEH MARBUTA
15550 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afi57418;ARABIC LETTER TEH
15551 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afi57419;ARABIC LET-
TER THEH
15552 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afi57420;ARABIC LET-
TER JEEM
15553 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afi57421;ARABIC LETTER HAH
15554 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afi57422;ARABIC LETTER KHAH
15555 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afi57423;ARABIC LETTER DAL
15556 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afi57424;ARABIC LETTER THAL
15557 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afi57425;ARABIC LETTER REH
15558 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afi57426;ARABIC LETTER ZAIN
15559 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afi57427;ARABIC LETTER SEEN
15560 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afi57428;ARABIC LET-
TER SHEEN
15561 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afi57429;ARABIC LETTER SAD
15562 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afi57430;ARABIC LETTER DAD
15563 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afi57431;ARABIC LETTER TAH
15564 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afi57432;ARABIC LETTER ZAH
15565 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afi57433;ARABIC LETTER AIN
15566 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afi57434;ARABIC LET-
TER GHAIN
15567 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afi57440;ARABIC TATWEEL
15568 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afi57441;ARABIC LETTER FEH
15569 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afi57442;ARABIC LETTER QAF
15570 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afi57443;ARABIC LETTER KAF
15571 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afi57444;ARABIC LETTER LAM
15572 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afi57445;ARABIC LET-
TER MEEM
15573 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afi57446;ARABIC LETTER NOON

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15574 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afi57470;ARABIC LETTER HEH
15575 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afi57448;ARABIC LETTER WAW
15576 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afi57449;ARABIC LET-
TER ALEF MAKSURA
15577 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afi57450;ARABIC LETTER YEH
15578 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afi57451;ARABIC FATHATAN
15579 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afi57452;ARABIC DAMMATAN
15580 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afi57453;ARABIC KASRATAN
15581 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afi57454;ARABIC FATHA
15582 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afi57455;ARABIC DAMMA
15583 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afi57456;ARABIC KASRA
15584 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afi57457;ARABIC SHADDA
15585 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afi57458;ARABIC SUKUN

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Farsi

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15586 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afi57506;ARABIC LETTER PEH
15587 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afi57507;ARABIC LET-
TER TCHEH
15588 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afi57508;ARABIC LETTER JEH
15589 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afi????;FARSI LET-
TER KAF
15590 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afi57509;ARABIC LETTER GAF
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15592 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
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15594 \puarenc

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15595 \*check
15596 \typeout{}
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15599 \check

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