

Hypertext marks in \LaTeX

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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 Euro \TeX 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 \LaTeX ”

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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 `\Hy@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\[%
218 \x\]%
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@hypertexnames
 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@hyperfootnotesttrue
 302 \Hy@hyperindextrue
 303 \Hy@hypertextnamestrue
 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@unicodefalse
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` `\Hy@ReturnAfterFi` The commands `\Hy@ReturnAfterElseFi` and `\Hy@ReturnAfterFi` avoid a too deep 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` `\Hy@safe@activesfalse` Babel's switch setting commands cannot be used directly, because they can be undefined if 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\cscname dimexpr\endcscname\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.

Email: oberdiek@uni-freiburg.de.

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 processed by T_EX, 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 (vtx driver, Unicode support).

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

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

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

```
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\emph\@firstofone
427 \let\textnormal\@firstofone
428 \let\textrm\@firstofone
429 \let\textsf\@firstofone
430 \let\texttt\@firstofone
431 \let\textbf\@firstofone
432 \let\textmd\@firstofone
433 \let\textit\@firstofone
434 \let\textsc\@firstofone
435 \let\textsl\@firstofone
436 \let\textup\@firstofone
437 \let\normalfont\@empty
438 \let\rmfamily\@empty
439 \let\sfamily\@empty
440 \let\ttfamily\@empty
441 \let\bfseries\@empty
442 \let\mdseries\@empty
443 \let\itshape\@empty
444 \let\scshape\@empty
445 \let\slshape\@empty
446 \let\upshape\@empty
447 \let\em\@empty
448 \let\rm\@empty
449 \let\Huge\@empty
450 \let\LARGE\@empty
451 \let\Large\@empty
452 \let\footnotesize\@empty
453 \let\huge\@empty
454 \let\large\@empty
455 \let\normalsize\@empty
456 \let\scriptsize\@empty
457 \let\small\@empty
458 \let\tiny\@empty
459 \let\mathversion\@gobble
460 \let\phantom\@gobble
461 \let\vphantom\@gobble
462 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

464 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
465 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

466 \let\textlatin\@firstofone
467 \@ifundefined{language@group}{-}{%
468   \csname HyPsd@babel@\language@group\endcsname
469 }%
470 \HyPsd@GreekPatch
471 \HyPsd@SpanishPatch

```

```

472 \HyPsd@BabelPatch
473 \let\@safe@activestruerelax
474 \let\@safe@activesfalse\relax

  Disable \cyr, used in russianb.ldf.
475 \let\cyr\relax

  Redefine \es@roman, used in spanish.ldf.
476 \let\es@roman\@Roman

```

Package german.

```

477 \let\glqq\textglqq
478 \let\grqq\textgrqq
479 \let\glq\textglq
480 \let\grq\textgrq
481 \let\fiqq\textfiqq
482 \let\frqq\textfrqq
483 \let\fiq\textfiq
484 \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}
485 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

486 \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.

```

487 \let\hspace\HyPsd@hspace

```

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

```

488 \let\label\@gobble
489 \let\index\@gobble
490 \let\glossary\@gobble
491 \let\href\@secondoftwo
492 \let\@mkboth\@gobbletwo

```

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

```

493 \let\ref\HyPsd@ref
494 \let\pageref\HyPsd@pageref
495 \let\nameref\HyPsd@nameref
496 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```
497 \let\leavevmode\@empty
498 \let\mbox\@empty
\halign causes error messages because of the template character #.
499 \def\halign{\pdfstringdef\Warn\halign\@gobble}%
500 \let\ignorespaces\HyPsd@ignorespaces
501 \let\Hy@SectionAnchorHref\@gobble
```

Patch for cjk bookmarks.

```
502 \ifHy@CJKbookmarks
503 \HyPsd@CJKhook
504 \fi
```

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`).

```
505 \Hy@pdfstringtrue
506 \pdfstringdefPreHook
```

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

```
507 \HyPsd@LetUnexpandableSpace\space
508 \HyPsd@LetUnexpandableSpace\ %
509 \HyPsd@LetUnexpandableSpace~%
510 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
511 \@ifundefined{@xspace}{%
512 \let\xspace\HyPsd@ITALCORR
513 }{%
514 \let\xspace\HyPsd@XSPACE
515 }%
516 \let\@HyPsd@ITALCORR
517 \let\bgroup\/%
518 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
519 \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:

```
520 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
521 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
522 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
523 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package ‘xargs’:

```
524 \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).

```
525 \begingroup
526 \let\GenericError\@gobblefour
527 \let\GenericWarning\@gobbletwo
528 \let\GenericInfo\@gobbletwo
```

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

```
529 \ifx\nofrenchguillemets\@undefined
530 \else
531 \nofrenchguillemets
532 \fi
```

Definition commands and expansion. Redefining the defining commands (see sec. 6.5.10). The original meaning of `\xdef` is saved in `\Hy@temp`.

```
533 \let\Hy@temp\xdef
534 \let\def\HyPsd@DefCommand
535 \let\gdef\HyPsd@DefCommand
536 \let\edef\HyPsd@DefCommand
537 \let\xdef\HyPsd@DefCommand
538 \let\futurelet\HyPsd@LetCommand
539 \let\let\HyPsd@LetCommand
540 \Hy@temp#1{#2}%
541 \endgroup
```

6.2.3 Postprocessing

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

```
542 \ifx#1\@empty
543 \else
```

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

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

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

```
544 \HyPsd@ProtectSpaces#1%
545 \let\HyPsd@String\@empty
546 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
547 \global\let#1\HyPsd@String
```

Check tokens. After removing the spaces and the grouping characters the string now should only consist 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.

```

548 \let\HyPsd@SPACEOPTI\relax
549 {%
550 \let\HyPsd@String\@empty
551 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@end
552 \global\let#1\HyPsd@String
553 }%
554 \expandafter\HyPsd@RemoveMask\expandafter
555 | \expandafter\@empty#1\HyPsd@end#1%
```

`\HyPsd@CheckCatcodes` should not have removed the tokens with catcode 3, 4, 7, and 8. Because a parameter token (6) would cause too 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.

```

556 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
557 \let\HyPsd@String\@empty
558 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
559 \global\let#1\HyPsd@String
```

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

```
560 \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.

```

561 \ifHy@unicode
562 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
563 \HyPsd@SPACEOPTI#1%
564 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
```



```

565 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
566 {\HyPsd@SPACEOPTI\80\273}#1%
567 \else
568 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
569 \expandafter\HyPsd@Subst\expandafter{%
570 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
571 \string\273}\HyPsd@SPACEOPTI\273}#1%
572 \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.

```

573 \ifHy@unicode
574 \HyPsd@StringSubst{\)}{\80\051}#1%
575 \HyPsd@Subst){\80\051}#1%
576 \let\HyPsd@empty\relax
577 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
578 {\HyPsd@empty\80\051}#1%
579 \else
580 \HyPsd@StringSubst{\)}{\051}#1%
581 \HyPsd@Subst){\051}#1%
582 \let\HyPsd@empty\relax
583 \HyPsd@StringSubst{\051}\HyPsd@empty\string\)}#1%
584 \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`.

```

585 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
586 \@ifundefined{@xspace}{%
587 }{%
588 \let\HyPsd@xspace\relax
589 \expandafter\HyPsd@Subst\expandafter
590 {\HyPsd@XSPACE}\HyPsd@xspace#1%
591 \let\HyPsd@xspace\HyPsd@doxspace
592 }%
593 \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.

```
594 \HyPsd@Subst{---}\textemdash#1%
595 \HyPsd@Subst{--}\textendash#1%
596 % \HyPsd@Subst{fi}\textfi#1%
597 % \HyPsd@Subst{fi}\textfi#1%
598 \HyPsd@Subst{!}\textexclamdown#1%
599 \HyPsd@Subst{?}\textquestiondown#1%
```

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

```
600 \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.

```
601 \ifHy@unicode
602 \HyPsd@StringSubst\(\textparenleft#1%
603 \HyPsd@Subst(\textparenleft#1%
604 \else
605 \HyPsd@StringSubst\({\050}#1%
606 \HyPsd@Subst({\050}#1%
607 \HyPsd@StringSubst{\050}{\string\{ }#1%
608 \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.

```
609 \ifHy@unicode
610 \edef\HyPsd@SPACEOPTI{\80\040}%
611 \else
612 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
613 \fi
614 \xdef#1{#1\@empty}%
615 \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.

```
616 \endgroup
617 \begingroup
618 \ifHy@unicode
619 \HyPsd@ConvertToUnicode#1%
```

Try conversion back to PDFDocEncoding.

```
620 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
621 \@ifundefined{StringEncodingConvertTest}{%
622 }{%
623 \EdefUnescapeString\HyPsd@temp#1%
```

```

624     \ifxetex
625     \let\HyPsd@UnescapedString\HyPsd@temp
626     \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
627         {utf16be}{ascii-print}{-%
628     \EdefEscapeString\HyPsd@temp\HyPsd@temp
629     \global\let#1\HyPsd@temp
630     \Hy@unicodefalse
631     }{-%
632     \HyPsd@ToBigChars#1%
633     }%
634 \else
635     \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
636         {utf16be}{pdfdoc}{-%
637     \EdefEscapeString\HyPsd@temp\HyPsd@temp
638     \global\let#1\HyPsd@temp
639     \Hy@unicodefalse
640     }{ }%
641     \fi
642     }%
643 \fi
644 \fi
645 \HyPsd@XeTeXBigCharsfalse

```

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

```

646     \pdfstringdefPostHook#1%
647 \endgroup
648 }

```

`\Hy@pdfstringdef`

```

649 \def\Hy@pdfstringdef#1#2{%
650 \pdfstringdef\Hy@gtemp{#2}%
651 \let#1\Hy@gtemp
652 }

```

6.3 Encodings

6.3.1 XeTeX

```

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

```

```

671 \ifHyPsd@XeTeXBigChars
672 \EdefEscapeHex\HyPsd@UnescapedString{%
673 \expandafter\@gobbletwo\HyPsd@UnescapedString
674 }%
675 \begingroup
676 \toks@{ }%
677 \escapechar=92\relax
678 \let\x\HyPsd@ToBigChar
679 \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
680 \relax\relax\relax\relax\relax\relax\relax
681 \edef\x{%
682 \endgroup
683 \gdef\noexpand#1{\the\toks@}%
684 }%
685 \x
686 \fi
687 }%
688 \def\HyPsd@ToBigChar#1#2#3#4{%
689 \ifx\relax#1\relax
690 \let\x\relax
691 \else
692 \count@=#1#2#3#4\relax
693 \let\y\@empty
694 \lccode\z@=\count@
695 \ifnum\count@=40 % (
696 \let\y\@backslashchar
697 \else
698 \ifnum\count@=41 % )
699 \let\y\@backslashchar
700 \else
701 \ifnum\count@=92 % backslash
702 \let\y\@backslashchar
703 \else
704 \ifnum\count@=10 % newline
705 \edef\y##1{\string\n}%
706 \else
707 \ifnum\count@=13 % carriage return
708 \edef\y##1{\string\r}%
709 \fi
710 \fi
711 \fi
712 \fi
713 \fi
714 \lowercase{%
715 \toks@\expandafter{%
716 \the\expandafter\toks@
717 \y
718 ^^@%
719 }%
720 }%
721 \fi
722 \x
723 }%
724 }
725 \Hy@temp

```

6.3.2 Workaround for package linguex

```

726 \@ifpackageloaded{linguex}{%
727   \let\HyLinguex@OrgB\b
728   \let\HyLinguex@OrgC\c
729   \let\HyLinguex@OrgD\d
730   \def\HyLinguex@Restore{%
731     \let\b\HyLinguex@OrgB
732     \let\c\HyLinguex@OrgC
733     \let\d\HyLinguex@OrgD
734   }%
735   \AtEndOfPackage{%
736     \pdfstringdefDisableCommands{%
737       \@ifundefined{oldb}{\let\b\oldb}%
738       \@ifundefined{oldc}{\let\c\oldc}%
739       \@ifundefined{oldd}{\let\d\oldd}%
740     }%
741   }%
742 }{%
743   \let\HyLinguex@Restore\relax
744 }%

```

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.

```

745 \@ifundefined{T@PD1}{%
746   \input{pd1enc.def}%
747   \HyLinguex@Restore
748 }{}
749 \DeclareFontFamily{PD1}{pdf}{}
750 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
751 \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`.

```

752 \def\HyPsd@InitUnicode{%
753   \@ifundefined{T@PU}{%
754     \input{puenc.def}%
755     \HyLinguex@Restore
756   }{}%
757   \DeclareFontFamily{PU}{pdf}{}%
758   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
759   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
760   \let\HyPsd@InitUnicode\relax
761 }

```

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.

```
762 \def\texorpdfstring{%
763   \ifHy@pdfstring
764   \expandafter\@secondoftwo
765   \else
766   \expandafter\@firstoftwo
767   \fi
768 }
```

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`.

```
769 \@ifundefined{pdfstringdefPreHook}{%
770   \let\pdfstringdefPreHook\@empty
771 }{}
772 \@ifundefined{pdfstringdefPostHook}{%
773   \let\pdfstringdefPostHook\@gobble
774 }{}
```

`\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`.

```
775 \def\pdfstringdefDisableCommands{%
776   \begingroup
777   \makeatletter
778   \HyPsd@DisableCommands
779 }
```

`\HyPsd@DisableCommands`

```
780 \long\def\HyPsd@DisableCommands#1{%
781   \toks0=\expandafter{\pdfstringdefPreHook}%
782   \toks1={#1}%
783   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
784 \endgroup
785 }
```

`\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`.

```
786 \def\pdfstringdefWarn#1{%
787   \expandafter\noexpand\csname<>-\string#1\endcsname
788 }
```

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.

```
789 \begingroup
790   \catcode0=12 %
791   \def\x{\endgroup
792     \def\HyPsd@ignorespaces{%
793       \romannumeral\expandafter'\expandafter^^@%
794       \romannumeral'^^@%
795     }%
796   }%
797 \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`.

```
798 \def\HyPsd@BabelPatch{%
799   \let\HyOrg@languageshorthands\languageshorthands
800   \let\languageshorthands\HyPsd@LanguageShorthands
801 }
802 \RequirePackage{pdftexcmds}[2009/04/10]
803 \begingroup\expandafter\expandafter\expandafter\endgroup
804 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
805   \let\HyPsd@langshort@system\@empty
806   \def\HyPsd@LanguageShorthands#1{%
807     \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
808       \HyPsd@langshort@system
809     \expandafter\@gobble
810   \else
```

```

811 \expandafter\@firstofone
812 \fi
813 {%
814 \HyOrg@languageshorthands{#1}%
815 }%
816 }%
817 \else
818 \def\HyPsd@LanguageShorthands#1{%
819 \ifnum\pdf@strcmp{#1}{system}=\z@
820 \expandafter\@gobble
821 \else
822 \expandafter\@firstofone
823 \fi
824 {%
825 \HyOrg@languageshorthands{#1}%
826 }%
827 }%
828 \fi
829 \def\Hy@temp{%
830 \@ifpackageloaded{babel}{%
831 \@ifpackagelater{babel}{2008/03/16}{%
832 \let\Hy@temp@empty
833 }{%
834 \def\HyPsd@BabelPatch{%
835 \let\HyOrg@languageshorthands\languageshorthands
836 }%
837 }%
838 }-}%
839 }
840 \Hy@temp
841 \expandafter\AtBeginDocument\expandafter{\Hy@temp}
842 \newif\ifHy@next

Nothing to do for english.
843 \@ifundefined{danish@sh@"@sel}{-}{%
844 \def\HyPsd@babel@danish{%
845 \declare@shorthand{danish}{-|}{-}%
846 \declare@shorthand{danish}{-~}{-}%
847 }%
848 }
849 \@ifundefined{dutch@sh@"@sel}{-}{%
850 \def\HyPsd@babel@dutch{%
851 \declare@shorthand{dutch}{-|}{-}%
852 \declare@shorthand{dutch}{-~}{-}%
853 }%
854 }
855 \@ifundefined{finnish@sh@"@sel}{-}{%
856 \def\HyPsd@babel@finnish{%
857 \declare@shorthand{finnish}{-|}{-}%
858 }%
859 }
860 \@ifundefined{french@sh@:@sel}{-}{%
861 \def\HyPsd@babel@frenchb{%
862 \def\guill@spacing{ }%
863 }%
864 }
865 \@ifundefined{german@sh@"@sel}{-}{%

```



```

866 \def\HyPsd@babel@german{%
867   \declare@shorthand{german}{f}{f}%
868   \declare@shorthand{german}{|}{|}%
869   \declare@shorthand{german}{~}{-}%
870 }%
871 }
872 \@ifundefined{macedonian@sh@"@sel}{-}{-}%
873 \def\HyPsd@babel@macedonian{%
874   \declare@shorthand{macedonian}{|}{|}%
875   \declare@shorthand{macedonian}{~}{-}%
876 }%
877 }{}
878 \@ifundefined{ngerman@sh@"@sel}{-}{-}%
879 \def\HyPsd@babel@ngerman{%
880   \declare@shorthand{ngerman}{|}{|}%
881   \declare@shorthand{ngerman}{~}{-}%
882 }%
883 }
884 \@ifundefined{portuges@sh@"@sel}{-}{-}%
885 \def\HyPsd@babel@portuges{%
886   \declare@shorthand{portuges}{|}{|}%
887 }%
888 }
889 \@ifundefined{russian@sh@"@sel}{-}{-}%
890 \def\HyPsd@babel@russian{%
891   \declare@shorthand{russian}{|}{|}%
892   \declare@shorthand{russian}{~}{-}%
893 }%
894 }
895 \@ifundefined{slovene@sh@"@sel}{-}{-}%
896 \def\HyPsd@babel@slovene{%
897   \declare@shorthand{slovene}{|}{|}%
898 }%
899 }

```

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

```

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

```

```

922 \@ifundefined{usorbian@sh@~@sel}{~}{~}%
923 \def\HyPsd@babel@usorbian{~}
924 \declare@shorthand{usorbian}{~}{~}%
925 \declare@shorthand{usorbian}{~}{~}%
926 }%
927 }

928 \@ifundefined{greek@sh@\string~@sel}{~}{~}%
929 \let\HyPsd@GreekPatch\@empty
930 }{~}%
931 \def\HyPsd@GreekPatch{~}
932 \let\greeknumeral\HyPsd@greeknumeral
933 \let\Greeknatural\HyPsd@Greeknatural
934 }%
935 }
936 \def\HyPsd@greeknumeral#1{~}
937 \HyPsd@GreekNum\@firstoftwo{#1}%
938 }
939 \def\HyPsd@Greeknatural#1{~}
940 \HyPsd@GreekNum\@secondoftwo{#1}%
941 }
942 \def\HyPsd@GreekNum#1#2{~}
943 \ifHy@unicode
944 \ifnum#2<\@ne
945 \@arabic{#2}%
946 \else
947 \ifnum#2<1000000 %
948 \HyPsd@@GreekNum#1{#2}%
949 \else
950 \@arabic{#2}%
951 \fi
952 \fi
953 \else
954 \@arabic{#2}%
955 \fi
956 }
957 \def\HyPsd@@GreekNum#1#2{~}
958 \ifnum#2<\@m
959 \ifnum#2<10 %
960 \expandafter\HyPsd@GreekNumI
961 \expandafter\@gobble\expandafter#1\number#2%
962 \else
963 \ifnum#2<100 %
964 \expandafter\HyPsd@GreekNumII
965 \expandafter\@gobble\expandafter#1\number#2%
966 \else
967 \expandafter\HyPsd@GreekNumIII
968 \expandafter\@gobble\expandafter#1\number#2%
969 \fi
970 \fi
971 \ifnum#2>\z@
972 \textnumeralsigngreek
973 \fi
974 \else
975 \ifnum#2<\@M
976 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
977 \else
978 \ifnum#2<100000 %

```

```

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

```

```

1036 }%
1037 \expandafter#2%
1038 \ifcase#3 %
1039   {}{}%
1040 \or\textrho\textRho
1041 \or\textsigma\textSigma
1042 \or\texttau\textTau
1043 \or\textupsilon\textUpsilon
1044 \or\textphi\textPhi
1045 \or\textchi\textChi
1046 \or\textpsi\textPsi
1047 \or\textomega\textOmega
1048 \or\textsampigreek\textSampigreek
1049 \else
1050   {}{}%
1051 \fi
1052 \HyPsd@GreekNumII#1#2#4#5%
1053 }
1054 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1055 \HyPsd@GreekNumI\@firstofone#1#2%
1056 \HyPsd@@GreekNum#1{#3#4#5}%
1057 }
1058 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1059 \HyPsd@GreekNumII\@firstofone#1#2#3%
1060 \HyPsd@@GreekNum#1{#4#5#6}%
1061 }
1062 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1063 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1064 \HyPsd@@GreekNum#1{#5#6#7}%
1065 }

1066 \def\HyPsd@SpanishPatch{%
1067 \begingroup\expandafter\expandafter\expandafter\endgroup
1068 \expandafter\ifx\csname es@save@dot\endcsname\relax
1069 \else
1070 \let\.\es@save@dot
1071 \fi
1072 }

```

6.5.3 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 ($\geq 0x40$).

```

1073 \begingroup
1074 \catcode"7F=\active
1075 \toks@{%
1076 \let\CJK@ignorespaces\empty
1077 \def\CJK@char#1{\@gobbletwo}%
1078 \let\CJK@charx\@gobblefour
1079 \let\CJK@punctchar\@gobblefour

```

```

1080 \def\CJK@punctcharx#1{\@gobblefour}%
1081 \catcode"7F=\active
1082 \def^^7f#1^^7f#2^^7f{%
1083   \string #1\HyPsd@DecimalToOctal{#2}%
1084 }%
1085 % ... ?
1086 \ifHy@unicode
1087   \def\Hy@cjkpu{\80}%
1088   \else
1089     \let\Hy@cjkpu\@empty
1090   \fi
1091   \HyPsd@CJKActiveChars
1092 }%
1093 \count@=127 %
1094 \@whilenum\count@<255 \do{%
1095   \advance\count@ by 1 %
1096   \lccode'\~=\count@
1097   \lowercase{%
1098     \toks@\expandafter{\the\toks@ ~}%
1099   }%
1100 }%
1101 \toks@\expandafter{\the\toks@ !}%
1102 \xdef\HyPsd@CJKhook{\the\toks@}%
1103 \endgroup

```

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

```

1104 \def\HyPsd@CJKActiveChars#1{%
1105   \ifx#1!%
1106     \let\HyPsd@CJKActiveChars\relax
1107   \else
1108     \edef#1{\noexpand\Hy@cjkpu\string#1}%
1109   \fi
1110   \HyPsd@CJKActiveChars
1111 }

```

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

```

1112 \def\HyPsd@DecimalToOctal#1{%
1113   \ifcase #1 %
1114     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1115     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1116     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1117     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1118     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1119     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1120     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1121     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1122     \or @\or A\or B\or C\or D\or E\or F\or G%
1123     \or H\or I\or J\or K\or L\or M\or N\or O%
1124     \or P\or Q\or R\or S\or T\or U\or V\or W%
1125     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1126     \or \140\or a\or b\or c\or d\or e\or f\or g%
1127     \or h\or i\or j\or k\or l\or m\or n\or o%
1128     \or p\or q\or r\or s\or t\or u\or v\or w%
1129     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1130     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1131     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%

```

```

1132 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1133 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1134 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1135 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1136 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1137 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1138 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1139 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1140 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1141 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1142 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1143 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1144 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1145 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1146 \fi
1147 }

```

6.5.4 \@inmathwarn-Patch

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

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

```

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

1148 \def\HyPsd@inmathwarn#1#2{%
1149 \ifx#2\expandafter
1150 \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1151 \HyPsd@GLYPHERR
1152 \expandafter\@gobble\string#1%
1153 >%
1154 \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1155 \else
1156 \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1157 \fi
1158 \else
1159 \expandafter#2%
1160 \fi
1161 }
1162 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1163 \def\HyPsd@EndWithElse#1\else{\else}

```

\HyPsd@add@accent

```

1164 \def\HyPsd@add@accent#1#2{%
1165 \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1166 #2%
1167 }%

```

6.5.5 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.

```

1168 \def\HyPsd@LetUnexpandableSpace#1{%
1169 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1170 }

```

\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.

```

1171 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.6 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.

```

1172 \edef\HyPsd@XSPACE{\string#\string X}
1173 \edef\HyPsd@ITALCORR{\string#\string I}
1174 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.7 `\hspace fix`

`\HyPsd@hspace`

```
1175 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1176 \def\HyPsd@@hspace#1*#2\END{%
1177   \ifx\#2\%
1178     \HyPsd@hspacetest{#1}%
1179   \else
1180     \expandafter\HyPsd@hspacetest
1181   \fi
1182 }
```

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

```
1183 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.8 Fix for AMS classes

```
1184 \@ifundefined{tocsection}{%
1185   \let\HyPsd@AMSclassfix\relax
1186 }{%
1187   \def\HyPsd@AMSclassfix{%
1188     \let\tocpart\HyPsd@tocsection
1189     \let\tocchapter\HyPsd@tocsection
1190     \let\tocappendix\HyPsd@tocsection
1191     \let\tocsection\HyPsd@tocsection
1192     \let\tocsubsection\HyPsd@tocsection
1193     \let\tocsubsubsection\HyPsd@tocsection
1194     \let\tocparagraph\HyPsd@tocsection
1195   }%
1196   \def\HyPsd@tocsection#1#2#3{%
1197     \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1198     #3%
1199   }%
1200 }
```

6.5.9 Reference commands

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

```
1201 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```
1202 \def\HyPsd@@ref#1*#2\END{%
1203   \ifx\#2\%
1204     \HyPsd@@@ref{#1}%
1205   \else
1206     \expandafter\HyPsd@@@ref
1207   \fi
1208 }
```

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

```
1209 \def\HyPsd@@@ref#1{%
1210   \expandafter\ifx\csname r@#1\endcsname\relax
1211   ??%
```



```

1212 \else
1213   \expandafter\expandafter\expandafter
1214   \@car\csname r@#1\endcsname\@nil
1215 \fi
1216 }

```

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

```

1217 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1218 \def\HyPsd@@pageref#1*#2\END{%
1219   \ifx\#2\%
1220     \HyPsd@@@pageref{#1}%
1221   \else
1222     \expandafter\HyPsd@@@pageref
1223   \fi
1224 }

```

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

```

1225 \def\HyPsd@@@pageref#1{%
1226   \expandafter\ifx\csname r@#1\endcsname\relax
1227     ??%
1228   \else
1229     \expandafter\expandafter\expandafter\expandafter
1230     \expandafter\expandafter\expandafter\@car
1231     \expandafter\expandafter\expandafter\@gobble
1232     \csname r@#1\endcsname{}\@nil
1233   \fi
1234 }

```

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

```

1235 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1236 \def\HyPsd@@nameref#1*#2\END{%
1237   \ifx\#2\%
1238     \HyPsd@@@nameref{#1}%
1239   \else
1240     \expandafter\HyPsd@@@nameref
1241   \fi
1242 }

```

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

```

1243 \def\HyPsd@@@nameref#1{%
1244   \expandafter\ifx\csname r@#1\endcsname\relax
1245     ??%
1246   \else
1247     \expandafter\expandafter\expandafter\expandafter
1248     \expandafter\expandafter\expandafter\@car
1249     \expandafter\expandafter\expandafter\@gobbletwo
1250     \csname r@#1\endcsname{}{}\@nil
1251   \fi
1252 }

```

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

```
1253 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1254 \def\HyPsd@@autoref#1*#2\END{%
1255 \ifx\#2\%
1256 \HyPsd@@@autoref{#1}%
1257 \else
1258 \expandafter\HyPsd@@@autoref
1259 \fi
1260 }
```

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

```
1261 \def\HyPsd@@@autoref#1{%
1262 \expandafter\ifx\csname r@#1\endcsname\relax
1263 ??%
1264 \else
1265 \expandafter\expandafter\expandafter\HyPsd@autorefname
1266 \csname r@#1\endcsname{}{}{}{} \@nil
1267 \expandafter\expandafter\expandafter
1268 \@car\csname r@#1\endcsname\@nil
1269 \fi
1270 }
```

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

```
1271 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1272 \ifx\#4\%
1273 \else
1274 \HyPsd@@autorefname#4.\@nil
1275 \fi
1276 }
```

`\HyPsd@@autorefname`

```
1277 \def\HyPsd@@autorefname#1.#2\@nil{%
1278 \@ifundefined{#1autorefname}{%
1279 \@ifundefined{#1name}{%
1280 }{%
1281 \csname#1name\endcsname\space
1282 }%
1283 }{%
1284 \csname#1autorefname\endcsname\space
1285 }%
1286 }
```

6.5.10 Redefining the defining commands

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

Active characters cannot be defined with this trick. It is possible to define all undefined active characters (perhaps that they have the meaning of `\relax`). To avoid side effects this should be done in `\pdfstringdef` shortly before the `\xdef` job. But checking

and defining all possible active characters of the full range (0 until 255) would take a while. `\pdfstringdef` is slow enough, so this isn't done.

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

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

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

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

```

\HyPsd@DefCommand
\HyPsd@LetCommand
1287 \begingroup
1288 \def\x#1#2{%
1289 \endgroup
1290 \let#1\def
1291 \def\HyPsd@DefCommand##1##2###{%
1292 #1%
1293 \expandafter\noexpand
1294 \csname\expandafter\@gobble\string##1\@empty\endcsname
1295 \@gobble
1296 }%
1297 \let#2\let
1298 \def\HyPsd@@LetCommand##1{%
1299 \expandafter\ifx\csname##1\expandafter\endcsname
1300 \csname iftrue\endcsname
1301 \pdfstringdefWarn\let
1302 \expandafter\@gobble
1303 \else
1304 \expandafter\ifx\csname##1\expandafter\endcsname
1305 \csname iffalse\endcsname
1306 \pdfstringdefWarn\let
1307 \expandafter\expandafter\expandafter\@gobble
1308 \else
1309 #2%
1310 \expandafter\noexpand
1311 \csname##1\expandafter\expandafter\expandafter\endcsname
1312 \fi
1313 \fi
1314 }%
1315 }%
1316 \expandafter\x\csname <def>-command\expandafter\endcsname
1317 \csname <let>-command\endcsname
1318 \def\HyPsd@LetCommand#1{%
1319 \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1320 \expandafter\expandafter\expandafter{%
1321 \expandafter\@gobble\string#1\@empty
1322 }%

```

```
1323 }
```

6.5.11 `\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).

```
1324 \def\HyPsd@ifnextchar#1{%
1325 \pdfstringdefWarn#1%
1326 \expandafter\@gobbletwo\@gobble
1327 }
```

6.5.12 `\@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`.

```
1328 \def\HyPsd@protected@testopt#1{%
1329 \pdfstringdefWarn#1%
1330 \@gobbletwo
1331 }
```

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:

```
1332 \def\HyPsd@Warning#1{%
1333 \begingroup
1334 \def\space{ }%
1335 \Hy@Warning{#1}%
1336 \endgroup
1337 }
```

6.6.2 Protecting spaces

```
1338 \RequirePackage{etexcmds}[2007/09/09]
1339 \ifetex@unexpanded
1340 \expandafter\@secondoftwo
1341 \else
1342 \expandafter\@firstoftwo
1343 \fi
1344 {%
```

`\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`.

```

1345 \def\HyPsd@ProtectSpaces#1{%
1346   \iftrue
1347     \expandafter\HyPsd@@ProtectSpacesFi
1348     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1349   \fi
1350 }%

```

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

```

1351 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1352   \fi
1353   \ifx\scrollmode#2\scrollmode
1354     \HyPsd@RemoveMask#1\HyPsd@End#3%
1355   \else
1356     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1357     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1358   \fi
1359 }%

```

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.

```

1360 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1361   \toks@ \expandafter{#1}%
1362   \xdef#2{\the\toks@}%
1363 }%
1364 }{%
1365 \let\HyPsd@fi\fi
1366 \def\HyPsd@ProtectSpaces#1{%
1367   \xdef#1{%
1368     \iftrue
1369       \expandafter\HyPsd@@ProtectSpacesFi
1370       \expandafter|\expandafter\@empty#1| %
1371     \HyPsd@fi
1372   }%
1373   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1374 }%
1375 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1376   \fi
1377   \etex@unexpanded{#1}%
1378   \ifx\scrollmode#2\scrollmode
1379   \else
1380     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1381   \HyPsd@fi
1382 }%
1383 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1384   \xdef#2{\etex@unexpanded\expandafter{#1}}%
1385 }%
1386 }

```

6.6.3 Remove grouping braces

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

```

1387 \def\HyPsd@RemoveBraces#1{%
1388   \ifx\scrollmode#1\scrollmode
1389   \else
1390     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1391   \fi
1392 }

```

`\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`.

```

1393 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1394   \fi
1395   \def\Hy@temp@A{#1#2}%
1396   \def\Hy@temp@B{#3}%
1397   \ifx\Hy@temp@A\Hy@temp@B
1398     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1399       \HyPsd@String#1%
1400     }%
1401     \ifx\scrollmode#2\scrollmode
1402     \else
1403       \Hy@ReturnAfterFiFiEnd{%
1404         \HyPsd@RemoveBraces{#2}%
1405       }%
1406     \fi
1407   \else
1408     \def\Hy@temp@A{#1}%
1409     \HyPsd@AppendItalcorr\HyPsd@String
1410     \ifx\Hy@temp@A\@empty
1411       \Hy@ReturnAfterElseFiFiEnd{%
1412         \HyPsd@RemoveBraces{#2}%
1413       }%
1414     \else
1415       \HyPsd@ProtectSpaces\Hy@temp@A
1416       \HyPsd@AppendItalcorr\Hy@temp@A
1417       \Hy@ReturnAfterFiFiEnd{%
1418         \expandafter\HyPsd@RemoveBraces\expandafter
1419           {\Hy@temp@A#2}%
1420       }%
1421     \fi
1422   \fi
1423   \Hy@ReturnEnd
1424 }

```

`\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`.

```

1425 \def\HyPsd@AppendItalcorr#1{%
1426   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/}#1%
1427 }
1428 \def\HyPsd@@AppendItalcorr#1#2{%
1429   \expandafter\def\expandafter#2\expandafter{#2#1}%
1430 }

```

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`).

```
1431 \def\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1432 \global\let\HyPsd@Rest\relax
1433 \ifcat\relax\noexpand#1\relax
1434 \ifx#1\protect
1435 \else
1436 \ifx#1\penalty
1437 \setbox\z@=\hbox{%
1438 \afterassignment\HyPsd@AfterCountRemove
1439 \count@=#2\HyPsd@end
1440 }%
1441 \else
1442 \ifx#1\kern
1443 \setbox\z@=\hbox{%
1444 \afterassignment\HyPsd@AfterDimenRemove
1445 \dimen@=#2\HyPsd@end
1446 }%
1447 \else
1448 \ifx#1\hskip
1449 \setbox\z@=\hbox{%
1450 \afterassignment\HyPsd@AfterSkipRemove
1451 \skip@=#2\HyPsd@end
1452 }%
1453 \else
1454 \HyPsd@CatcodeWarning{#1}%
1455 \fi
1456 \fi
1457 \fi
1458 \fi
1459 \else
1460 \ifcat#1A% letter
1461 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1462 \HyPsd@String#1%
1463 }%
1464 \else
1465 \ifcat#1 % SPACE
1466 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1467 \HyPsd@String\HyPsd@SPACEOPTI
1468 }%
1469 \else
1470 \ifcat$#1%
1471 \HyPsd@CatcodeWarning{math shift}%
1472 \else
1473 \ifcat&#1%
1474 \HyPsd@CatcodeWarning{alignment tab}%
```

```

1475     \else
1476         \ifcat^#1%
1477             \HyPsd@CatcodeWarning{superscript}%
1478         \else
1479             \ifcat_#1%
1480                 \HyPsd@CatcodeWarning{subscript}%
1481             \else
1482                 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1483                     \HyPsd@String#1%
1484                 }%
1485             \fi
1486         \fi
1487     \fi
1488 \fi
1489 \fi
1490 \fi
1491 \fi
1492 \ifx\HyPsd@Rest\relax
1493     \ifx\scrollmode#2\scrollmode
1494     \else
1495         \Hy@ReturnAfterFiFiEnd{%
1496             \HyPsd@CheckCatcodes#2\HyPsd@End
1497         }%
1498     \fi
1499 \else
1500     \ifx\HyPsd@Rest\@empty
1501     \else
1502         \Hy@ReturnAfterFiFiEnd{%
1503             \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1504         }%
1505     \fi
1506 \fi
1507 \Hy@ReturnEnd
1508 }

```

Remove counts, dimens, skips.

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

```

1509 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1510     \gdef\HyPsd@Rest{#1}%
1511 }

```

`\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.

```

1512 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1513     \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@\fi>1ex %
1514     \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1515     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1516 \else
1517     \ifdim\dimen@=\z@
1518     \else
1519         \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1520     \fi
1521     \gdef\HyPsd@Rest{#1}%
1522 \fi

```



```
1523 }
```

`\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).

```
1524 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1525 \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>\fi>1ex %
1526 \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1527 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1528 \else
1529 \ifdim\skip@=\z@
1530 \else
1531 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1532 \fi
1533 \gdef\HyPsd@Rest{#1}%
1534 \fi
1535 }
```

Catcode warnings.

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

```
1536 \def\HyPsd@CatcodeWarning#1{%
1537 \HyPsd@Warning{%
1538 Token not allowed in a PDF string (%
1539 \ifHy@unicode
1540 Unicode%
1541 \else
1542 PDFDocEncoding%
1543 \fi
1544 ):%
1545 \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
1546 }%
1547 }
1548 \begingroup
1549 \catcode'\|=0 %
1550 \catcode'\|=12 %
1551 |gdef|HyPsd@RemoveCmdPrefix#1{%
1552 |expandafter|HyPsd@@RemoveCmdPrefix
1553 |string#1|@empty\<-|@empty|@empty
1554 }%
1555 |gdef|HyPsd@@RemoveCmdPrefix#1\<-#2|@empty#3|@empty{#1#2}%
1556 |endgroup
```

`\HyPsd@RemoveSpaceWarning`

```
1557 \def\HyPsd@RemoveSpaceWarning#1{%
1558 \HyPsd@Warning{%
1559 Token not allowed in a PDF string (%
1560 \ifHy@unicode
1561 Unicode%
1562 \else
1563 PDFDocEncoding%
1564 \fi
1565 ):%
1566 \MessageBreak #1\MessageBreak
1567 removed%
1568 }%
1569 }
```

\HyPsd@ReplaceSpaceWarning

```
1570 \def\HyPsd@ReplaceSpaceWarning#1{%
1571 \HyPsd@Warning{%
1572   Token not allowed in a PDF string (%
1573   \ifHy@unicode
1574     Unicode%
1575   \else
1576     PDFDocEncoding%
1577   \fi
1578   ):%
1579   \MessageBreak #1\MessageBreak
1580   replaced by space%
1581 }%
1582 }
```

6.6.5 Check for wrong glyphs

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

```
1583 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1584 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1585   \HyPsd@String#1%
1586 }%
1587 \ifx\#2\%
1588 \else
1589   \Hy@ReturnAfterFi{%
1590     \HyPsd@GlyphProcessWarning#2\@empty
1591   }%
1592 \fi
1593 }
1594 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1595 \HyPsd@@GlyphProcessWarning#1++>%
1596 \HyPsd@GlyphProcess#2\@empty
1597 }
1598 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1599 \ifx\#2\%
1600   \HyPsd@Warning{%
1601     Glyph not defined in %
1602     P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1603     removing ‘\@backslashchar#1’%
1604   }%
1605 \else
1606   \HyPsd@Warning{%
1607     Composite letter ‘\@backslashchar#1+#2’\MessageBreak
1608     not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1609     \MessageBreak
1610     removing ‘\@backslashchar#1’%
1611   }%
1612 \fi
1613 }
```

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.

```

1614 \def\HyPsd@spaceopti#1{ % first space
1615 \ifx\HyPsd@spaceopti#1%
1616   \040%
1617 \else
1618   #1%
1619 \fi
1620 }%

```

6.6.6 Replacing tokens

`\HyPsd@Subst` To save tokens `\HyPsd@StringSubst` is a 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.

```

1621 \def\HyPsd@Subst#1#2#3{%
1622 \def\HyPsd@@ReplaceFi##1##2\END\fi{%
1623   \fi
1624   ##1%
1625   \ifx\scrollmode##2\scrollmode
1626   \else
1627     #2%
1628   \HyPsd@@ReplaceFi##2\END
1629   \fi
1630 }%
1631 \xdef#3{%
1632   \iftrue
1633     \expandafter\HyPsd@@ReplaceFi#3##1\END
1634   \fi
1635 }%
1636 }

```

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

```

1637 \def\HyPsd@StringSubst#1{%
1638 \expandafter\HyPsd@Subst\expandafter{\string#1}%
1639 }

```

6.6.7 Support for package `xspace`

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

```

1640 \def\HyPsd@doxspace#1{%
1641 \ifx#1\relax\else
1642 \ifx#1.\else
1643 \ifx#1:\else
1644 \ifx#1,\else
1645 \ifx#1;\else
1646 \ifx#1!\else
1647 \ifx#1?\else
1648 \ifx#1/\else
1649 \ifx#1-\else
1650 \ifx#1'\else
1651 \HyPsd@SPACEOPTI

```

```

1652     \fi
1653     \fi
1654     \fi
1655     \fi
1656     \fi
1657     \fi
1658     \fi
1659     \fi
1660     \fi
1661     \fi
1662     #1%
1663 }%

```

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.

```

1664 \begingroup
1665 \catcode'\|=0 %
1666 \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1667 |gdef|HyPsd@ConvertToUnicode#1{%
1668 |xdef#1{%
1669 |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1670 }%
1671 |ifx#1|@empty
1672 |else
1673 |xdef#1{%
1674 \376\377%
1675 #1%
1676 }%
1677 |fi
1678 }%

```

\HyPsd@DoConvert

```

1679 |gdef|HyPsd@DoConvert#1{%
1680 |ifx#1|@empty
1681 |else
1682 |Hy@ReturnAfterFi{%
1683 |ifx#1\%%
1684 \%%
1685 |expandafter|HyPsd@DoEscape
1686 |else
1687 |HyPsd@Char{#1}%
1688 |expandafter|HyPsd@DoConvert
1689 |fi
1690 }%
1691 |fi
1692 }%

```

\HyPsd@DoEscape

```

1693 |gdef|HyPsd@DoEscape#1{%
1694 |ifx#19%
1695 |expandafter|HyPsd@GetTwoBytes

```

```

1696 | else
1697 | Hy@ReturnAfterFi{%
1698 | ifx#18%
1699 | 00%
1700 | expandafter|HyPsd@GetTwoBytes
1701 | else
1702 | #1%
1703 | expandafter|HyPsd@GetOneByte
1704 | fi
1705 }%
1706 |fi
1707 }%

```

`\HyPsd@GetTwoBytes`

```

1708 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1709 | #1\#2#3#4%
1710 | |HyPsd@DoConvert
1711 }%

```

`\HyPsd@GetOneByte`

```

1712 |gdef|HyPsd@GetOneByte#1#2{%
1713 | #1#2%
1714 | |HyPsd@DoConvert
1715 }%
1716 |endgroup

```

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

```

1717 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1718 \xdef#4{#4#1#2}%
1719 \HyPsd@@ConvertToUnicode#3\END#4%
1720 }

```

`\HyPsd@Char`

```

1721 \RequirePackage{intcalc}[2007/09/27]
1722 \begingroup
1723 \catcode0=9 %
1724 \catcode'\^=7 %
1725 \catcode'\^^=12 %
1726 \def\x{^^^0000}%
1727 \expandafter\endgroup
1728 \ifx\x\@empty
1729 \def\HyPsd@Char#1{%
1730 \ifnum'#1<128 %
1731 \backslashchar 000#1%
1732 \else
1733 \ifnum'#1<65536 %
1734 \expandafter\HyPsd@CharTwoByte\number'#1!%
1735 \else
1736 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
1737 \intcalcSub{'#1}{65536}!%
1738 \fi
1739 \fi
1740 }%
1741 \def\HyPsd@CharTwoByte#1!{%
1742 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1743 \IntCalcDiv#1!256!!%
1744 \expandafter\expandafter\expandafter\HyPsd@CharOctByte

```

```

1745 \IntCalcMod#1!256!!%
1746 }%
1747 \def\HyPsd@CharOctByte#1!{%
1748 \@backslashchar
1749 \IntCalcDiv#1!64!%
1750 \intcalcDiv{\IntCalcMod#1!64!}{8}%
1751 \IntCalcMod#1!8!%
1752 }%
1753 \def\HyPsd@CharSurrogate#1!{%
1754 \@backslashchar 33%
1755 \IntCalcDiv#1!262144!%
1756 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1757 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1758 \@backslashchar 33%
1759 \expandafter\expandafter\expandafter\IntCalcAdd
1760 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1761 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1762 \IntCalcMod#1!256!!%
1763 }%
1764 \else
1765 \def\HyPsd@Char#1{%
1766 \@backslashchar 000#1%
1767 }%
1768 \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

```

```

1769 \begingroup\expandafter\expandafter\expandafter\endgroup
1770 \expandafter\ifx\csname numexpr\endcsname\relax
1771 \let\HyPsd@UTFviii\relax
1772 \else
1773 \begingroup
1774 \lccode'\~='^f4\relax
1775 \lowercase{\endgroup
1776 \def\HyPsd@UTFviii{%
1777 \let\UTFviii@two@octets\HyPsd@UTFviii@two
1778 \let\UTFviii@three@octets\HyPsd@UTFviii@three
1779 \let\UTFviii@four@octets\HyPsd@UTFviii@four
1780 \ifx~\HyPsd@UTFviii@ccxliv@undef
1781 \let~\HyPsd@UTFviii@ccxliv@def
1782 \fi
1783 \let\unichar\HyPsd@unichar
1784 }%
1785 }%
1786 \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1787 \edef\HyPsd@UTFviii@ccxliv@def{%

```

```
1788 \noexpand\UTFviii@four@octets\string ^^f4%
1789 }%
```

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.

$$a := A/4 - 48 \tag{1}$$

$$b := A - 4 * (A/4) \tag{2}$$

$$c := B/8 - 8 * ((8 * (B/8))/8) \tag{3}$$

$$d := B - 8 * (B/8) \tag{4}$$

$$\tag{5}$$

```
1790 \def\HyPsd@UTFviii@two#1#2{%
1791 \expandafter\HyPsd@UTFviii@@two
1792 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
1793 \number'#1\expandafter| %
1794 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
1795 \number'#2 \@nil
1796 }%
1797 \def\HyPsd@UTFviii@@two#1|#2|#3|#4\@nil{%
1798 \expandafter\8%
1799 \number\numexpr #1-48\expandafter\relax
1800 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1801 \number\numexpr #3-8*%
1802 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1803 \number\numexpr #4-8*#3\relax
1804 }%
```

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

$$a := A/4 - 56 \tag{6}$$

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

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

$$d := B - 4 * (B/4) \tag{9}$$

$$e := C/8 - 16 \tag{10}$$

$$f := C - 8 * (C/8) \tag{11}$$

$$\tag{12}$$

```
1805 \def\HyPsd@UTFviii@three#1#2#3{%
1806 \expandafter\HyPsd@UTFviii@@three
1807 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
1808 \number'#1\expandafter| %
1809 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
1810 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
1811 \number'#2\expandafter| %
1812 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
1813 \number'#3 \@nil
1814 }%
1815 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1816 \expandafter\9%
1817 \number\numexpr #1-56\expandafter\relax
1818 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1819 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
```

```

1820 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1821 \number\numexpr #6-16\expandafter\relax
1822 \number\numexpr #7-8*#6\relax
1823 }%

```

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

```

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

```

```

1824 \def\HyPsd@UTFviii@four#1#2{%
1825 \expandafter\HyPsd@@UTFviii@four\number
1826 \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
1827 \expandafter|\number
1828 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
1829 }%
1830 \def\HyPsd@@UTFviii@four#1|#2|#3{%
1831 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1832 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1833 \ifodd#2 %
1834 \number\numexpr(#2-1)/2\relax
1835 \else
1836 \number\numexpr#2/2\relax
1837 \fi
1838 \number\numexpr\ifodd#2 4+\fi
1839 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
1840 \933%
1841 \expandafter\HyPsd@@@UTFviii@four\number
1842 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
1843 }%
1844 \def\HyPsd@@@UTFviii@four#1|#2{%
1845 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1846 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1847 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
1848 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
1849 }%

```

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

```

1850 \def\HyPsd@unichar#1{%
1851 \ifHy@unicode
1852 \ifnum#1>"10FFFF %
1853 \HyPsd@UnicodeReplacementCharacter % illegal
1854 \else
1855 \ifnum#1>"FFFF %

```

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

```

1856 \expandafter\HyPsd@unichar\expandafter{%
1857 \number\numexpr 55296+%
1858 \dimexpr.0009765625\dimexpr\number#1sp-\p@
1859 \relax\relax\relax
1860 }%

```

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

```

1861 \expandafter\HyPsd@unichar\expandafter{%
1862 \number\numexpr#1-9216%

```



```

1863         -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1864         \relax\relax\relax
1865     }%
1866     \else
1867         \ifnum#1>"7FF %
1868         \9%
1869         \expandafter\HyPsd@unichar@first@byte\expandafter{%
1870         \number
1871         \dimexpr.00390625\dimexpr\number#1sp\relax\relax
1872     }%
1873     \else
1874         \8%
1875         \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
1876     \fi
1877     \expandafter\HyPsd@unichar@second@byte\expandafter{%
1878     \number
1879     \numexpr#1-256*\number
1880     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
1881     }%
1882     \fi
1883     \fi
1884     \else
1885     .% unsupported (Unicode -> PDF Doc Encoding)
1886     \fi
1887 }%
1888 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
1889 \def\HyPsd@unichar@first@byte#1{%
1890 \number\dimexpr.015625\dimexpr#1sp\relax\relax
1891 \expandafter\HyPsd@unichar@octtwo\expandafter{%
1892 \number
1893 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1894 \relax\relax\relax
1895 }%
1896 }%
1897 \def\HyPsd@unichar@second@byte#1{%
1898 \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
1899 \expandafter\HyPsd@unichar@octtwo\expandafter{%
1900 \number
1901 \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1902 \relax\relax\relax
1903 }%
1904 }%
1905 \def\HyPsd@unichar@octtwo#1{%
1906 \number\dimexpr.125\dimexpr#1sp\relax\relax
1907 \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
1908 \relax\relax\relax
1909 }%
1910 \fi

```

7 Support of other packages

7.1 Class memoir

```

1911 \@ifclassloaded{memoir}{%
1912 \AtEndOfPackage{\RequirePackage{memhfixc}}}%
1913 }{}

```

7.2 Package subfigure

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

```
1914 \@ifpackageloaded{subfigure}{%
1915   \@ifundefined{sub@label}{%
1916     \Hy@hypertextnamesfalse
1917   }{%
1918     \renewcommand*{\sub@label}[1]{%
1919       \@bsphack
1920       \subfig@oldlabel{#1}%
1921     \if@filesw
1922       \begingroup
1923         \edef\@currentlabstr{%
1924           \expandafter\strip@prefix\meaning\@currentlabelname
1925         }%
1926         \protected@write\@auxout{}{%
1927           \string\newlabel{sub@#1}{%
1928             {\@nameuse{@@thesub\@capttype}}%
1929             {\thepage}%
1930           }%
1931           \expandafter\strip@period\@currentlabstr
1932           \relax.\relax\@@@%
1933         }%
1934         {\@currentHref}%
1935       }%
1936     }%
1937   }%
1938   \endgroup
1939   \fi
1940   \@esphack
1941 }%
1942 \@ifpackagelater{subfigure}{2002/03/26}{%
1943   \providecommand*\@toclevel@subfigure}{1}%
1944   \providecommand*\@toclevel@subtable}{1}%
1945 }%
1946 }%
1947 }
```

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:

```
1948 \@ifundefined{XR@addURL}{%
1949 }
```

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.

```
1950 \def\xr@addURL#1{\xr@dURL#1}{-}{-}{-}\%
1951 \def\xr@dURL#1#2#3#4#5\{%
1952   {#1}{#2}%
1953   \if!#4!%
1954   \else
1955     {#3}{#4}{\xr@URL}%
1956   \fi
1957 }%
1958 }
1959 \def\Hy@true{true}
```

```
1960 \def\Hy@false{false}
```

Providing dummy definitions.

```
1961 \let\literalps@out\@gobble
1962 \newcommand\pdfbookmark[3][]{ }
1963 \def\Acrobatmenu#1#2{\leavevmode#2}
1964 \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

```
1965 \let\HyperRaiseLinkHook\@empty
1966 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
1967 \def\Hy@raisedlink#1{%
1968   \ifvmode
1969     #1%
1970   \else
1971     \penalty\@M
1972     \smash{%
1973       \begingroup
1974         \let\HyperRaiseLinkLength\@tempdima
1975         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
1976         \HyperRaiseLinkHook
1977         \expandafter\endgroup
1978         \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
1979       }%
1980   \fi
1981 }
```

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

```
1982 \def\Hy@SaveLastskip{%
1983   \let\Hy@RestoreLastskip\relax
1984   \ifvmode
1985     \ifdim\lastskip=\z@
1986       \let\Hy@RestoreLastskip\nobreak
1987     \else
1988       \begingroup
1989         \skip@=-\lastskip
1990       \edef\x{%
1991         \endgroup
1992       \def\noexpand\Hy@RestoreLastskip{%
1993         \noexpand\ifvmode
1994         \noexpand\nobreak
1995         \vskip\the\skip@
```

```

1996         \vskip\the\lastskip\relax
1997         \noexpand\fi
1998     }%
1999 }%
2000 \x
2001 \fi
2002 \else
2003 \ifhmode
2004     \ifdim\lastskip=\z@
2005         \let\Hy@RestoreLastskip\nobreak
2006     \else
2007         \begingroup
2008         \skip@=-\lastskip
2009         \edef\x{%
2010             \endgroup
2011             \def\noexpand\Hy@RestoreLastskip{%
2012                 \noexpand\ifhmode
2013                 \noexpand\nobreak
2014                 \hskip\the\skip@
2015                 \hskip\the\lastskip\relax
2016                 \noexpand\fi
2017             }%
2018         }%
2019     \x
2020 \fi
2021 \fi
2022 \fi
2023 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

2024 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2025 \def\Hy@@boolkey[#1]#2#3{%
2026     \edef\Hy@tempa{#3}%
2027     \lowercase\expandafter{%
2028         \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2029     }%
2030 \ifx\Hy@tempa\@empty
2031     \let\Hy@tempa\Hy@true
2032 \fi
2033 \ifx\Hy@tempa\Hy@true
2034 \else
2035     \ifx\Hy@tempa\Hy@false
2036     \else
2037         \let\Hy@tempa\relax
2038     \fi
2039 \fi
2040 \ifx\Hy@tempa\relax
2041     \Hy@WarnOptionValue{#3}{#1}{'true' or 'false'}%
2042 \else
2043     \Hy@Info{Option '#1' set '\Hy@tempa'}%
2044     \csname Hy@#2\Hy@tempa\endcsname
2045 \fi

```

2046 }

\Hy@WarnOptionValue

```
2047 \def\Hy@WarnOptionValue#1#2#3{%
2048 \Hy@Warning{%
2049   Unexpected value '#1'\MessageBreak
2050   of option '#2' instead of\MessageBreak
2051   #3%
2052 }%
2053 }
```

\Hy@DisableOption

```
2054 \def\Hy@DisableOption#1{%
2055 \ifundefined{KV@Hyp@#1@default}{%
2056 \define@key{Hyp}{#1}%
2057 }{%
2058 \define@key{Hyp}{#1}[]%
2059 }%
2060 {\Hy@WarnOptionDisabled{#1}}%
2061 }
```

\Hy@WarnOptionDisabled

```
2062 \def\Hy@WarnOptionDisabled#1{%
2063 \Hy@Warning{%
2064   Option '#1' has already been used,\MessageBreak
2065   setting the option has no effect%
2066 }%
2067 }
```

\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.

```
2068 \def\Hy@CheckOptionValue#1#2#3{%
2069 \begingroup
2070 \edef\x{#1}%
2071 \@onelevel@sanitize\x
2072 \let\y=y%
2073 \def\do##1##2{%
2074 \def\z{##1}%
2075 \@onelevel@sanitize\z
2076 \ifx\x\z
2077 \let\y=n%
2078 \let\do@gobbletwo
2079 \fi
2080 }%
2081 #3%
2082 \ifx\y y%
2083 \def\do##1##2{%
2084 * '##1'%
2085 \ifx\##2\else\space(##2)\fi
2086 \MessageBreak
2087 }%
2088 \Hy@Warning{%
2089   Values of option '#2':\MessageBreak
2090   #3%
2091   * An empty value disables the option.\MessageBreak
2092   Unknown value '\x'%
2093 }
```

```

2094 \fi
2095 \endgroup
2096 }

```

```

\Hy@DefNameKey #1: option name
#2: \do list with known values, first argument of \do is value, second argument is a
comment.
2097 \def\Hy@DefNameKey#1{%
2098 \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
2099 }

```

```

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
2100 \def\Hy@@DefNameKey#1#2#3{%
2101 \define@key{Hyp}{#2}{%
2102 \edef#1{##1}%
2103 \ifx#1\@empty
2104 \else
2105 \Hy@CheckOptionValue{##1}{#2}{#3}%
2106 \fi
2107 }%
2108 \let#1\@empty
2109 }

```

```

\Hy@UseNameKey
2110 \def\Hy@UseNameKey#1#2{%
2111 \ifx#2\@empty
2112 \else
2113 /#1/#2%
2114 \fi
2115 }

```

9.2 Defining the options

```

2116 \define@key{Hyp}{implicit}[true]{%
2117 \Hy@boolkey{implicit}{#1}%
2118 }
2119 \define@key{Hyp}{draft}[true]{%
2120 \Hy@boolkey{draft}{#1}%
2121 }
2122 \define@key{Hyp}{final}[true]{%
2123 \Hy@boolkey{final}{#1}%
2124 }
2125 \let\KV@Hyp@nolinks\KV@Hyp@draft
2126 \def\Hy@ObsoletePaperOption#1{%
2127 \Hy@WarningNoLine{%
2128 Option '#1' is no longer used%
2129 }%
2130 \define@key{Hyp}{#1}[true]{}%
2131 }
2132 \def\Hy@temp#1{%
2133 \define@key{Hyp}{#1}[true]{%
2134 \Hy@ObsoletePaperOption{#1}%
2135 }%
2136 }

```

```

2137 \Hy@temp{a4paper}
2138 \Hy@temp{a5paper}
2139 \Hy@temp{b5paper}
2140 \Hy@temp{letterpaper}
2141 \Hy@temp{legalpaper}
2142 \Hy@temp{executivepaper}

2143 \define@key{Hyp}{setpagesize}[true]{%
2144   \Hy@boolkey{setpagesize}{#1}%
2145 }
2146 \define@key{Hyp}{debug}[true]{%
2147   \Hy@boolkey[debug]{verbose}{#1}%
2148 }
2149 \define@key{Hyp}{linktopage}[true]{%
2150   \Hy@boolkey{linktopage}{#1}%
2151   \ifHy@linktopage
2152     \let\Hy@linktoc\Hy@linktoc@page
2153   \else
2154     \let\Hy@linktoc\Hy@linktoc@section
2155   \fi
2156 }
2157 \chardef\Hy@linktoc@none=0 %
2158 \chardef\Hy@linktoc@section=1 %
2159 \chardef\Hy@linktoc@page=2 %
2160 \chardef\Hy@linktoc@all=3 %
2161 \ifHy@linktopage
2162   \let\Hy@linktoc\Hy@linktoc@page
2163 \else
2164   \let\Hy@linktoc\Hy@linktoc@section
2165 \fi
2166 \define@key{Hyp}{linktoc}{%
2167   \@ifundefined{Hy@linktoc@#1}{%
2168     \Hy@Warning{%
2169       Unexpected value '#1' of\MessageBreak
2170       option 'linktoc' instead of 'none',\MessageBreak
2171       'section', 'page' or 'all'%
2172     }%
2173   }{%
2174     \expandafter\let\expandafter\Hy@linktoc
2175     \csname Hy@linktoc@#1\endcsname
2176   }%
2177 }
2178 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2179 \let\XR@ext\relax
2180 \define@key{Hyp}{verbose}[true]{%
2181   \Hy@boolkey{verbose}{#1}%
2182 }
2183 \define@key{Hyp}{typexml}[true]{%
2184   \Hy@boolkey{typexml}{#1}%
2185 }

```

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.

```

2186 \define@key{Hyp}{raiselinks}[true]{%
2187   \Hy@boolkey{raiselinks}{#1}%
2188 }

```

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

```
2189 \def\Hy@setbreaklinks#1{%
2190   \csname breaklinks#1\endcsname
2191 }
2192 \def\Hy@breaklinks@unsupported{%
2193   \ifx\Hy@setbreaklinks\@gobble
2194     \ifHy@breaklinks
2195       \Hy@WarningNoLine{%
2196         You have enabled option ‘breaklinks’.\MessageBreak
2197         But driver ‘\Hy@driver.def’ does not support this.\MessageBreak
2198         Expect trouble with the link areas of broken links%
2199       }%
2200   \fi
2201 \fi
2202 }
2203 \define@key{Hyp}{breaklinks}[true]{%
2204   \Hy@boolkey{breaklinks}{#1}%
2205   \let\Hy@setbreaklinks\@gobble
2206 }
```

Determines whether an automatic anchor is put on each page

```
2207 \define@key{Hyp}{pageanchor}[true]{%
2208   \Hy@boolkey{pageanchor}{#1}%
2209 }
```

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.

```
2210 \define@key{Hyp}{plainpages}[true]{%
2211   \Hy@boolkey{plainpages}{#1}%
2212 }
```

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

```
2213 \define@key{Hyp}{naturalnames}[true]{%
2214   \Hy@boolkey{naturalnames}{#1}%
2215 }
```

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

```
2216 \define@key{Hyp}{hypertexnames}[true]{%
2217   \Hy@boolkey{hypertexnames}{#1}%
2218 }
```

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

```
2219 \define@key{Hyp}{nesting}[true]{%
2220   \Hy@boolkey{nesting}{#1}%
2221 }
2222 \define@key{Hyp}{unicode}[true]{%
2223   \Hy@boolkey{unicode}{#1}%
2224   \ifHy@unicode
2225     \def\HyPsd@pdfencoding{unicode}%
2226     \HyPsd@LoadUnicode
2227   \else
2228     \def\HyPsd@pdfencoding{pdfdoc}%
2229   \fi
2230 }
2231 \def\HyPsd@LoadUnicode{%
2232   \@ifundefined{T@PU}{%
2233     \input{puenc.def}%
```



```

2234 \HyLinguex@Restore
2235 }{}%
2236 \DeclareFontFamily{PU}{pdf}{}%
2237 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
2238 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2239 \global\let\HyPsd@LoadUnicode\relax
2240 }
2241 \AtBeginDocument{%
2242 \ifx\HyPsd@LoadUnicode\relax
2243 \else
2244 \def\HyPsd@LoadUnicode{%
2245 \PackageError{hyperref}{}%
2246 Unicode support for bookmarks is not available.\MessageBreak
2247 Activate unicode support by using one of the options\MessageBreak
2248 'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2249 in the preamble%
2250 }\@ehc
2251 \global\let\HyPsd@LoadUnicode\relax
2252 \global\Hy@unicodedefalse
2253 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2254 }%
2255 \fi
2256 }

2257 \define@key{Hyp}{pdfencoding}{}%
2258 \edef\HyPsd@temp{#1}%
2259 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2260 \let\HyPsd@pdfencoding\HyPsd@temp
2261 \Hy@unicodedefalse
2262 \else
2263 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2264 \z@
2265 \else
2266 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2267 \z@
2268 \else
2269 \@ne
2270 \fi
2271 \fi
2272 \let\HyPsd@pdfencoding\HyPsd@temp
2273 \hypersetup{unicode}%
2274 \ifHy@unicode
2275 \def\HyPsd@pdfencoding{#1}%
2276 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2277 \HyPsd@LoadStringEncoding
2278 \fi
2279 \else
2280 \Hy@Warning{Cannot switch to unicode bookmarks}%
2281 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2282 \fi
2283 \else
2284 \@onelevel@sanitize\HyPsd@temp
2285 \Hy@Warning{}%
2286 Values of option 'pdfencoding':\MessageBreak
2287 'pdfdoc', 'unicode', 'auto'.\MessageBreak
2288 Ignoring unknown value '\HyPsd@temp'%
2289 }%
2290 \fi

```

```

2291 \fi
2292 }
2293 \def\HyPsd@pdfencoding@auto{auto}
2294 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2295 \def\HyPsd@pdfencoding@unicode{unicode}
2296 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2297 \def\HyPsd@LoadStringEnc{%
2298   \RequirePackage{stringenc}[2009/12/15]%
2299   \let\HyPsd@LoadStringEnc\relax
2300 }
2301 \AtBeginDocument{%
2302   \@ifpackageloaded{stringenc}{%
2303     \let\HyPsd@LoadStringEnc\relax
2304   }{%
2305     \def\HyPsd@LoadStringEnc{%
2306       \Hy@WarningNoLine{%
2307         Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2308         in the preamble or load the package there%
2309       }%
2310     }%
2311   }%
2312 }

2313 \newif\ifHy@setpdfversion
2314 \define@key{Hyp}{pdfversion}{%
2315   \@ifundefined{Hy@pdfversion@#1}{%
2316     \PackageWarning{hyperref}{%
2317       Unsupported PDF version '#1'.\MessageBreak
2318       Valid values: 1.2 until 1.9%
2319     }%
2320   }{%
2321     \Hy@setpdfversiontrue
2322     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2323   }%
2324 }
2325 \@namedef{Hy@pdfversion@1.2}{2}%
2326 \@namedef{Hy@pdfversion@1.3}{3}%
2327 \@namedef{Hy@pdfversion@1.4}{4}%
2328 \@namedef{Hy@pdfversion@1.5}{5}%
2329 \@namedef{Hy@pdfversion@1.6}{6}%
2330 \@namedef{Hy@pdfversion@1.7}{7}%
2331 \@namedef{Hy@pdfversion@1.8}{8}%
2332 \@namedef{Hy@pdfversion@1.9}{9}%
2333 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2334 \define@key{Hyp}{hyperref}[true]{}
2335 \define@key{Hyp}{tex4ht}[true]{%
2336   \Hy@texhttrue
2337   \setkeys{Hyp}{colorlinks=true}%
2338   \def\BeforeTeXIVht{\usepackage{color}}%
2339   \def\Hy@driver{htex4ht}%
2340   \def\MaybeStopEarly{%
2341     \typeout{Hyperref stopped early}%
2342     \AfterBeginDocument{%
2343       \PDF@FinishDoc
2344       \gdef\PDF@FinishDoc{}%

```

```

2345 }%
2346 \endinput
2347 }%
2348 }
2349 \define@key{Hyp}{pdftex}[true]{%
2350 \def\Hy@driver{hpdftex}%
2351 }
2352 \define@key{Hyp}{nativepdf}[true]{%
2353 \def\Hy@driver{hdvips}%
2354 }
2355 \define@key{Hyp}{dvi pdfm}[true]{%
2356 \def\Hy@driver{hdvipdfm}%
2357 }
2358 \define@key{Hyp}{dvi pdfmx}[true]{%
2359 \def\Hy@driver{hdvipdfm}%
2360 }
2361 \define@key{Hyp}{dvi pdfmx-outline-open}[true]{%
2362 \expandafter\ifx\csname if#1\expandafter\endcsname
2363 \csname iftrue\endcsname
2364 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2365 \else
2366 \chardef\SpecialDvipdfmxOutlineOpen\z@
2367 \fi
2368 }
2369 \define@key{Hyp}{xetex}[true]{%
2370 \def\Hy@driver{hxetex}%
2371 }
2372 \define@key{Hyp}{pdfmark}[true]{%
2373 \def\Hy@driver{hdvips}%
2374 }
2375 \define@key{Hyp}{dvips}[true]{%
2376 \def\Hy@driver{hdvips}%
2377 }
2378 \define@key{Hyp}{hypertex}[true]{%
2379 \def\Hy@driver{hypertex}%
2380 }
2381 \let\Hy@MaybeStopNow\relax
2382 \define@key{Hyp}{vtex}[true]{%
2383 \begingroup\expandafter\expandafter\expandafter\endgroup
2384 \expandafter\ifx\csname OpMode\endcsname\relax
2385 \@latex@error{Non-VTeX processor}{}%
2386 \global\let\Hy@MaybeStopNow\endinput
2387 \endinput
2388 \else
2389 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2390 \def\Hy@driver{hvtex}%
2391 \else
2392 \ifnum\OpMode=10\relax
2393 \def\Hy@driver{hvtexhtm}%
2394 \def\MaybeStopEarly{%
2395 \typeout{Hyperref stopped early}%
2396 \AfterBeginDocument{%
2397 \PDF@FinishDoc
2398 \gdef\PDF@FinishDoc{}}%
2399 }%
2400 \endinput
2401 }%

```

```

2402   \else
2403     \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2404     \global\let\Hy@MaybeStopNow\endinput
2405     \endinput
2406   \fi
2407   \fi
2408 \fi
2409 }
2410 \define@key{Hyp}{vtexpdfmark}[true]{%
2411   \begingroup\expandafter\expandafter\expandafter\endgroup
2412   \expandafter\ifx\csname OpMode\endcsname\relax
2413     \@latex@error{Non-VTeX processor}{}%
2414     \let\Hy@MaybeStopNow\endinput
2415     \endinput
2416   \else
2417     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2418     \def\Hy@driver{hvtexmrk}%
2419     \else
2420       \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2421       \let\Hy@MaybeStopNow\endinput
2422       \endinput
2423     \fi
2424   \fi
2425 }
2426 \define@key{Hyp}{dviwindo}[true]{%
2427   \def\Hy@driver{hdviwind}%
2428   \setkeys{Hyp}{colorlinks}%
2429   \ifpdf
2430     \else
2431     \ifxetex
2432     \else
2433       \PassOptionsToPackage{dviwindo}{color}%
2434     \fi
2435   \fi
2436 }
2437 \define@key{Hyp}{dvipsone}[true]{%
2438   \def\Hy@driver{hdvipson}%
2439 }
2440 \define@key{Hyp}{textures}[true]{%
2441   \def\Hy@driver{htexture}%
2442 }
2443 \define@key{Hyp}{latex2html}[true]{%
2444   \AtBeginDocument{\@latex2htmlX}%
2445 }

```

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

```

2446 \define@key{Hyp}{ps2pdf}[true]{%
2447   \def\Hy@driver{hdvips}%
2448   \providecommand*\@pdfborder{0 0 1}%
2449 }

```

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.

```

2450 \define@key{Hyp}{hyperfigures}[true]{%
2451   \Hy@boolkey[hyperfigures]{figures}{#1}%
2452 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```
2453 \define@key{Hyp}{hyperfootnotes}[true]{%
2454 \Hy@boolkey{hyperfootnotes}{#1}%
2455 }
```

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

```
2456 \def\back@none{none}
2457 \def\back@section{section}
2458 \def\back@page{page}
2459 \def\back@slide{slide}
2460 \define@key{Hyp}{backref}[section]{%
2461 \lowercase{\def\Hy@tempa{#1}}%
2462 \ifx\Hy@tempa\@empty
2463 \let\Hy@tempa\back@section
2464 \fi
2465 \ifx\Hy@tempa\Hy@false
2466 \let\Hy@tempa\back@none
2467 \fi
2468 \ifx\Hy@tempa\back@slide
2469 \let\Hy@tempa\back@section
2470 \fi
2471 \ifx\Hy@tempa\back@page
2472 \PassOptionsToPackage{hyperpageref}{backref}%
2473 \Hy@backreftrue
2474 \else
2475 \ifx\Hy@tempa\back@section
2476 \PassOptionsToPackage{hyperref}{backref}%
2477 \Hy@backreftrue
2478 \else
2479 \ifx\Hy@tempa\back@none
2480 \Hy@backreffalse
2481 \else
2482 \Hy@WarnOptionValue{#1}{backref}{%
2483 'section', 'slide', 'page', 'none',\MessageBreak
2484 or 'false'}%
2485 \fi
2486 \fi
2487 \fi
2488 }
2489 \define@key{Hyp}{pagebackref}[true]{%
2490 \edef\Hy@tempa{#1}%
2491 \lowercase\expandafter{%
2492 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2493 }%
2494 \ifx\Hy@tempa\@empty
2495 \let\Hy@tempa\Hy@true
2496 \fi
2497 \ifx\Hy@tempa\Hy@true
2498 \PassOptionsToPackage{hyperpageref}{backref}%
2499 \Hy@backreftrue
2500 \else
2501 \ifx\Hy@tempa\Hy@false
2502 \Hy@backreffalse
2503 \else
2504 \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2505 \fi
2506 \fi
2507 }
```

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

```
2508 \define@key{Hyp}{hyperindex}[true]{%
2509 \Hy@boolkey{hyperindex}{#1}%
2510 }
```

Configuration of encap char.

```
2511 \define@key{Hyp}{encap}{\|}{%
2512 \def\HyInd@EncapChar{#1}%
2513 }
```

12 Language options

The `\autoref` feature depends on the language.

```
2514 \def\HyLang@afrikaans{%
2515 \def\equationautorefname{Vergelyking}%
2516 \def\footnoteautorefname{Voetnota}%
2517 \def\itemautorefname{Item}%
2518 \def\figureautorefname{Figuur}%
2519 \def\tableautorefname{Tabel}%
2520 \def\partautorefname{Deel}%
2521 \def\appendixautorefname{Bylae}%
2522 \def\chapterautorefname{Hoofstuk}%
2523 \def\sectionautorefname{Afdeling}%
2524 \def\subsectionautorefname{Subafdeling}%
2525 \def\subsubsectionautorefname{Subsubafdeling}%
2526 \def\paragraphautorefname{Paragraaf}%
2527 \def\subparagraphautorefname{Subparagraaf}%
2528 \def\FancyVerbLineautorefname{Lyn}%
2529 \def\theoremautorefname{Teorema}%
2530 \def\pageautorefname{Bladsy}%
2531 }
2532 \def\HyLang@english{%
2533 \def\equationautorefname{Equation}%
2534 \def\footnoteautorefname{footnote}%
2535 \def\itemautorefname{item}%
2536 \def\figureautorefname{Figure}%
2537 \def\tableautorefname{Table}%
2538 \def\partautorefname{Part}%
2539 \def\appendixautorefname{Appendix}%
2540 \def\chapterautorefname{chapter}%
2541 \def\sectionautorefname{section}%
2542 \def\subsectionautorefname{subsection}%
2543 \def\subsubsectionautorefname{subsubsection}%
2544 \def\paragraphautorefname{paragraph}%
2545 \def\subparagraphautorefname{subparagraph}%
2546 \def\FancyVerbLineautorefname{line}%
2547 \def\theoremautorefname{Theorem}%
2548 \def\pageautorefname{page}%
2549 }
2550 \def\HyLang@french{%
2551 \def\equationautorefname{'Equation}%
2552 \def\footnoteautorefname{note}%
2553 \def\itemautorefname{item}%
2554 \def\figureautorefname{Figure}%
2555 \def\tableautorefname{Tableau}%

```

```

2556 \def\partautorefname{Partie}%
2557 \def\appendixautorefname{Appendice}%
2558 \def\chapterautorefname{chapitre}%
2559 \def\sectionautorefname{section}%
2560 \def\subsectionautorefname{sous-section}%
2561 \def\subsubsectionautorefname{sous-sous-section}%
2562 \def\paragraphautorefname{paragraphe}%
2563 \def\subparagraphautorefname{sous-paragraphe}%
2564 \def\FancyVerbLineautorefname{ligne}%
2565 \def\theoremautorefname{Th\'eor\'eme}%
2566 \def\pageautorefname{page}%
2567 }
2568 \def\HyLang@german{%
2569 \def\equationautorefname{Gleichung}%
2570 \def\footnoteautorefname{Fu\ss note}%
2571 \def\itemautorefname{Punkt}%
2572 \def\figureautorefname{Abbildung}%
2573 \def\tableautorefname{Tabelle}%
2574 \def\partautorefname{Teil}%
2575 \def\appendixautorefname{Anhang}%
2576 \def\chapterautorefname{Kapitel}%
2577 \def\sectionautorefname{Abschnitt}%
2578 \def\subsectionautorefname{Unterabschnitt}%
2579 \def\subsubsectionautorefname{Unterunterabschnitt}%
2580 \def\paragraphautorefname{Absatz}%
2581 \def\subparagraphautorefname{Unterabsatz}%
2582 \def\FancyVerbLineautorefname{Zeile}%
2583 \def\theoremautorefname{Theorem}%
2584 \def\pageautorefname{Seite}%
2585 }
2586 \def\HyLang@italian{%
2587 \def\equationautorefname{Equazione}%
2588 \def\footnoteautorefname{nota}%
2589 \def\itemautorefname{punto}%
2590 \def\figureautorefname{Figura}%
2591 \def\tableautorefname{Tabella}%
2592 \def\partautorefname{Parte}%
2593 \def\appendixautorefname{Appendice}%
2594 \def\chapterautorefname{Capitolo}%
2595 \def\sectionautorefname{sezione}%
2596 \def\subsectionautorefname{sottosezione}%
2597 \def\subsubsectionautorefname{sottosottosezione}%
2598 \def\paragraphautorefname{paragrafo}%
2599 \def\subparagraphautorefname{sottoparagrafo}%
2600 \def\FancyVerbLineautorefname{linea}%
2601 \def\theoremautorefname{Teorema}%
2602 \def\pageautorefname{Pag.\@}%
2603 }
2604 \def\HyLang@magyar{%
2605 \def\equationautorefname{Egyenlet}%
2606 \def\footnoteautorefname{l\'abjegyzet}%
2607 \def\itemautorefname{Elem}%
2608 \def\figureautorefname{\`A bra}%
2609 \def\tableautorefname{T\`abl\'azat}%
2610 \def\partautorefname{R\`esz}%
2611 \def\appendixautorefname{F\`uggel\`ek}%
2612 \def\chapterautorefname{fejezet}%

```

```

2613 \def\sectionautorefname{szakasz}%
2614 \def\subsectionautorefname{alszakasz}%
2615 \def\subsubsectionautorefname{alalszakasz}%
2616 \def\paragraphautorefname{bekezd'es}%
2617 \def\subparagraphautorefname{albekezd'es}%
2618 \def\FancyVerbLineautorefname{sor}%
2619 \def\theoremautorefname{T'etel}%
2620 \def\pageautorefname{oldal}%
2621 }
2622 \def\HyLang@portuges{%
2623 \def\equationautorefname{Equa\c c\~ao}%
2624 \def\footnoteautorefname{Nota de rodap'e}%
2625 \def\itemautorefname{Item}%
2626 \def\figureautorefname{Figura}%
2627 \def\tableautorefname{Tabela}%
2628 \def\partautorefname{Parte}%
2629 \def\appendixautorefname{Ap\^endice}%
2630 \def\chapterautorefname{Cap\itulo}%
2631 \def\sectionautorefname{Se\c c\~ao}%
2632 \def\subsectionautorefname{Subse\c c\~ao}%
2633 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
2634 \def\paragraphautorefname{par'agrafo}%
2635 \def\subparagraphautorefname{subpar'agrafo}%
2636 \def\FancyVerbLineautorefname{linha}%
2637 \def\theoremautorefname{Teorema}%
2638 \def\pageautorefname{P'agina}%
2639 }

```

Next commented section for Russian is provided by Olga Lapko.

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

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

```
2640 \def\HyLang@russian{%
```

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

```
2641 \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%
```

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

```
2642 % \def\equationautorefname{%
2643 %   \cyr\cyrv\cyrery\cyr\cyrz\cyrh\cyr\cyrn\cyr\cyr
2644 % }%
```

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

```
2645 \def\footnoteautorefname{%
2646   \cyr\cyrp\cyr\cyr\cyr\cyr\cyr\cyr\cyr\cyr\cyr\cyr\cyr.%
2647 }%
```

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

```
2648 % \def\footnoteautorefname{%
```



```

2649 % \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrch\cyrn\cyro\cyre\ %
2650 % \cyrp\cyrr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
2651 % }%

```

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

```

2652 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2653 % \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.

```

2654 \def\itemautorefname{\cyr\cyrp.}%
2655 % \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.

```

2656 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2657 \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.

```

2658 \def\partautorefname{\cyr\cyrch.}%
2659 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2660 \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.

```

2661 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2662 % \def\appendixautorefname{%
2663 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
2664 % }%

```

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.

```

2665 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2666 \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.

```

2667 \def\paragraphautorefname{\cyr\cyrp.}%
2668 \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.

```

2669 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2670 % \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.

```

2671 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%

```

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

```
2672 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
2673 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2674 % \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 . . .

```
2675 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2676 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
2677 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
2678 \def\pageautorefname{\cyr\cyrs.}%
2679 }
```

```
2680 \def\HyLang@spanish{%
2681 \def\equationautorefname{Ecuaci'on}%
2682 \def\footnoteautorefname{Nota a pie de p'agina}%
2683 \def\itemautorefname{Elemento}%
2684 \def\figureautorefname{Figura}%
2685 \def\tableautorefname{Tabla}%
2686 \def\partautorefname{Parte}%
2687 \def\appendixautorefname{Ap'endice}%
2688 \def\chapterautorefname{Cap'itulo}%
2689 \def\sectionautorefname{Secci'on}%
2690 \def\subsectionautorefname{Subsecci'on}%
2691 \def\subsubsectionautorefname{Subsubsecci'on}%
2692 \def\paragraphautorefname{P'arrafo}%
2693 \def\subparagraphautorefname{Subp'arrafo}%
2694 \def\FancyVerbLineautorefname{L'inea}%
2695 \def\theoremautorefname{Teorema}%
2696 \def\pageautorefname{P'agina}%
2697 }
```

```
2698 \def\HyLang@vietnamese{%
2699 \def\equationautorefname{Ph\uhorn{ }\ohorn{ }ng tr\inh}%
2700 \def\footnoteautorefname{Ch'u th'ich}%
2701 \def\itemautorefname{m\d{u}c}%
2702 \def\figureautorefname{H\inh}%
2703 \def\tableautorefname{B\h{a}ng}%
2704 \def\partautorefname{Ph'\acircumflex{n}}%
2705 \def\appendixautorefname{Ph\d{u} l\d{u}c}%
2706 \def\chapterautorefname{ch\uhorn{ }\ohorn{ }ng}%
2707 \def\sectionautorefname{m\d{u}c}%
2708 \def\subsectionautorefname{m\d{u}c}%
2709 \def\subsubsectionautorefname{m\d{u}c}%
2710 \def\paragraphautorefname{\dj{ }o\d{a}n}%
2711 \def\subparagraphautorefname{\dj{ }o\d{a}n}%
2712 \def\FancyVerbLineautorefname{d'ong}%
2713 \def\theoremautorefname{DJ{ }\d{i}nh l'y}%
2714 \def\pageautorefname{Trang}%
2715 }
```

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

```

2716 \def\HyLang@addto#1#2{%
2717   #2%
2718   \@temptokena{#2}%
2719   \ifx#1\relax
2720     \let#1\@empty
2721   \fi
2722   \ifx#1\undefined
2723     \edef#1{\the\@temptokena}%
2724   \else
2725     \toks@\expandafter{#1}%
2726     \edef#1{\the\toks@\the\@temptokena}%
2727   \fi
2728   \@temptokena{ }\toks@\@temptokena
2729 }

2730 \def\HyLang@DeclareLang#1#2#3{%
2731   \begingroup
2732   \edef\x##1##2{%
2733     \noexpand\ifx##2\relax
2734       \errmessage{No definitions for language #2' found!}%
2735     \noexpand\fi
2736   \endgroup
2737   \noexpand\define@key{Hyp}{#1}[]{%
2738     \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
2739     #3%
2740   }%
2741   }%
2742   \expandafter\x\csname extras#1\expandafter\endcsname
2743     \csname HyLang@#2\endcsname
2744 }
2745 \HyLang@DeclareLang{english}{english}{}
2746 \HyLang@DeclareLang{UKenglish}{english}{}
2747 \HyLang@DeclareLang{british}{english}{}
2748 \HyLang@DeclareLang{USenglish}{english}{}
2749 \HyLang@DeclareLang{american}{english}{}
2750 \HyLang@DeclareLang{german}{german}{}
2751 \HyLang@DeclareLang{austrian}{german}{}
2752 \HyLang@DeclareLang{ngerman}{german}{}
2753 \HyLang@DeclareLang{naustrian}{german}{}
2754 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
2755 \HyLang@DeclareLang{brazil}{portuges}{}
2756 \HyLang@DeclareLang{brazilian}{portuges}{}
2757 \HyLang@DeclareLang{portuguese}{portuges}{}
2758 \HyLang@DeclareLang{spanish}{spanish}{}
2759 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
2760 \HyLang@DeclareLang{french}{french}{}
2761 \HyLang@DeclareLang{frenchb}{french}{}
2762 \HyLang@DeclareLang{français}{french}{}
2763 \HyLang@DeclareLang{acadian}{french}{}
2764 \HyLang@DeclareLang{canadien}{french}{}
2765 \HyLang@DeclareLang{italian}{italian}{}
2766 \HyLang@DeclareLang{magyar}{magyar}{}
2767 \HyLang@DeclareLang{hungarian}{magyar}{}

More work is needed in case of options vietnamese and vietnam.
2768 \define@key{Hyp}{vietnamese}[]{}%

```

```

2769 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
2770 \AtEndOfPackage{%
2771   \@ifundefined{T@PU}{-}{%
2772     \input{puvnenc.def}%
2773   }%
2774 }%
2775 }
2776 \define@key{Hyp}{vietnam}[]{}%
2777 \HyLang@addto\extravietnam\HyLang@vietnamese
2778 \AtEndOfPackage{%
2779   \@ifundefined{T@PU}{-}{%
2780     \input{puvnenc.def}%
2781   }%
2782 }%
2783 }

```

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

```

2784 \define@key{Hyp}{arabic}[]{}%
2785 \AtEndOfPackage{%
2786   \@ifundefined{T@PU}{-}{%
2787     \input{puarenc.def}%
2788   }%
2789 }%
2790 }

```

13 Options to change appearance of links

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

```

2791 \define@key{Hyp}{colorlinks}[true]{%
2792   \Hy@boolkey{colorlinks}{#1}%
2793 }
2794 \define@key{Hyp}{ocgcolorlinks}[true]{%
2795   \Hy@boolkey{ocgcolorlinks}{#1}%
2796 }
2797 \AtBeginDocument{%
2798   \begingroup
2799   \@ifundefined{OBJ@OCG@view}{%
2800     \ifHy@ocgcolorlinks
2801       \Hy@Warning{%
2802         Driver does not support ‘ocgcolorlinks’,\MessageBreak
2803         using ‘colorlinks’ instead%
2804       }%
2805     \fi
2806   }{}%
2807 \endgroup
2808 }
2809 \define@key{Hyp}{frenchlinks}[true]{%
2810   \Hy@boolkey{frenchlinks}{#1}%
2811 }

```

14 Bookmarking

```

2812 \begingroup\expandafter\expandafter\expandafter\endgroup
2813 \expandafter\ifx\csname chapter\endcsname\relax
2814 \def\toclevel@part{0}%

```

```

2815 \else
2816   \def\toclevel@part{-1}%
2817 \fi
2818 \def\toclevel@chapter{0}
2819 \def\toclevel@section{1}
2820 \def\toclevel@subsection{2}
2821 \def\toclevel@subsubsection{3}
2822 \def\toclevel@paragraph{4}
2823 \def\toclevel@subparagraph{5}
2824 \def\toclevel@figure{0}
2825 \def\toclevel@table{0}
2826 \@ifpackageloaded{listings}{%
2827   \providecommand*\theHlstlisting{\thelstlisting}%
2828   \providecommand*\toclevel@lstlisting{0}%
2829 }{}
2830 \@ifpackageloaded{listing}{%
2831   \providecommand*\theHlisting{\thelisting}%
2832   \providecommand*\toclevel@listing{0}%
2833 }{}

2834 \define@key{Hyp}{bookmarks}[true]{%
2835   \Hy@boolkey{bookmarks}{#1}%
2836 }

2837 \define@key{Hyp}{bookmarksopen}[true]{%
2838   \Hy@boolkey{bookmarksopen}{#1}%
2839 }

```

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.

```

2840 \let\Hy@bookmarksdepth\c@tocdepth
2841 \define@key{Hyp}{bookmarksdepth}[]{}%
2842 \begingroup
2843   \edef\x{#1}%
2844   \ifx\x\empty
2845     \global\let\Hy@bookmarksdepth\c@tocdepth
2846   \else
2847     \@ifundefined{toclevel@\x}{%
2848       \@onelevel@sanitize\x
2849       \edef\y{\expandafter\@car\x\@nil}%
2850       \ifcase 0\expandafter\ifx\y-1\fi
2851         \expandafter\ifnum\expandafter\y>47 %
2852           \expandafter\ifnum\expandafter\y<58 1\fi\fi\relax
2853       \Hy@Warning{Unknown document division name (\x)}%
2854     \else
2855       \setbox\z@=\hbox{%
2856         \count@=\x
2857         \xdef\Hy@bookmarksdepth{\the\count@}%
2858       }%
2859     \fi

```

```

2860   }{%
2861     \setbox\z@=\hbox{%
2862       \count@=\csname toplevel@\x\endcsname
2863       \xdef\Hy@bookmarksdepth{\the\count@}%
2864     }%
2865   }%
2866   \fi
2867 \endgroup
2868 }

```

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

```

2869 \define@key{Hyp}{bookmarksopenlevel}{%
2870 \def\@bookmarksopenlevel{#1}%
2871 }
2872 \def\@bookmarksopenlevel{\maxdimen}
2873 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
2874 \define@key{Hyp}{bookmarkstype}{%
2875 \def\Hy@bookmarkstype{#1}%
2876 }
2877 \def\Hy@bookmarkstype{toc}

```

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

```

2878 \define@key{Hyp}{bookmarksnumbered}[true]{%
2879 \Hy@boolkey{bookmarksnumbered}{#1}%
2880 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

2881 \define@key{Hyp}{CJKbookmarks}[true]{%
2882 \Hy@boolkey{CJKbookmarks}{#1}%
2883 }

2884 \def\Hy@temp#1{%
2885 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
2886 }

2887 \def\Hy@@temp#1#2#3{%
2888 \define@key{Hyp}{#2color}{%
2889 \HyColor@HyperrefColor{##1}#1%
2890 }%
2891 \def#1{#3}%
2892 }

2893 \Hy@temp{link}{red}
2894 \Hy@temp{anchor}{black}
2895 \Hy@temp{cite}{green}
2896 \Hy@temp{file}{cyan}
2897 \Hy@temp{url}{magenta}
2898 \Hy@temp{menu}{red}
2899 \Hy@temp{run}{\@filecolor}
2900 \define@key{Hyp}{pagecolor}{%
2901 \Hy@WarningPageColor
2902 }
2903 \def\Hy@WarningPageColor{%
2904 \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
2905 \global\let\Hy@WarningPageColor\relax
2906 }

2907 \def\hyperbaseurl#1{\def\@baseurl{#1}}
2908 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
2909 \let\@baseurl\@empty
2910 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}

```

```

2911 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
2912 \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.

```

2913 \let\@pdfpagetransition\relax
2914 \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.

```

2915 \let\@pdfpageduration\relax
2916 \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.

```

2917 \newif\ifHy@useHidKey
2918 \Hy@useHidKeyfalse
2919 \define@key{Hyp}{pdfpagehidden}[true]{%
2920 \Hy@boolkey{pdfpagehidden}{#1}%
2921 \ifHy@pdfpagehidden
2922 \global\Hy@useHidKeytrue
2923 \fi
2924 }

```

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).

```

2925 \def\Hy@ColorList{cite,file,link,menu,run,url}
2926 \@for\Hy@temp:=\Hy@ColorList\do{%
2927 \edef\Hy@temp{%
2928 \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
2929 \noexpand\Hy@Color@HyperrefBorderColor
2930 {##1}%
2931 \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
2932 {hyperref}%
2933 {\Hy@temp bordercolor}%
2934 }%
2935 }%
2936 \Hy@temp
2937 }
2938 \define@key{Hyp}{pagebordercolor}{%
2939 \Hy@WarningPageBorderColor
2940 }
2941 \def\Hy@WarningPageBorderColor{%
2942 \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
2943 \global\let\Hy@WarningPageBorderColor\relax
2944 }

```

```

2945 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
2946 \Hy@DefNameKey{pdfhighlight}{%
2947 \do{/I}{Invert}%
2948 \do{/N}{None}%
2949 \do{/O}{Outline}%
2950 \do{/P}{Push}%
2951 }
2952 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
2953 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
2954 \def\Hy@setpdfborder{%
2955 \ifx\@pdfborder\@empty
2956 \else
2957 /Border[\@pdfborder]%
2958 \fi
2959 \ifx\@pdfborderstyle\@empty
2960 \else
2961 /BS<<\@pdfborderstyle>>%
2962 \fi
2963 }
2964 \Hy@DefNameKey{pdfpagemode}{%
2965 \do{UseNone}{}%
2966 \do{UseOutlines}{}%
2967 \do{UseThumbs}{}%
2968 \do{FullScreen}{}%
2969 \do{UseOC}{PDF 1.5}%
2970 \do{UseAttachments}{PDF 1.6}%
2971 }
2972 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
2973 \do{UseNone}{}%
2974 \do{UseOutlines}{}%
2975 \do{UseThumbs}{}%
2976 \do{FullScreen}{}%
2977 \do{UseOC}{PDF 1.5}%
2978 \do{UseAttachments}{PDF 1.6}%
2979 }
2980 \Hy@DefNameKey{pdfdirection}{%
2981 \do{L2R}{Left to right}%
2982 \do{R2L}{Right to left}%
2983 }
2984 \Hy@DefNameKey{pdfviewarea}{%
2985 \do{MediaBox}{}%
2986 \do{CropBox}{}%
2987 \do{BleedBox}{}%
2988 \do{TrimBox}{}%
2989 \do{ArtBox}{}%
2990 }
2991 \Hy@DefNameKey{pdfviewclip}{%
2992 \do{MediaBox}{}%
2993 \do{CropBox}{}%
2994 \do{BleedBox}{}%
2995 \do{TrimBox}{}%
2996 \do{ArtBox}{}%
2997 }
2998 \Hy@DefNameKey{pdfprintarea}{%
2999 \do{MediaBox}{}%
3000 \do{CropBox}{}%
3001 \do{BleedBox}{}%

```



```

3002 \do{TrimBox}{}%
3003 \do{ArtBox}{}%
3004 }
3005 \Hy@DefNameKey{pdfprintclip}{%
3006 \do{MediaBox}{}%
3007 \do{CropBox}{}%
3008 \do{BleedBox}{}%
3009 \do{TrimBox}{}%
3010 \do{ArtBox}{}%
3011 }
3012 \Hy@DefNameKey{pdfprintscaling}{%
3013 \do{AppDefault}{}%
3014 \do{None}{}%
3015 }
3016 \Hy@DefNameKey{pdfduplex}{%
3017 \do{Simplex}{}%
3018 \do{DuplexFlipShortEdge}{}%
3019 \do{DuplexFlipLongEdge}{}%
3020 }
3021 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3022 \do{true}{}%
3023 \do{false}{}%
3024 }
3025 \define@key{Hyp}{pdfprintpagerange}{%
3026 \def\@pdfprintpagerange{#1}%
3027 }
3028 \Hy@DefNameKey{pdfnumcopies}{%
3029 \do{2}{two copies}%
3030 \do{3}{three copies}%
3031 \do{4}{four copies}%
3032 \do{5}{five copies}%
3033 }
3034 \define@key{Hyp}{pdfusetitle}[true]{%
3035 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
3036 }
3037 \def\HyXeTeX@CheckUnicode{%
3038 \ifxetex
3039 \ifHy@unicode
3040 \else
3041 \Hy@WarningNoLine{%
3042 XeTeX driver only supports unicode.\MessageBreak
3043 Enabling option 'unicode'%
3044 }%
3045 \setkeys{Hyp}{unicode}%
3046 \fi
3047 \else
3048 \let\HyXeTeX@CheckUnicode\relax
3049 \fi
3050 }
3051 \define@key{Hyp}{pdftitle}{%
3052 \HyXeTeX@CheckUnicode
3053 \HyPsd@XeTeXBigCharstrue
3054 \pdfstringdef\@pdftitle{#1}%
3055 }
3056 \define@key{Hyp}{pdfauthor}{%
3057 \HyXeTeX@CheckUnicode
3058 \HyPsd@XeTeXBigCharstrue

```

```

3059 \pdfstringdef\@pdfauthor{#1}%
3060 }
3061 \define@key{Hyp}{pdfproducer}{%
3062 \HyXeTeX@CheckUnicode
3063 \HyPsd@XeTeXBigCharstrue
3064 \pdfstringdef\@pdfproducer{#1}%
3065 }
3066 \define@key{Hyp}{pdfcreator}{%
3067 \HyXeTeX@CheckUnicode
3068 \HyPsd@XeTeXBigCharstrue
3069 \pdfstringdef\@pdfcreator{#1}%
3070 }
3071 \define@key{Hyp}{pdfcreationdate}{%
3072 \begingroup
3073 \Hy@unicodedefalse
3074 \pdfstringdef\@pdfcreationdate{#1}%
3075 \endgroup
3076 }
3077 \define@key{Hyp}{pdfmoddate}{%
3078 \begingroup
3079 \Hy@unicodedefalse
3080 \pdfstringdef\@pdfmoddate{#1}%
3081 \endgroup
3082 }
3083 \define@key{Hyp}{pdfsubject}{%
3084 \HyXeTeX@CheckUnicode
3085 \HyPsd@XeTeXBigCharstrue
3086 \pdfstringdef\@pdfsubject{#1}%
3087 }
3088 \define@key{Hyp}{pdfkeywords}{%
3089 \HyXeTeX@CheckUnicode
3090 \HyPsd@XeTeXBigCharstrue
3091 \pdfstringdef\@pdfkeywords{#1}%
3092 }
3093 \define@key{Hyp}{pdftrapped}{%
3094 \lowercase{\edef\Hy@temp{#1}}%
3095 \ifx\Hy@temp\HyInfo@trapped@true
3096 \def\@pdftrapped{True}%
3097 \else
3098 \ifx\Hy@temp\HyInfo@trapped@false
3099 \def\@pdftrapped{False}%
3100 \else
3101 \ifx\Hy@temp\HyInfo@trapped@unknown
3102 \def\@pdftrapped{Unknown}%
3103 \else
3104 \ifx\Hy@temp\@empty
3105 \else
3106 \Hy@Warning{%
3107     Unsupported value '#1'\MessageBreak
3108     for option 'pdftrapped'%
3109 }%
3110 \fi
3111 \def\@pdftrapped{}%
3112 \fi
3113 \fi
3114 \fi
3115 }

```

```

3116 \def\HyInfo@trapped@true{true}
3117 \def\HyInfo@trapped@false{false}
3118 \def\HyInfo@trapped@unknown{unknown}
3119 \def\HyInfo@TrappedUnsupported{%
3120   \ifx\@pdftrapped\@empty
3121   \else
3122     \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3123   \gdef\HyInfo@TrappedUnsupported{}%
3124   \fi
3125 }
3126 \define@key{Hyp}{pdfinfo}{%
3127   \kvsetkeys{pdfinfo}{#1}%
3128 }
3129 \def\Hy@temp#1{%
3130   \lowercase{\Hy@temp@A{#1}}{#1}%
3131 }
3132 \def\Hy@temp@A#1#2{%
3133   \define@key{pdfinfo}{#2}{%
3134     \hypersetup{pdf#1={##1}}%
3135   }%
3136 }
3137 \Hy@temp{Title}
3138 \Hy@temp{Author}
3139 \Hy@temp{Keywords}
3140 \Hy@temp{Subject}
3141 \Hy@temp{Creator}
3142 \Hy@temp{Producer}
3143 \Hy@temp{CreationDate}
3144 \Hy@temp{ModDate}
3145 \Hy@temp{Trapped}
3146 \newif\ifHyInfo@AddonUnsupported
3147 \kv@set@family@handler{pdfinfo}{%
3148   \HyInfo@AddonHandler{#1}{#2}%
3149 }
3150 \let\HyInfo@do\relax
3151 \def\HyInfo@AddonHandler#1#2{%
3152   \ifx\kv@value\relax
3153     \Hy@Warning{%
3154       Option 'pdfinfo': ignoring key '\kv@key' without value%
3155     }%
3156   \else
3157     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3158     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3159     \expandafter\ifx\curname KV@pdfinfo@\HyInfo@Key\endcurname\relax
3160     \ifHyInfo@AddonUnsupported
3161       \Hy@Warning{%
3162         This driver does not support additional\MessageBreak
3163         information entries, therefore\MessageBreak
3164         '\kv@key' is ignored%
3165       }%
3166     \else
3167       \define@key{pdfinfo}{\HyInfo@Key}{%
3168         \HyXeTeX@CheckUnicode
3169         \HyPsd@XeTeXBigCharstrue
3170         \pdfstringdef\HyInfo@Value{##1}%
3171         \expandafter\let\curname HyInfo@Value@\HyInfo@Key\endcurname
3172         \HyInfo@Value

```

```

3173 }%
3174 \edef\HyInfo@AddonList{%
3175   \HyInfo@AddonList
3176   \HyInfo@do{\HyInfo@Key}%
3177 }%
3178 \kv@parse@normalized{%
3179   \HyInfo@Key={#2}%
3180 }{%
3181   \kv@processor@default{pdfinfo}%
3182 }%
3183 \fi
3184 \else
3185   \kv@parse@normalized{%
3186     \HyInfo@Key={#2}%
3187   }{%
3188     \kv@processor@default{pdfinfo}%
3189   }%
3190 \fi
3191 \fi
3192 }
3193 \def\HyInfo@GenerateAddons{%
3194   \ifHyInfo@AddonUnsupported
3195     \def\HyInfo@Addons{}%
3196   \else
3197     \begingroup
3198       \toks@{}%
3199       \def\HyInfo@do##1{%
3200         \EdefEscapeName\HyInfo@Key{##1}%
3201         \edef\x{%
3202           \toks@{%
3203             \the\toks@
3204             /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3205           }%
3206         }%
3207         \x
3208       }%
3209       \HyInfo@AddonList
3210       \edef\x{\endgroup
3211         \def\noexpand\HyInfo@Addons{\the\toks@}%
3212       }%
3213       \x
3214     \fi
3215   }
3216 \def\HyInfo@AddonList{}

3217 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3218 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3219 \let\setpdfinkmargin\@gobble
3220 \def\calculate@pdfview#1 #2\{%
3221   \def\@pdfview{#1}%
3222   \ifx\#2\%
3223     \def\@pdfviewparams{-32768}%
3224   \else
3225     \def\@pdfviewparams{#2}%
3226   \fi
3227 }
3228 \begingroup\expandafter\expandafter\expandafter\endgroup
3229 \expandafter\ifx\csname numexpr\endcsname\relax

```

```

3230 \def\Hy@number#1{%
3231   \expandafter\@firstofone\expandafter{\number#1}%
3232 }%
3233 \else
3234 \def\Hy@number#1{%
3235   \the\numexpr#1\relax
3236 }%
3237 \fi
3238 \define@key{Hyp}{pdfstartpage}{%
3239   \ifx\#1\%
3240   \def\@pdfstartpage{}%
3241   \else
3242   \edef\@pdfstartpage{\Hy@number{#1}}%
3243   \fi
3244 }%
3245 \define@key{Hyp}{pdfstartview}{%
3246   \ifx\#1\%
3247   \def\@pdfstartview{}%
3248   \else
3249   \hypercalcbpdef\@pdfstartview{ /#1 }%
3250   \fi
3251 }
3252 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3253 \define@key{Hyp}{pdftoolbar}[true]{%
3254   \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3255 }
3256 \define@key{Hyp}{pdfmenubar}[true]{%
3257   \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3258 }
3259 \define@key{Hyp}{pdfwindowui}[true]{%
3260   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3261 }
3262 \define@key{Hyp}{pdffitwindow}[true]{%
3263   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3264 }
3265 \define@key{Hyp}{pdfcenterwindow}[true]{%
3266   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3267 }
3268 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3269   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3270 }
3271 \define@key{Hyp}{pdfa}[true]{%
3272   \Hy@boolkey{pdfa}{#1}%
3273 }
3274 \define@key{Hyp}{pdfnewwindow}[true]{%
3275   \def\Hy@temp{#1}%
3276   \ifx\Hy@temp\@empty
3277     \Hy@newwindowsetfalse
3278   \else
3279     \Hy@newwindowsettrue
3280     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3281   \fi
3282 }
3283 \def\Hy@SetNewWindow{%
3284   \ifHy@newwindowset
3285     /NewWindow %
3286   \ifHy@newwindow true\else false\fi

```

```

3287 \fi
3288 }
3289 \Hy@DefNameKey{pdfpagelayout}{}%
3290 \do{SinglePage}{}%
3291 \do{OneColumn}{}%
3292 \do{TwoColumnLeft}{}%
3293 \do{TwoColumnRight}{}%
3294 \do{TwoPageLeft}{PDF 1.5}%
3295 \do{TwoPageRight}{PDF 1.5}%
3296 }
3297 \define@key{Hyp}{pdflang}{}%
3298 \def\@pdflang{#1}%
3299 }
3300 \define@key{Hyp}{pdfpagelabels}[true]{}%
3301 \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3302 }
3303 \define@key{Hyp}{pdfescapeform}[true]{}%
3304 \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3305 }

```

Default values:

```

3306 \def\@linkbordercolor{1 0 0}
3307 \def\@urlbordercolor{0 1 1}
3308 \def\@menubordercolor{1 0 0}
3309 \def\@filebordercolor{0 .5 .5}
3310 \def\@runbordercolor{0 .7 .7}
3311 \def\@citebordercolor{0 1 0}
3312 \def\@pdfhighlight{/I}
3313 \def\@pdftitle{}
3314 \def\@pdfauthor{}
3315 \let\@pdfproducer\relax
3316 \def\@pdfcreator{LaTeX with hyperref package}
3317 \def\@pdfcreationdate{}
3318 \def\@pdfmoddate{}
3319 \def\@pdfsubject{}
3320 \def\@pdfkeywords{}
3321 \def\@pdftrapped{}
3322 \def\@pdfpagescrop{}
3323 \def\@pdfstartview{/Fit }
3324 \def\@pdfstartpage{1}
3325 \def\@pdfprintpagerange{}
3326 \def\@pdflang{}
3327 \let\PDF@SetupDoc\@empty
3328 \let\PDF@FinishDoc\@empty
3329 \let\phantomsection\@empty
3330 \let\special@paper\@empty
3331 \def\HyperDestNameFilter#1{#1}
3332 \AtBeginDocument{%
3333 \begingroup
3334 \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3335 \dimen@=\x\relax
3336 \ifdim\dimen@>\z@
3337 \else
3338 \dimen@=11in\relax
3339 \Hy@WarningNoLine{%
3340 Height of page (\expandafter\string\x) %
3341 is invalid (\the\x),\MessageBreak
3342 using 11in%

```

```

3343   }%
3344   \fi
3345   \dimen@=0.99626401\dimen@
3346   \xdef\Hy@pageheight{\strip@pt\dimen@}%
3347   \endgroup
3348 }
3349 \def\HyInd@EncapChar{\|}
3350 \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.

```

3351 \let\hyper@normalise\ExecuteOptions
3352 \let\ExecuteOptions\hypersetup
3353 \Hy@RestoreCatcodes
3354 \InputIfFileExists{hyperref.cfg}{-}{-}
3355 \Hy@SetCatcodes
3356 \let\ExecuteOptions\hyper@normalise
3357 \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`.

```

3358 \RequirePackage{kvoptions}[2009/07/21]
3359 \SetupKeyvalOptions{family=Hyp}
3360 \DeclareLocalOptions{%
3361   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
3362 }

```

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

```

3363 \@ifpackageloaded{tex4ht}{-%
3364   \@ifpackagewith{hyperref}{tex4ht}{-}{-%
3365     \PassOptionsToPackage{tex4ht}{hyperref}%
3366   }%
3367 }{}
3368 \let\ReadBookmarks\relax
3369 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3370 \AtBeginDocument{%
3371   \ifHy@draft
3372     \let\hyper@@anchor\@gobble
3373     \gdef\hyper@link#1#2#3{#3}%
3374     \let\hyper@anchorstart\@gobble
3375     \let\hyper@anchorend\@empty
3376     \let\hyper@linkstart\@gobbletwo
3377     \let\hyper@linkend\@empty
3378     \def\hyper@linkurl#1#2{#1}%
3379     \def\hyper@linkfile#1#2#3{#1}%
3380     \def\hyper@link@{#1}#2#3{}%
3381     \def\Acrobatmenu#1#2{\leavevmode#2}%
3382     \let\PDF@SetupDoc\@empty
3383     \let\PDF@FinishDoc\@empty
3384     \let\@fifthoffive\@secondoftwo
3385     \let\@secondoffive\@secondoftwo
3386     \let\ReadBookmarks\relax

```

```

3387 \let\WriteBookmarks\relax
3388 \Hy@WarningNoLine{ draft mode on}%
3389 \fi
3390 \Hy@DisableOption{draft}%
3391 \Hy@DisableOption{nolinks}%
3392 \Hy@DisableOption{final}%
3393 }

```

15.1 PDF/A

```

3394 \Hy@DisableOption{pdfa}
3395 \ifHy@pdfa
3396 \setkeys{Hyp}{pdfversion=1.4}%
3397 \def\Hy@Acrobatmenu#1#2{%
3398 \leavevmode
3399 \begingroup
3400 \edef\x{#1}%
3401 \@onelevel@sanitize\x
3402 \ifx\x\Hy@NextPage
3403 \let\y=Y%
3404 \else
3405 \ifx\x\Hy@PrevPage
3406 \let\y=Y%
3407 \else
3408 \ifx\x\Hy@FirstPage
3409 \let\y=Y%
3410 \else
3411 \ifx\x\Hy@LastPage
3412 \let\y=Y%
3413 \else
3414 \let\y=N%
3415 \fi
3416 \fi
3417 \fi
3418 \fi
3419 \expandafter\endgroup
3420 \ifx\y Y%
3421 \else
3422 \PackageError{hyperref}{%
3423 PDF/A: Named action '#1' is not permitted%
3424 }\@ehc
3425 {#2}%
3426 \expandafter\@gobble
3427 \fi
3428 }%
3429 \def\Hy@temp#1{%
3430 \expandafter\def\csname Hy@#1\endcsname{#1}%
3431 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3432 }%
3433 \Hy@temp{NextPage}%
3434 \Hy@temp{PrevPage}%
3435 \Hy@temp{FirstPage}%
3436 \Hy@temp{LastPage}%
3437 \else
3438 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3439 \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.

```
3440 \Hy@nextfalse
3441 \@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3442 \@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3443 \@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3444 \ifHy@next
3445 \let\texttilde\~%
3446 \fi

3447 \ifHy@figures
3448 \Hy@Info{Hyper figures ON}%
3449 \else
3450 \Hy@Info{Hyper figures OFF}%
3451 \fi

3452 \ifHy@nesting
3453 \Hy@Info{Link nesting ON}%
3454 \else
3455 \Hy@Info{Link nesting OFF}%
3456 \fi

3457 \ifHy@hyperindex
3458 \Hy@Info{Hyper index ON}%
3459 \else
3460 \Hy@Info{Hyper index OFF}%
3461 \fi

3462 \ifHy@plainpages
3463 \Hy@Info{Plain pages ON}%
3464 \else
3465 \Hy@Info{Plain pages OFF}%
3466 \fi

3467 \ifHy@backref
3468 \Hy@Info{Backreferencing ON}%
3469 \else
3470 \Hy@Info{Backreferencing OFF}%
3471 \fi

3472 \ifHy@typexml
3473 \AtEndOfPackage{%
3474 \RequirePackage{color}%
3475 \RequirePackage{nameref}%
3476 }%
3477 \fi

3478 \Hy@DisableOption{typexml}
3479 \ifHy@implicit
3480 \typeout{Implicit mode ON; LaTeX internals redefined}%
3481 \else
3482 \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3483 \def\MaybeStopEarly{%
3484 \typeout{Hyperref stopped early}%
3485 \AfterBeginDocument{%
3486 \PDF@FinishDoc
3487 \gdef\PDF@FinishDoc{}}%
3488 }%
3489 \endinput
3490 }%
3491 \AtBeginDocument{%
3492 \let\autoref\ref
```

```

3493 \let\autopageref\pageref
3494 \ifx\@pdfpagemode\@empty
3495   \gdef\@pdfpagemode{UseNone}%
3496 \fi
3497 \global\Hy@backreffalse
3498 }%
3499 \AtEndOfPackage{%
3500   \global\let\ReadBookmarks\relax
3501   \global\let\WriteBookmarks\relax
3502 }%
3503 \fi
3504 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

3505 \AtEndOfPackage{%
3506   \@ifpackageloaded{tex4ht}{%
3507     \def\Hy@driver{htex4ht}%
3508     \Hy@texhttrue
3509   }{}%

```

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.

```

3510 \ifx\Hy@driver\@empty
3511 \else
3512   \def\Hy@temp{hpdftex}%
3513   \ifpdf
3514     \ifx\Hy@driver\Hy@temp
3515     \else
3516       \Hy@WarningNoLine{%
3517         Wrong driver ‘\Hy@driver.def’;\MessageBreak
3518         pdfTeX is running in PDF mode.\MessageBreak
3519         Forcing driver ‘\Hy@temp.def’%
3520       }%
3521       \let\Hy@driver\Hy@temp
3522     \fi
3523   \else
3524     \ifx\Hy@driver\Hy@temp
3525     \Hy@WarningNoLine{%
3526       Wrong driver ‘\Hy@driver.def’;\MessageBreak
3527       pdfTeX is not running in PDF mode.\MessageBreak
3528       Using default driver%
3529     }%
3530     \let\Hy@driver\@empty
3531   \fi
3532 \fi
3533 \fi
3534 \ifx\Hy@driver\@empty
3535 \else
3536   \def\Hy@temp{hxtex}%
3537   \ifxetex
3538     \ifx\Hy@driver\Hy@temp
3539     \else
3540       \Hy@WarningNoLine{%
3541         Wrong driver ‘\Hy@driver.def’;\MessageBreak
3542         XeTeX is running.\MessageBreak
3543         Forcing driver ‘\Hy@temp.def’ for XeTeX%
3544       }%

```

```

3545     \let\Hy@driver\Hy@temp
3546     \fi
3547   \fi
3548 \fi
3549 \ifx\Hy@driver\@empty
3550 \else
3551   \def\Hy@temp{hvtexhtm}%
3552   \ifvtexhtml
3553     \ifx\Hy@driver\Hy@temp
3554     \else
3555       \Hy@WarningNoLine{%
3556         Wrong driver ‘\Hy@driver.def’;\MessageBreak
3557         VTeX is running in HTML mode.\MessageBreak
3558         Forcing driver ‘\Hy@temp.def’%
3559       }%
3560     \let\Hy@driver\Hy@temp
3561     \fi
3562   \else
3563     \ifx\Hy@driver\Hy@temp
3564     \Hy@WarningNoLine{%
3565       Wrong driver ‘\Hy@driver.def’;\MessageBreak
3566       VTeX is not running in HTML mode.\MessageBreak
3567       Using default driver%
3568     }%
3569     \let\Hy@driver\@empty
3570   \fi
3571 \fi
3572 \fi

```

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

```

3573 \ifx\Hy@driver\@empty
3574   \providecommand*{\Hy@defaultdriver}{hypertex}%
3575   \ifpdf
3576     \def\Hy@driver{hpdfTEX}%
3577   \else
3578     \ifxetex
3579       \def\Hy@driver{hxetex}%
3580     \else
3581       \ifvtexhtml
3582         \def\Hy@driver{hvtexhtm}%
3583         \def\MaybeStopEarly{%
3584           \typeout{Hyperref stopped early}%
3585           \AfterBeginDocument{%
3586             \PDF@FinishDoc
3587             \gdef\PDF@FinishDoc{}}%
3588           }%
3589         \endinput
3590       }%
3591     \else
3592       \ifvtexpdf
3593         \def\Hy@driver{hvtex}%
3594       \else
3595         \ifvtexps
3596           \def\Hy@driver{hvtex}%
3597         \else
3598           \let\Hy@driver\Hy@defaultdriver
3599         \fi
3600       \fi

```

```

3601     \fi
3602     \fi
3603 \fi
3604 \ifx\Hy@driver\Hy@defaultdriver
3605   \def\Hy@temp{hdvwind}%
3606   \ifx\Hy@temp\Hy@driver
3607     \setkeys{Hyp}{colorlinks}%
3608     \PassOptionsToPackage{dviwindo}{color}%
3609   \fi
3610   \fi
3611 \typeout{*hyperref using default driver \Hy@driver*}%
3612 \else
3613 \typeout{*hyperref using driver \Hy@driver*}%
3614 \fi
3615 \input{\Hy@driver.def}%
3616 \let\@unprocessedoptions\relax
3617 \Hy@RestoreCatcodes
3618 }

```

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.

```

3619 \newif\ifHy@DvipdfmxOutlineOpen
3620 \ifxetex
3621   \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3622   \else
3623     \Hy@DvipdfmxOutlineOpenttrue
3624   \fi
3625 \fi
3626 \begingroup\expandafter\expandafter\expandafter\endgroup
3627 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3628 \else
3629   \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3630     \Hy@DvipdfmxOutlineOpenttrue
3631   \fi
3632 \fi
3633 \Hy@DisableOption{tex4ht}
3634 \Hy@DisableOption{pdftex}
3635 \Hy@DisableOption{nativepdf}
3636 \Hy@DisableOption{dvipdfm}
3637 \Hy@DisableOption{dvipdfmx}
3638 \Hy@DisableOption{dvipdfmx-outline-open}
3639 \Hy@DisableOption{pdfmark}
3640 \Hy@DisableOption{dvips}
3641 \Hy@DisableOption{hypertex}
3642 \Hy@DisableOption{vtex}
3643 \Hy@DisableOption{vtexpdfmark}
3644 \Hy@DisableOption{dviwindo}
3645 \Hy@DisableOption{dvipsone}
3646 \Hy@DisableOption{textures}
3647 \Hy@DisableOption{latex2html}
3648 \Hy@DisableOption{ps2pdf}
3649 \Hy@DisableOption{xetex}
3650 \AtEndOfPackage{%
3651   \Hy@DisableOption{pdfversion}%
3652 }

```

15.2.2 Bookmarks

```

3653 \def\WriteBookmarks{0}
3654 \def\@bookmarkopenstatus#1{%
3655 \ifHy@bookmarksopen

```

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

```

3656 \ifnum#1<\expandafter\@firstofone\expandafter
3657     {\number\@bookmarksopenlevel} % explicit space
3658 \else
3659 -%
3660 \fi
3661 \else
3662 -%
3663 \fi
3664 }
3665 \ifHy@bookmarks
3666 \Hy@Info{Bookmarks ON}%
3667 \ifx\@pdfpagemode\@empty
3668 \def\@pdfpagemode{UseOutlines}%
3669 \fi
3670 \else
3671 \def\@bookmarkopenstatus#1{%
3672 \Hy@Info{Bookmarks OFF}%
3673 \AtEndOfPackage{%
3674 \global\let\ReadBookmarks\relax
3675 \global\let\WriteBookmarks\relax
3676 }%
3677 \ifx\@pdfpagemode\@empty
3678 \def\@pdfpagemode{UseNone}%
3679 \fi
3680 \fi
3681 \Hy@DisableOption{bookmarks}

```

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

```

3682 \def\Hy@CatcodeWrapper#1{%
3683 \def\Hy@EndWrap{}%
3684 \def\TMP@EnsureCode##1##2{%
3685 \edef\Hy@EndWrap{%
3686 \Hy@EndWrap
3687 \catcode##1 \the\catcode##1\relax
3688 }%
3689 \catcode##1 ##2\relax
3690 }%
3691 \TMP@EnsureCode{10}{12}% ^^J
3692 \TMP@EnsureCode{33}{12}% !
3693 \TMP@EnsureCode{34}{12}% "
3694 \TMP@EnsureCode{36}{3}% $ (math)
3695 \TMP@EnsureCode{38}{4}% & (alignment)
3696 \TMP@EnsureCode{39}{12}% '
3697 \TMP@EnsureCode{40}{12}% (
3698 \TMP@EnsureCode{41}{12}% )
3699 \TMP@EnsureCode{42}{12}% *
3700 \TMP@EnsureCode{43}{12}% +
3701 \TMP@EnsureCode{44}{12}% ,
3702 \TMP@EnsureCode{45}{12}% -
3703 \TMP@EnsureCode{46}{12}% .
3704 \TMP@EnsureCode{47}{12}% /
3705 \TMP@EnsureCode{58}{12}% :
3706 \TMP@EnsureCode{59}{12}% ;

```

```

3707 \TMP@EnsureCode{60}{12}% <
3708 \TMP@EnsureCode{61}{12}% =
3709 \TMP@EnsureCode{62}{12}% >
3710 \TMP@EnsureCode{63}{12}% ?
3711 \TMP@EnsureCode{91}{12}% [
3712 \TMP@EnsureCode{93}{12}% ]
3713 \TMP@EnsureCode{94}{7}% ^ (superscript)
3714 \TMP@EnsureCode{95}{8}% _ (subscript)
3715 \TMP@EnsureCode{96}{12}% ‘
3716 \TMP@EnsureCode{124}{12}% |
3717 \TMP@EnsureCode{126}{13}% ~ (active)
3718 #1\relax
3719 \Hy@endWrap
3720 }

\HyColor@UseColor expects a macro as argument. It contains the color specifica-
tion.
3721 \AtBeginDocument{%
3722 \ifHy@ocgcolorlinks
3723 \setkeys{Hyp}{colorlinks}%
3724 \ifHy@pdfa
3725 \Hy@Warning{%
3726 PDF/A: Optional Content Groups are prohibited,\MessageBreak
3727 using ‘colorlinks’ instead of ‘ocgcolorlinks’%
3728 }%
3729 \Hy@ocgcolorlinksfalse
3730 \fi
3731 \fi
3732 \ifHy@ocgcolorlinks
3733 \else
3734 \Hy@DisableOption{ocgcolorlinks}%
3735 \fi
3736 \ifHy@colorlinks
3737 \def\@pdfborder{0 0 0}%
3738 \let\@pdfborderstyle\@empty
3739 \ifHy@typexml
3740 \else
3741 \Hy@CatcodeWrapper{%
3742 \RequirePackage{color}%
3743 }%
3744 \fi
3745 \def\Hy@colorlink#1{%
3746 \begingroup
3747 \HyColor@UseColor#1%
3748 }%
3749 \def\Hy@endcolorlink{\endgroup}%
3750 \Hy@Info{Link coloring ON}%
3751 \else
3752 \ifHy@frenchlinks
3753 \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
3754 \def\Hy@endcolorlink{\endgroup}%
3755 \Hy@Info{French linking ON}%
3756 \else
for grouping consistency:
3757 \def\Hy@colorlink#1{\begingroup}%
3758 \def\Hy@endcolorlink{\endgroup}%
3759 \Hy@Info{Link coloring OFF}%
3760 \fi

```

```

3761 \fi
3762 \Hy@DisableOption{colorlinks}%
3763 \Hy@DisableOption{frenchlinks}%
3764 \ifHy@texht
3765 \long\def\@firstoffive#1#2#3#4#5{#1}%
3766 \long\def\@secondoffive#1#2#3#4#5{#2}%
3767 \long\def\@thirdoffive#1#2#3#4#5{#3}%
3768 \long\def\@fourthoffive#1#2#3#4#5{#4}%
3769 \long\def\@fifthoffive#1#2#3#4#5{#5}%
3770 \providecommand*\@safe@activestruetrue{}%
3771 \providecommand*\@safe@activesfalse{}%
3772 \def\T@ref#1{%
3773   \Hy@safe@activestruetrue
3774   \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
3775   \Hy@safe@activesfalse
3776 }%
3777 \def\T@pageref#1{%
3778   \Hy@safe@activestruetrue
3779   \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
3780   \Hy@safe@activesfalse
3781 }%
3782 \else
3783 \ifHy@typexml
3784 \else
3785   \Hy@CatcodeWrapper{%
3786     \RequirePackage{nameref}%
3787   }%
3788 \fi
3789 \fi
3790 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
3791 \DeclareRobustCommand\pageref{%
3792   \@ifstar\@pagerefstar\T@pageref
3793 }%
3794 }
3795 \AfterBeginDocument{%
3796   \ifHy@texht
3797   \else
3798     \Hy@CatcodeWrapper{%
3799       \ReadBookmarks
3800     }%
3801 \fi
3802 }
3803 \ifHy@backref
3804 \RequirePackage{backref}%
3805 \else
3806 \let\Hy@backout\@gobble
3807 \fi
3808 \Hy@DisableOption{backref}
3809 \Hy@DisableOption{pagebackref}
3810 \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`.

```

3811 \begingroup
3812 \endlinechar=-1 %
3813 \catcode'\^^A=14 %
3814 \catcode'\^^M\active
3815 \catcode'\%\active
3816 \catcode'\#\active
3817 \catcode'\_\active
3818 \catcode'\$\active
3819 \catcode'\&\active
3820 \gdef\hyper@normalise{^^A
3821 \begingroup
3822 \catcode'\^^M\active
3823 \def^^M{ }^^A
3824 \catcode'\%\active
3825 \let%\@percentchar
3826 \let%\@percentchar
3827 \catcode'\#\active
3828 \def#{\hyper@hash}^^A
3829 \def\#{\hyper@hash}^^A
3830 \@makeother\&^^A
3831 \edef&{\string&}^^A
3832 \edef&{\string&}^^A
3833 \edef\textunderscore{\string_}^^A
3834 \let_\textunderscore
3835 \catcode'\_\active
3836 \let_\textunderscore
3837 \let~\hyper@tilde
3838 \let~\hyper@tilde
3839 \let\textasciitilde\hyper@tilde
3840 \let\\ \@backslashchar
3841 \edef$\string$^^A
3842 \Hy@safe@activestrue
3843 \hyper@n@rmalise
3844 }^^A
3845 \catcode'\#=6 ^^A
3846 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
3847 \gdef\hyper@n@rmalise#1#2{^^A
3848 \def\Hy@tempa{#2}^^A
3849 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
3850 \Hy@ReturnAfterElseFi{^^A
3851 \hyper@@normalise{#1}^^A
3852 }^^A
3853 \else
3854 \Hy@ReturnAfterFi{^^A
3855 \hyper@@normalise{#1}{#2}^^A
3856 }^^A
3857 \fi
3858 }^^A
3859 \gdef\hyper@@normalise#1#2{^^A
3860 \edef\Hy@tempa{^^A
3861 \endgroup
3862 \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
3863 }^^A
3864 \Hy@tempa
3865 }^^A

```



```

3866 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
3867   #1^^A
3868   \ifx\limits#2\limits
3869   \else
3870     \Hy@ReturnAfterFi{^^A
3871     \Hy@RemovePercentCr #2\@nil
3872   }^^A
3873   \fi
3874 }^^A
3875 \endgroup
3876 \providecommand*\hyper@chars{%
3877   \let\#\hyper@hash
3878   \let\%\@percentchar
3879   \Hy@safe@activestru
3880 }

3881 \def\hyperlink#1#2{%
3882   \hyper@@link#{#1}{#2}%
3883 }

3884 \def\Hy@VerboseLinkStart#1#2{%
3885   \ifHy@verbose
3886     \begingroup
3887     \Hy@safe@activestru
3888     \Hy@Info{Reference (#1) to '#2'}%
3889   \endgroup
3890   \fi
3891 }

3892 \def\Hy@VerboseAnchor#1{%
3893   \ifHy@verbose
3894     \begingroup
3895     \Hy@safe@activestru
3896     \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
3897   \endgroup
3898   \fi
3899 }

3900 \DeclareRobustCommand*\href{%
3901   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href}%
3902 }
3903 \def\Hy@href#{%
3904   \hyper@normalise\href@
3905 }
3906 \begingroup
3907   \catcode'\$=6 %
3908   \catcode'\#=12 %
3909   \gdef\href@\$1{\expandafter\href@split$1##\}%
3910   \gdef\href@split$1#$2#$3\{\%
3911     \hyper@@link{$1}{$2}%
3912   }%
3913 \endgroup

```

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

```

3914 \RequirePackage{url}
3915 \let\HyOrg@url\url
3916 \def\Hurl{\begingroup \Url}
3917 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
3918 \def\nolinkurl@#1{\Hurl{#1}}
3919 \DeclareRobustCommand*\url{\hyper@normalise\url@}

```

```

3920 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
3921 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
3922 \providecommand\hyper@image[2]{#2}

3923 \def\hypertarget#1#2{%
3924   \ifHy@nesting
3925     \hyper@@anchor{#1}{#2}%
3926   \else
3927     \hyper@@anchor{#1}{\relax}#2%
3928   \fi
3929 }

```

`\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.

```

3930 \DeclareRobustCommand*\hyperref{%
3931   \@ifnextchar{\Hy@babelnormalise\label@hyperref}\@hyperref
3932 }
3933 \def\Hy@babelnormalise#1[#2]{%
3934   \begingroup
3935     \Hy@safe@activestruer
3936     \edef\Hy@tempa{%
3937       \endgroup
3938       \noexpand#1[#2]}%
3939   }%
3940   \Hy@tempa
3941 }
3942 \def\@hyperref{\hyper@normalise\@hyperref}
3943 \def\@hyperref#1#2#3{%
3944   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
3945   \expandafter\tryhyper@link\ref@one\{#1}%
3946 }
3947 \def\tryhyper@link#1\#2{%
3948   \hyper@@link{#2}{#1}%
3949 }

3950 \def\hyperdef{\@ifnextchar{\label@hyperdef}\@hyperdef}
3951 \def\@hyperdef#1#2#3{%, category, name, text
3952   \ifx\#1\%
3953     \def\Hy@AnchorName{#2}%
3954   \else
3955     \def\Hy@AnchorName{#1.#2}%
3956   \fi
3957   \ifHy@nesting
3958     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
3959   \else
3960     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
3961   \fi
3962 }

```

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

```

3963 \def\label@hyperref[#1]{%
3964   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
3965 }%

```

```

3966 \def\label@hyperref#1#2#3{%
3967   \ifx#1\relax
3968     \protect\G@refundefinedtrue
3969     \@latex@warning{%
3970       Hyper reference '#2' on page \thepage \space undefined%
3971     }%
3972     \hyper@@link@{??}{#3}%
3973   \else
3974     \hyper@@link{\expandafter\@fifthoffive#1}%
3975     {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
3976   \fi
3977 }
3978 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
3979                               % anchor text
3980   \@bsphack
3981   \ifx\#2\%
3982     \def\Hy@AnchorName{#3}%
3983   \else
3984     \def\Hy@AnchorName{#2.#3}%
3985   \fi
3986   \if@filesw
3987     \protected@write\@auxout@{#{%
3988       \string\newlabel{#1}{#2}{#3}{\Hy@AnchorName}}}%
3989     }%
3990   \fi
3991   \@esphack
3992   \ifHy@nesting
3993     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
3994   \else
3995     \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
3996   \fi
3997 }

```

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.

```

3998 \def\hyper@@link{\let\Hy@reserved@a\relax
3999   \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
4000 }
4001 \def\hyper@link@[#1]#2#3#4{%
4002   \begingroup
4003     \protected@edef\Hy@tempa{#2}%
4004     \Hy@safe@activetrue
4005     \edef\x{#3}%
4006     \ifx\Hy@tempa\@empty
4007       \toks0{\hyper@link{#1}}%
4008     \else
4009       \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4010     \fi
4011     \toks2{%
4012       \Hy@safe@activesfalse
4013       #4%
4014     }%

```

```

4015 \edef\Hy@tempa{\the\toks2}%
4016 \edef\x{\endgroup
4017 \ifx\Hy@tempa\@empty
4018 \noexpand\Hy@Warning{Suppressing empty link}%
4019 \else
4020 \the\toks0 {\x}{\the\toks2}%%
4021 \fi
4022 }%
4023 \x
4024 }

```

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.

```
4025 \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.

```

4026 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4027 }

```

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

```

4028 \def\@pdftempwordfile{file}%
4029 \def\@pdftempwordrun{run}%
4030 \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:

```

4031 \ifx\#6\%
4032 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
4033 \else
4034 \ifx\#4\%
4035 \expandafter\@hyper@linkfile file:#7\{#3}{#2}%
4036 \else

```

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

```

4037 \def\@pdftempa{#4}%
4038 \ifx\@pdftempa\@pdftempwordfile
4039 \expandafter\@hyper@linkfile#7\{#3}{#2}%
4040 \else

```

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

```

4041 \ifx\@pdftempa\@pdftempwordrun
4042 \ifHy@pdfa
4043 \PackageError{hyperref}{%

```

```

4044         PDF/A: Launch action is prohibited%
4045     }\@ehc
4046     \begingroup
4047         \leavevmode
4048         #2%
4049     \endgroup
4050     \else
4051         \expandafter\@hyper@launch#7\{\#3}\#2}%
4052     \fi
4053     \else

```

otherwise its a URL

```

4054         \hyper@linkurl{\#3}\#7\ifx\#2\else\hyper@hash#2\fi}%
4055     \fi
4056     \fi
4057     \fi
4058     \fi
4059 }

```

By default, turn run: into file:

```

4060 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
4061     \hyper@linkurl{\#2}\#3}%
4062     \Hy@linkfileprefix
4063     #1%
4064     \ifx\#3\%
4065     \else
4066         \hyper@hash
4067         #3%
4068     \fi
4069 }%
4070 }

```

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

```

4071 \def\@hyper@linkfile file:#1\#2#3{%
4072     %file url,link string, name
4073     \filename@parse{\#1}%
4074     \ifx\filename@ext\relax
4075         \edef\filename@ext{\XR@ext}%
4076     \fi
4077     \def\use@file{\filename@area\filename@base.\filename@ext}%
4078     \ifx\filename@ext\XR@ext
4079         \hyper@linkfile{\#2}\use@file{\#3}%
4080     \else
4081         \ifx\@baseurl\@empty
4082             \hyper@linkurl{\#2}\#3}%
4083             \Hy@linkfileprefix\use@file\ifx\#3\else\hyper@hash#3\fi
4084         }%
4085     \else
4086         \hyper@linkurl{\#2}\use@file\ifx\#3\else\hyper@hash#3\fi}%
4087     \fi
4088     \fi
4089 }

```

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.

```

4090 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4091 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4092 \ifx\#1\%
4093 #2\Hy@WarningNoLine{empty link? #1: #2#3}%
4094 \else
4095 \def\anchor@spot{#2#3}%
4096 \let\put@me@back\@empty
4097 \ifx\relax#2\relax
4098 \else
4099 \ifHy@nesting
4100 \else
4101 \ifcat a\noexpand#2\relax
4102 \else
4103 \ifcat 0\noexpand#2 \relax
4104 \else
4105 % \typeout{Anchor start is not alphanumeric %
4106 % on input line\the\inputlineno%
4107 % }%
4108 \let\anchor@spot\@empty
4109 \def\put@me@back{#2#3}%
4110 \fi
4111 \fi
4112 \fi
4113 \fi
4114 \ifHy@activeanchor
4115 \anchor@spot
4116 \else
4117 \hyper@anchor{#1}%
4118 \fi
4119 \expandafter\put@me@back
4120 \fi
4121 \let\anchor@spot\@empty
4122 }

```

18 Compatibility with the *L^AT_EX2html* package

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

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

```

4123 \let\htmladdimg\hyperimage
4124 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4125 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4126 \def\htmlref#1#2{% anchor text, label
4127 \label@hyperref[#{2}]{#1}%
4128 }

```

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

```

4129 \def\@l@texttohtmlX{%
4130   \let\hhyperref\hyperref
4131   \def\hyperref##1##2##3##4{% anchor text for HTML
4132     % text to print before label in print
4133     % label
4134     % post-label text in print
4135     ##2\ref{##4}##3%
4136   }%
4137 }

```

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.

```
4138 \RequirePackage{bitset}
```

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

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

```

\HyField@NewFlag #1: type: F annot flags, Ff field flags
#2: PDF name
#3: PDF position
4139 \def\HyField@NewFlag#1#2{%
4140   \lowercase{\HyField@NewOption{#2}}%
4141   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4142 }

```

```

\HyField@NewFlagOnly
4143 \def\HyField@NewFlagOnly#1#2{%
4144   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
4145 }

```

```

\HyField@NewOption #1: option name
4146 \def\HyField@NewOption#1{%
4147   \expandafter\newif\csname ifFld@#1\endcsname
4148   \define@key{Field}{#1}[true]{%
4149     \lowercase{\Field@boolkey{##1}}{#1}%
4150   }%
4151 }

```

```

\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
4152 \def\HyField@NewBitsetFlag#1#2##3##4{%
4153   \begingroup

```

```

4154 \count@=#4\relax
4155 \advance\count@\m@ne
4156 \def\x##1{%
4157 \endgroup
4158 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
4159 \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
4160 \expandafter\edef\csname HyField@#3@##1\endcsname{%
4161 (\number#4) #2%
4162 }%
4163 \else
4164 \expandafter\edef\csname HyField@#3@##1\endcsname{%
4165 \csname HyField@#3@##1\endcsname
4166 /#2%
4167 }%
4168 \fi
4169 }%
4170 \expandafter\x\expandafter{\the\count@}%
4171 }

```

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

```

4172 \def\HyField@UseFlag#1#2{%
4173 \lowercase{\HyField@@UseFlag{#2}}{#1}%
4174 }

```

\HyField@@UseFlag

```

4175 \def\HyField@@UseFlag#1#2{%
4176 \bitsetSetValue{HyField@#2}{%
4177 \csname HyField@#2@#1\endcsname
4178 }{%
4179 \csname ifFld@#1\endcsname 1\else 0\fi
4180 }%
4181 }

```

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

```

4182 \def\HyField@SetFlag#1#2{%
4183 \lowercase{\HyField@@SetFlag{#2}}{#1}%
4184 }

```

\HyField@@SetFlag

```

4185 \def\HyField@@SetFlag#1#2{%
4186 \bitsetSetValue{HyField@#2}{%
4187 \csname HyField@#2@#1\endcsname
4188 }{1}%
4189 }

```

\HyField@PrintFlags

```

4190 \def\HyField@PrintFlags#1#2{%
4191 \ifHy@verbose
4192 \begingroup
4193 \let\Hy@temp\@empty
4194 \let\MessageBreak\relax
4195 \expandafter\@for\expandafter\x\expandafter:\expandafter=%
4196 \bitsetGetSetBitList{HyField@#1}\do{%
4197 \edef\Hy@temp{%
4198 \Hy@temp
4199 \csname HyField@#1@\x\endcsname\MessageBreak

```



```

4200     }%
4201     }%
4202 \edef\x{\endgroup
4203 \noexpand\Hy@Info{%
4204   Field flags: %
4205   \expandafter\ifx\@car#1\@nil S\else/\fi
4206   #1 %
4207   \bitsetGetDec{HyField@#1} %
4208   (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
4209   \Hy@temp
4210   for #2%
4211   }%
4212 } \x
4213 \fi
4214 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

4215 \HyField@NewFlag{Ff}{ReadOnly}{1}
4216 \HyField@NewFlag{Ff}{Required}{2}
4217 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

4218 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
4219 \HyField@NewFlag{Ff}{Radio}{16}
4220 \HyField@NewFlag{Ff}{Pushbutton}{17}
4221 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

4222 \HyField@NewFlag{Ff}{Multiline}{13}
4223 \HyField@NewFlag{Ff}{Password}{14}
4224 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
4225 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4226 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
4227 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
4228 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

4229 \HyField@NewFlag{Ff}{Combo}{18}
4230 \HyField@NewFlag{Ff}{Edit}{19}
4231 \HyField@NewFlag{Ff}{Sort}{20}
4232 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
4233 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
4234 \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.

```

4235 \newif\ifFld@popdown
4236 \define@key{Field}{popdown}[true]{%
4237 \lowercase{\Field@boolkey{#1}}{popdown}%
4238 }

```

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.

```

4239 \HyField@NewFlag{F}{Invisible}{1}
4240 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
4241 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
4242 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
4243 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
4244 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
4245 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
4246 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
4247 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

4248 \ifHy@pdfa
4249 \def\HyField@PDFAFIWarning#1#2{%
4250 \Hy@Warning{%
4251 PDF/A: Annotation flag '#1' must\MessageBreak
4252 be set to '#2'%
4253 }%
4254 }%
4255 \Fld@invisiblefalse
4256 \def\Fld@invisibletrue{%
4257 \HyField@PDFAFIWarning{invisible}{false}%
4258 }%
4259 \Fld@hiddenfalse
4260 \def\Fld@hiddentruetrue{%
4261 \HyField@PDFAFIWarning{hidden}{false}%
4262 }%
4263 \Fld@printtrue
4264 \def\Fld@printfalse{%
4265 \HyField@PDFAFIWarning{print}{true}%
4266 }%
4267 \Fld@nozoomtrue
4268 \def\Fld@nozoomfalse{%
4269 \HyField@PDFAFIWarning{nozoom}{true}%
4270 }%
4271 \Fld@norotatetrue
4272 \def\Fld@norotatefalse{%
4273 \HyField@PDFAFIWarning{norotate}{true}%
4274 }%
4275 \Fld@noviewfalse
4276 \def\Fld@noviewtrue{%
4277 \HyField@PDFAFIWarning{noview}{false}%
4278 }%
4279 \fi

```

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

```

4280 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
4281 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
4282 \HyField@NewFlag{Submit}{GetMethod}{4}
4283 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
4284 \HyField@NewFlagOnly{Submit}{XFDF}{6}
4285 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
4286 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
4287 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
4288 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
4289 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
4290 \HyField@NewFlag{Submit}{ExclFKey}{12}
4291 \HyField@NewFlag{Submit}{EmbedForm}{14}

4292 \define@key{Field}{export}{%
4293 \lowercase{\def\Hy@temp{#1}}%

```

```

4294 \@ifundefined{Fld@export@\Hy@temp}{%
4295   \@onelevel@sanitize\Hy@temp
4296   \PackageError{hyperref}{%
4297     Unknown export format '\Hy@temp'.\MessageBreak
4298     Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4299   }\@ehc
4300 }{%
4301   \let\Fld@export\Hy@temp
4302 }%
4303 }
4304 \def\Fld@export{fdf}
4305 \@namedef{Fld@export@fdf}{0}%
4306 \@namedef{Fld@export@html}{1}%
4307 \@namedef{Fld@export@xdfd}{2}%
4308 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4309 \def\HyField@FlagsSubmit{%
4310   \bitsetReset{HyField@Submit}%
4311   \ifcase\@nameuse{Fld@export@\Fld@export} %
4312     % FDF
4313     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4314     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4315     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4316     \HyField@UseFlag{Submit}{IncludeAnnotations}%
4317     \HyField@UseFlag{Submit}{CanonicalFormat}%
4318     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4319     \HyField@UseFlag{Submit}{ExclFKey}%
4320     \HyField@UseFlag{Submit}{EmbedForm}%
4321   \or % HTML
4322     \HyField@SetFlag{Submit}{ExportFormat}%
4323     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4324     \HyField@UseFlag{Submit}{GetMethod}%
4325     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4326     \HyField@UseFlag{Submit}{CanonicalFormat}%
4327   \or % XFDF
4328     \HyField@SetFlag{Submit}{XFDF}%
4329     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4330     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4331     \HyField@UseFlag{Submit}{CanonicalFormat}%
4332   \or % PDF
4333     \HyField@SetFlag{Submit}{SubmitPDF}%
4334     \HyField@UseFlag{Submit}{GetMethod}%
4335   \fi
4336   \HyField@PrintFlags{Submit}{submit button field}%
4337   \bitsetIsEmpty{HyField@Submit}{%
4338     \def\Fld@submitflags{%
4339     }{%
4340     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
4341     }%
4342 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```
4343 \def\HyField@FlagsAnnot#1{%
4344 \bitsetReset{HyField@F}%
4345 \HyField@UseFlag{F}{Invisible}%
4346 \HyField@UseFlag{F}{Hidden}%
4347 \HyField@UseFlag{F}{Print}%
4348 \HyField@UseFlag{F}{NoZoom}%
4349 \HyField@UseFlag{F}{NoRotate}%
4350 \HyField@UseFlag{F}{NoView}%
4351 \HyField@UseFlag{F}{Locked}%
4352 \HyField@UseFlag{F}{ToggleNoView}%
4353 \HyField@UseFlag{F}{LockedContents}%
4354 \HyField@PrintFlags{F}{#1}%
4355 \bitsetIsEmpty{HyField@F}{%
4356 \def\Fld@annotflags{%
4357 }{%
4358 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
4359 }%
4360 }
```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```
4361 \def\HyField@FlagsPushButton{%
4362 \HyField@FlagsAnnot{push button field}%
4363 \bitsetReset{HyField@Ff}%
4364 \HyField@UseFlag{Ff}{ReadOnly}%
4365 \HyField@UseFlag{Ff}{Required}%
4366 \HyField@UseFlag{Ff}{NoExport}%
4367 \HyField@SetFlag{Ff}{PushButton}%
4368 \HyField@PrintFlags{Ff}{push button field}%
4369 \bitsetIsEmpty{HyField@Ff}{%
4370 \def\Fld@flags{%
4371 }{%
4372 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4373 }%
4374 }
```

19.1.5 Check box field

\HyField@FlagsCheckBox

```
4375 \def\HyField@FlagsCheckBox{%
4376 \HyField@FlagsAnnot{check box field}%
4377 \bitsetReset{HyField@Ff}%
4378 \HyField@UseFlag{Ff}{ReadOnly}%
4379 \HyField@UseFlag{Ff}{Required}%
4380 \HyField@UseFlag{Ff}{NoExport}%
4381 \HyField@PrintFlags{Ff}{check box field}%
4382 \bitsetIsEmpty{HyField@Ff}{%
4383 \def\Fld@flags{%
4384 }{%
4385 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4386 }%
4387 }
```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```
4388 \def\HyField@FlagsRadioButton{%
4389 \HyField@FlagsAnnot{radio button field}%
4390 \bitsetReset{HyField@Ff}%
4391 \HyField@UseFlag{Ff}{ReadOnly}%
4392 \HyField@UseFlag{Ff}{Required}%
4393 \HyField@UseFlag{Ff}{NoExport}%
4394 \HyField@UseFlag{Ff}{NoToggleToOff}%
4395 \HyField@SetFlag{Ff}{Radio}%
4396 \HyField@UseFlag{Ff}{RadiosInUnison}%
4397 \HyField@PrintFlags{Ff}{radio button field}%
4398 \bitsetIsEmpty{HyField@Ff}{%
4399 \def\Fld@flags{}}%
4400 }{%
4401 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4402 }%
4403 }
```

19.1.7 Text fields

\HyField@FlagsText

```
4404 \def\HyField@FlagsText{%
4405 \HyField@FlagsAnnot{text field}%
4406 \bitsetReset{HyField@Ff}%
4407 \HyField@UseFlag{Ff}{ReadOnly}%
4408 \HyField@UseFlag{Ff}{Required}%
4409 \HyField@UseFlag{Ff}{NoExport}%
4410 \HyField@UseFlag{Ff}{Multiline}%
4411 \HyField@UseFlag{Ff}{Password}%
4412 \HyField@UseFlag{Ff}{FileSelect}%
4413 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4414 \HyField@UseFlag{Ff}{DoNotScroll}%
4415 \ifFld@comb
4416 \ifcase0\ifFld@multiline
4417 \else\ifFld@password
4418 \else\ifFld@fileselect
4419 \else 1\fi\fi\fi\relax
4420 \PackageError{hyperref}{%
4421 Field option ‘comb’ cannot used together with\MessageBreak
4422 ‘multiline’, ‘password’, or ‘fileselect’%
4423 }\@ehc
4424 \else
4425 \HyField@UseFlag{Ff}{Comb}%
4426 \fi
4427 \fi
4428 \HyField@UseFlag{Ff}{RichText}%
4429 \HyField@PrintFlags{Ff}{text field}%
4430 \bitsetIsEmpty{HyField@Ff}{%
4431 \def\Fld@flags{}}%
4432 }{%
4433 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4434 }%
4435 }
```

19.1.8 Choice fields

\HyField@FlagsChoice

```
4436 \def\HyField@FlagsChoice{%
4437   \HyField@FlagsAnnot{choice field}%
4438   \bitsetReset{HyField@Ff}%
4439   \HyField@UseFlag{Ff}{ReadOnly}%
4440   \HyField@UseFlag{Ff}{Required}%
4441   \HyField@UseFlag{Ff}{NoExport}%
4442   \HyField@UseFlag{Ff}{Combo}%
4443   \ifFld@combo
4444     \HyField@UseFlag{Ff}{Edit}%
4445   \fi
4446   \HyField@UseFlag{Ff}{Sort}%
4447   \HyField@UseFlag{Ff}{MultiSelect}%
4448   \ifFld@combo
4449     \ifFld@edit
4450       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4451     \fi
4452   \fi
4453   \HyField@UseFlag{Ff}{CommitOnSelChange}%
4454   \HyField@PrintFlags{Ff}{choice field}%
4455   \bitsetIsEmpty{HyField@Ff}{%
4456     \def\Fld@flags{%
4457     }{%
4458     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4459   }%
4460 }
```

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.

```
4461 \def\HyField@PDFChoices#1{%
4462   \begingroup
4463   \gdef\Fld@choices{%
4464     \def\HyTmp@optlist{%
4465       \let\HyTmp@optitem\relax
4466       \count@=0 %
4467       \kv@parse{#1}{%
4468         \Hy@pdfstringdef\kv@key\kv@key
4469         \ifx\kv@value\relax
4470           \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4471             \xdef\Fld@choices{\Fld@choices[\kv@key]\kv@key]}%
4472           \else
4473             \xdef\Fld@choices{\Fld@choices[\kv@key]}%
4474           \fi
4475         \else
4476           \Hy@pdfstringdef\kv@value\kv@value
4477           \xdef\Fld@choices{\Fld@choices[\kv@value]\kv@key]}%
4478         \fi
4479       \edef\HyTmp@optlist{%
4480         \HyTmp@optlist
4481         \HyTmp@optitem{\the\count@}{\kv@key}0%
4482       }%
4483       \advance\count@ by 1 %
```

```

4484 \gobbletwo
4485 }%
4486 \xdef\Fld@choices{/Opt[\Fld@choices]}%
4487 \ifFld@multiselect
4488 \HyField@@PDFChoices{DV}\Fld@default
4489 \HyField@@PDFChoices{V}\Fld@value
4490 \else
4491 \ifx\Fld@default\relax
4492 \else
4493 \pdfstringdef\Hy@gtmp\Fld@default
4494 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtmp)}%
4495 \fi
4496 \ifx\Fld@value\relax
4497 \else
4498 \pdfstringdef\Hy@gtmp\Fld@value
4499 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtmp)}%
4500 \fi
4501 \fi
4502 \endgroup
4503 }

```

\HyField@@PDFChoices

```

4504 \def\HyField@@PDFChoices#1#2{%
4505 \ifx#2\relax
4506 \else
4507 \count@=0 %
4508 \def\HyTmp@optitem##1##2##3{%
4509 \def\HyTmp@key{##2}%
4510 \ifx\HyTmp@key\Hy@gtmp
4511 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4512 \HyTmp@optlist
4513 \HyTmp@optitem{##1}{##2}1%
4514 }%
4515 \let\HyTmp@found=Y%
4516 \else
4517 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4518 \HyTmp@optlist
4519 \HyTmp@optitem{##1}{##2}##3%
4520 }%
4521 \fi
4522 }%
4523 \expandafter\comma@parse\expandafter{#2}{%
4524 \pdfstringdef\Hy@gtmp\comma@entry
4525 \let\HyTmp@found=N %
4526 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4527 \HyTmp@optlist
4528 \ifx\HyTmp@found Y%
4529 \advance\count@ by 1 %
4530 \else
4531 \@onelevel@sanitize\comma@entry
4532 \PackageWarning{hyperref}{%
4533 \string\ChoiceBox: Ignoring value '\comma@entry',%
4534 \MessageBreak
4535 it cannot be found in the choices%
4536 }%
4537 \fi
4538 \gobble

```

```

4539 }%
4540 \def\HyTmp@optitem##1##2##3{%
4541   \ifnum##3=1 %
4542     (##2)%
4543   \fi
4544 }%
4545 \ifcase\count@
4546 \or
4547   \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4548 \else
4549   \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4550 \ifx#1V%
4551   \def\HyTmp@optitem##1##2##3{%
4552     \ifnum##3=1 %
4553       \@firstofone{ ##1}%
4554     \fi
4555   }%
4556 \edef\HyTmp@optlist{\HyTmp@optlist}%
4557 \xdef\Fld@choices{%
4558   \Fld@choices
4559   /I[\expandafter\@firstofone\HyTmp@optlist]%
4560 }%
4561 \fi
4562 \fi
4563 \fi
4564 }

```

19.3 Forms

\HyField@SetKeys

```

4565 \def\HyField@SetKeys{%
4566   \setkeys{Field}%
4567 }

4568 \newif\ifFld@checked
4569 \newif\ifFld@disabled
4570 \Fld@checkedfalse
4571 \Fld@disabledfalse
4572 \newcount\Fld@menulength
4573 \newdimen\Fld@Width
4574 \newdimen\Fld@charsize
4575 \Fld@charsize=10\p@
4576 \def\Fld@maxlen{0}
4577 \def\Fld@align{0}
4578 \def\Fld@color{0 0 0 rg}
4579 \def\Fld@bcolor{1 1 1}
4580 \def\Fld@bordercolor{1 0 0}
4581 \def\Fld@bordersep{1\p@}
4582 \def\Fld@borderwidth{1}
4583 \def\Fld@borderstyle{S}
4584 \def\Fld@cbsymbol{4}
4585 \def\Fld@radiosymbol{H}
4586 \def\Fld@rotation{0}
4587 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}]
4588 \def\endForm{\@endForm}
4589 \newif\ifForm@html
4590 \Form@htmlfalse

```



```

4591 \def\Form@boolkey#1#2{%
4592 \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4593 }
4594 \define@key{Form}{action}{%
4595 \hyper@normalise\Hy@DefFormAction{#1}%
4596 }
4597 \def\Hy@DefFormAction{\def\Form@action}
4598 \def\enc@@html{html}
4599 \define@key{Form}{encoding}{%
4600 \def\Hy@tempa{#1}%
4601 \ifx\Hy@tempa\enc@@html
4602 \Form@htmltrue
4603 \def\Fld@export{html}%
4604 \else
4605 \typeout{hyperref: form 'encoding' key set to #1 %
4606 -- unknown type%
4607 }%
4608 \Form@htmlfalse
4609 \fi
4610 }
4611 \define@key{Form}{method}{%
4612 \lowercase{\def\Hy@temp{#1}}%
4613 \@ifundefined{Form@method@\Hy@temp}{%
4614 \@onelevel@sanitize\Hy@temp
4615 \PackageError{hyperref}{%
4616 Unknown method '\Hy@temp'.\MessageBreak
4617 Known values are 'post' and 'get'%
4618 }\@ehc
4619 }{%
4620 \let\Form@method\Hy@temp
4621 \ifcase\@nameuse{Form@method@\Hy@temp} %
4622 \Fld@getmethodfalse
4623 \else
4624 \Fld@getmethodtrue
4625 \fi
4626 }%
4627 }
4628 \def\Form@method{}
4629 \@namedef{Form@method@post}{0}
4630 \@namedef{Form@method@get}{1}
4631 \def\Field@boolkey#1#2{%
4632 \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4633 }
4634 \newtoks\Field@toks
4635 \Field@toks={ }%
4636 \def\Field@addtoks#1#2{%
4637 \edef\@processme{\Field@toks\the\Field@toks\space #1="#2"}%
4638 \@processme
4639 }
4640 \def\Fld@checkequals#1=#2=#3\{\%
4641 \def\@currDisplay{#1}%
4642 \ifx\#2\%
4643 \def\@currValue{#1}%
4644 \else
4645 \def\@currValue{#2}%
4646 \fi
4647 }

```

```

4648 \define@key{Field}{loc}{%
4649 \def\Fld@loc{#1}%
4650 }
4651 \define@key{Field}{checked}[true]{%
4652 \lowercase{\Field@boolkey{#1}}{checked}%
4653 }
4654 \define@key{Field}{disabled}[true]{%
4655 \lowercase{\Field@boolkey{#1}}{disabled}%
4656 }
4657 \define@key{Field}{accesskey}{%
4658 \Field@addtoks{accesskey}{#1}%
4659 }
4660 \define@key{Field}{tabkey}{%
4661 \Field@addtoks{tabkey}{#1}%
4662 }
4663 \define@key{Field}{name}{%
4664 \def\Fld@name{#1}%
4665 }
4666 \define@key{Field}{width}{%
4667 \def\Fld@width{#1}%
4668 \Field@Width#1\setbox0=\hbox{m}%
4669 }
4670 \define@key{Field}{maxlen}{%
4671 \def\Fld@maxlen{#1}%
4672 }
4673 \define@key{Field}{menulength}{%
4674 \Fld@menulength=#1\relax
4675 }
4676 \define@key{Field}{height}{%
4677 \def\Fld@height{#1}%
4678 }
4679 \define@key{Field}{charsize}{%
4680 \Fld@charsize#1%
4681 }
4682 \define@key{Field}{borderwidth}{%
4683 \def\Fld@borderwidth{#1}%
4684 }
4685 \define@key{Field}{borderstyle}{%
4686 \def\Fld@borderstyle{#1}%
4687 }
4688 \define@key{Field}{bordersep}{%
4689 \def\Fld@bordersep{#1}%
4690 }
4691 \define@key{Field}{default}{%
4692 \def\Fld@default{#1}%
4693 }
4694 \define@key{Field}{align}{%
4695 \def\Fld@align{#1}%
4696 }
4697 \define@key{Field}{value}{%
4698 \def\Fld@value{#1}%
4699 }
4700 \define@key{Field}{checkboxsymbol}{%
4701 \Fld@DingDef\Fld@cbsymbol{#1}%
4702 }
4703 \define@key{Field}{radiosymbol}{%
4704 \Fld@DingDef\Fld@radiosymbol{#1}%

```

```

4705 }
4706 \def\Fld@DingDef#1#2{%
4707 \def\Fld@temp{}%
4708 \Fld@@DingDef#2\ding{}}\@nil
4709 \let#1\Fld@temp
4710 }
4711 \def\Fld@@DingDef#1\ding#2#3\@nil{%
4712 \expandafter\def\expandafter\Fld@temp\expandafter{%
4713 \Fld@temp
4714 #1%
4715 }%
4716 \ifx\\#3\\%
4717 \expandafter\@gobble
4718 \else
4719 \begingroup
4720 \lccode'0=#2\relax
4721 \lowercase{\endgroup
4722 \expandafter\def\expandafter\Fld@temp\expandafter{%
4723 \Fld@temp
4724 0%
4725 }%
4726 }%
4727 \expandafter\@firstofone
4728 \fi
4729 {%
4730 \Fld@@DingDef#3\@nil
4731 }%
4732 }

4733 \define@key{Field}{rotation}{%
4734 \def\Fld@rotation{#1}%
4735 }

4736 \define@key{Field}{backgroundcolor}{%
4737 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
4738 }
4739 \define@key{Field}{bordercolor}{%
4740 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
4741 }
4742 \define@key{Field}{color}{%
4743 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
4744 }

4745 \def\Fld@onclick@code{}
4746 \def\Fld@format@code{}
4747 \def\Fld@validate@code{}
4748 \def\Fld@calculate@code{}
4749 \def\Fld@keystroke@code{}
4750 \def\Fld@onfocus@code{}
4751 \def\Fld@onblur@code{}
4752 \def\Fld@onmousedown@code{}
4753 \def\Fld@onmouseup@code{}
4754 \def\Fld@onenter@code{}
4755 \def\Fld@onexit@code{}
4756 \def\Hy@temp#1{%
4757 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
4758 }
4759 \def\Hy@@temp#1#2{%
4760 \ifHy@pdfa

```

```

4761 \define@key{Field}{#2}{%
4762 \PackageError{hyperref}{%
4763 PDF/A: Additional action '#2' is prohibited%
4764 }\@ehc
4765 }%
4766 \else
4767 \define@key{Field}{#2}{%
4768 \def#1{##1}%
4769 }%
4770 \fi
4771 }
4772 \Hy@temp{keystroke}
4773 \Hy@temp{format}
4774 \Hy@temp{validate}
4775 \Hy@temp{calculate}
4776 \Hy@temp{onfocus}
4777 \Hy@temp{onblur}
4778 \Hy@temp{onenter}
4779 \Hy@temp{onexit}
4780 \def\Hy@temp#1{%
4781 \define@key{Field}{#1}{%
4782 \Field@addtoks{#1}{##1}%
4783 }%
4784 }
4785 \Hy@temp{onselect}
4786 \Hy@temp{onchange}
4787 \Hy@temp{ondblclick}
4788 \Hy@temp{onmousedown}
4789 \Hy@temp{onmouseup}
4790 \Hy@temp{onmouseover}
4791 \Hy@temp{onmousemove}
4792 \Hy@temp{onmouseout}
4793 \Hy@temp{onkeypress}
4794 \Hy@temp{onkeydown}
4795 \Hy@temp{onkeyup}
4796 \ifHy@pdfa
4797 \define@key{Field}{onclick}{%
4798 \PackageError{hyperref}{%
4799 PDF/A: Action 'onclick' is prohibited%
4800 }\@ehc
4801 }%
4802 \else
4803 \define@key{Field}{onclick}{%
4804 \def\Fld@onclick@code{#1}%
4805 \Field@addtoks{onclick}{#1}%
4806 }%
4807 \fi
4808 \DeclareRobustCommand\TextField{%
4809 \@ifnextchar[{\@TextField}{\@TextField[]}%
4810 }
4811 \DeclareRobustCommand\ChoiceMenu{%
4812 \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
4813 }
4814 \DeclareRobustCommand\CheckBox{%
4815 \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
4816 }
4817 \DeclareRobustCommand\PushButton{%

```

```

4818 \@ifnextchar[{\@PushButton}{\@PushButton[]}%
4819 }
4820 \DeclareRobustCommand\Gauge{%
4821 \@ifnextchar[{\@Gauge}{\@Gauge[]}%
4822 }
4823 \DeclareRobustCommand\Submit{%
4824 \@ifnextchar[{\@Submit}{\@Submit[]}%
4825 }
4826 \DeclareRobustCommand\Reset{%
4827 \@ifnextchar[{\@Reset}{\@Reset[]}%
4828 }
4829 \def\LayoutTextField#1#2{% label, field
4830 #1 #2%
4831 }
4832 \def\LayoutChoiceField#1#2{% label, field
4833 #1 #2%
4834 }
4835 \def\LayoutCheckField#1#2{% label, field
4836 #1 #2%
4837 }
4838 \def\LayoutPushButtonField#1{% button
4839 #1%
4840 }
4841 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4842 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4843 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4844 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4845 \def\MakeButtonField#1{%
4846 \sbox0{%
4847 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
4848 }%
4849 \@tempdima\ht0 %
4850 \advance\@tempdima by \Fld@borderwidth bp %
4851 \advance\@tempdima by \Fld@borderwidth bp %
4852 \ht0\@tempdima
4853 \@tempdima\dp0 %
4854 \advance\@tempdima by \Fld@borderwidth bp %
4855 \advance\@tempdima by \Fld@borderwidth bp %
4856 \dp0\@tempdima
4857 \box0\relax
4858 }
4859 \def\DefaultHeightofSubmit{14pt}
4860 \def\DefaultWidthofSubmit{2cm}
4861 \def\DefaultHeightofReset{14pt}
4862 \def\DefaultWidthofReset{2cm}
4863 \def\DefaultHeightofCheckBox{\baselineskip}
4864 \def\DefaultWidthofCheckBox{\baselineskip}
4865 \def\DefaultHeightofChoiceMenu{\baselineskip}
4866 \def\DefaultWidthofChoiceMenu{\baselineskip}
4867 \def\DefaultHeightofText{\baselineskip}
4868 \def\DefaultHeightofTextMultiline{4\baselineskip}
4869 \def\DefaultWidthofText{3cm}
4870 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
4871 \def\DefaultOptionsofReset{print,name=Reset,noexport}
4872 \def\DefaultOptionsofPushButton{print}
4873 \def\DefaultOptionsofCheckBox{print}
4874 \def\DefaultOptionsofText{print}

```

Default options for the types of `\ChoiceMenu`.

```
4875 \def\DefaultOptionsofListBox{print}
4876 \def\DefaultOptionsofComboBox{print,edit,sort}
4877 \def\DefaultOptionsofPopdownBox{print}
4878 \def\DefaultOptionsofRadio{print,notoggletooff}
```

20 Setup

```
4879 \ifHy@figures
4880 \Hy@Info{Hyper figures ON}%
4881 \else
4882 \Hy@Info{Hyper figures OFF}%
4883 \fi
4884 \ifHy@nesting
4885 \Hy@Info{Link nesting ON}%
4886 \else
4887 \Hy@Info{Link nesting OFF}%
4888 \fi
4889 \ifHy@hyperindex
4890 \Hy@Info{Hyper index ON}%
4891 \else
4892 \Hy@Info{Hyper index OFF}%
4893 \fi
4894 \ifHy@backref
4895 \Hy@Info{backreferencing ON}%
4896 \else
4897 \Hy@Info{backreferencing OFF}%
4898 \fi
4899 \ifHy@colorlinks
4900 \Hy@Info{Link coloring ON}%
4901 \else
4902 \Hy@Info{Link coloring OFF}%
4903 \fi
4904 \ifHy@ocgcolorlinks
4905 \Hy@Info{Link coloring with OCG ON}%
4906 \else
4907 \Hy@Info{Link coloring with OCG OFF}%
4908 \fi
4909 \ifHy@pdfa
4910 \Hy@Info{PDF/A mode ON}%
4911 \else
4912 \Hy@Info{PDF/A mode OFF}%
4913 \fi
```

21 Low-level utility macros

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

```
4914 \edef\hyper@hash{\string#}
4915 \edef\hyper@tilde{\string~}
4916 \edef\hyper@quote{\string"}
4917 \let\@currentHref\@empty
4918 \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.

```
4919 \AfterBeginDocument{%
```

```

4920 \Hy@pdfstringtrue
4921 \PDF@SetupDoc
4922 \let\PDF@SetupDoc\@empty
4923 \Hy@DisableOption{pdfpagescrop}%
4924 \Hy@DisableOption{pdfpagemode}%
4925 \Hy@DisableOption{pdfnonfullscreenpagemode}%
4926 \Hy@DisableOption{pdfdirection}%
4927 \Hy@DisableOption{pdfviewarea}%
4928 \Hy@DisableOption{pdfviewclip}%
4929 \Hy@DisableOption{pdfprintarea}%
4930 \Hy@DisableOption{pdfprintclip}%
4931 \Hy@DisableOption{pdfprintscaling}%
4932 \Hy@DisableOption{pdfduplex}%
4933 \Hy@DisableOption{pdfpicktraybypdfsize}%
4934 \Hy@DisableOption{pdfprintpagerange}%
4935 \Hy@DisableOption{pdfnumcopies}%
4936 \Hy@DisableOption{pdfstartview}%
4937 \Hy@DisableOption{pdfstartpage}%
4938 \Hy@DisableOption{pdftoolbar}%
4939 \Hy@DisableOption{pdfmenubar}%
4940 \Hy@DisableOption{pdfwindowui}%
4941 \Hy@DisableOption{pdfwindow}%
4942 \Hy@DisableOption{pdfcenterwindow}%
4943 \Hy@DisableOption{pdfdisplaydoctitle}%
4944 \Hy@DisableOption{pdfpagelayout}%
4945 \Hy@DisableOption{pdflang}%
4946 \Hy@DisableOption{baseurl}%
4947 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
4948 \Hy@pdfstringfalse
4949 }

```

Ignore star from referencing macros:

```

4950 \LetLtxMacro\NoHy@OrgRef\ref
4951 \DeclareRobustCommand*\ref{%
4952 \@ifstar\NoHy@OrgRef\NoHy@OrgRef
4953 }
4954 \LetLtxMacro\NoHy@OrgPageRef\pageref
4955 \DeclareRobustCommand*\pageref{%
4956 \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
4957 }

```

22 Localized nullifying of package

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

```

4958 \def\NoHyper{%
4959 \def\hyper@link@{##1}##2##3##4{##4}%
4960 \def\hyper@@anchor##1{%
4961 \global\let\hyper@livelink\hyper@link
4962 \gdef\hyper@link##1##2##3{##3}%
4963 \def\hyper@anchor##1{%
4964 \def\hyper@anchorstart##1{%
4965 \let\hyper@anchorend\@empty
4966 \def\hyper@linkstart##1##2{%

```

```

4967 \let\hyper@linkend\@empty
4968 \def\hyper@linkurl##1##2{##1}%
4969 \def\hyper@linkfile##1##2##3{##1}%
4970 \def\hyper@link@{##1}##2##3{##1}%
4971 \let\Hy@backout\@gobble
4972 }
4973 \def\stop@hyper{%
4974 \def\hyper@link@{##1}##2##3##4{##4}%
4975 \let\Hy@backout\@gobble
4976 \def\hyper@@anchor##1{}}%
4977 \def\hyper@link##1##2##3{##3}%
4978 \def\hyper@anchor##1{}}%
4979 \def\hyper@anchorstart##1{}}%
4980 \let\hyper@anchorend\@empty
4981 \def\hyper@linkstart##1##2{}}%
4982 \let\hyper@linkend\@empty
4983 \def\hyper@linkurl##1##2{##1}%
4984 \def\hyper@linkfile##1##2##3{##1}%
4985 \def\hyper@link@{##1}##2##3{##1}%
4986 }
4987 \def\endNoHyper{%
4988 \global\let\hyper@link\hyper@livelink
4989 }
4990 \</package>

```

23 Package nohyperref

This package is introduced by Sebastian Rahtz.

Package nohyperref is a dummy package that defines some low level and some top-level commands. It is done for jadetex, which calls hyperref low-level commands, but it would also be useful with people using normal hyperref, who really do not want the package loaded at all.

Some low-level commands:

```

4991 \*nohyperref
4992 \RequirePackage{letltxmacro}[2008/06/13]
4993 \let\hyper@@anchor\@gobble
4994 \def\hyper@link##1##2##3{##3}%
4995 \let\hyper@anchorstart\@gobble
4996 \let\hyper@anchorend\@empty
4997 \let\hyper@linkstart\@gobbletwo
4998 \let\hyper@linkend\@empty
4999 \def\hyper@linkurl##1##2{##1}%
5000 \def\hyper@linkfile##1##2##3{##1}%
5001 \def\hyper@link@{##1}##2##3{##1}%
5002 \let\PDF@SetupDoc\@empty
5003 \let\PDF@FinishDoc\@empty
5004 \def\nohyperpage##1{##1}

```

Some top-level commands:

```

5005 \def\Acrobatmenu##1##2{\leavevmode##2}
5006 \let\pdfstringdefDisableCommands\@gobbletwo
5007 \let\texorpdfstring\@firsttwo
5008 \let\pdfbookmark\@undefined
5009 \newcommand\pdfbookmark[3]{}{}
5010 \let\phantomsection\@empty
5011 \let\hypersetup\@gobble

```



```

5012 \let\hyperbaseurl@gobble
5013 \let\href@gobble
5014 \let\hyperdef@gobbletwo
5015 \let\hyperlink@gobble
5016 \let\hypertarget@gobble
5017 \def\hyperref{%
5018   \@ifnextchar[\@gobbleopt{\expandafter@gobbletwo@gobble}%
5019 }
5020 \long\def@gobbleopt[#1]{
5021 \let\hyperpage@empty

```

Ignore star from referencing macros:

```

5022 \LetLtxMacro\NoHy@OrgRef\ref
5023 \DeclareRobustCommand*{\ref}{%
5024   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5025 }
5026 \LetLtxMacro\NoHy@OrgPageRef\pageref
5027 \DeclareRobustCommand*{\pageref}{%
5028   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5029 }
5030 \</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}`

```

5031 \*package
5032 \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.

```

5033 \if@filesw
5034   \ifHy@typexml
5035     \immediate\closeout\@mainaux
5036     \immediate\openout\@mainaux\jobname.aux\relax
5037     \immediate\write\@auxout{<relaxxml>\relax}%
5038   \fi
5039   \immediate\write\@auxout{%
5040     \string\ifx\string\hyper@anchor\string\@undefined^^J%
5041     \global\let\string\oldcontentsline\string\contentsline^^J%
5042     \gdef\string\contentsline%
5043       \string#1\string#2\string#3\string#4{%
5044         \string\oldcontentsline%
5045         {\string#1}{\string#2}{\string#3}}^^J%
5046     \global\let\string\oldnewlabel\string\newlabel^^J%
5047     \gdef\string\newlabel\string#1\string#2{%
5048       \string\newlabelxx{\string#1}\string#2}}^^J%
5049     \gdef\string\newlabelxx%
5050       \string#1\string#2\string#3\string#4\string#5\string#6{%
5051       \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.

```

5052   \string\AtEndDocument{%

```

```

5053     \let\string\contentsline\string\oldcontentsline^^J%
5054     \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.

```

5055     \string\else^^J%
5056     \global\let\string\hyper@last\relax^^J%
5057     \string\fi^^J%
5058   }%
5059 \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.

```

5060 \ifx\hyper@last\@undefined
5061   \def\@starttoc#1{%
5062     \begingroup
5063     \makeatletter
5064     \IfFileExists{\jobname.#1}{%
5065       \Hy@WarningNoLine{%
5066         old #1 file detected, not used; run LaTeX again%
5067       }%
5068     }-{}%
5069     \if@filesw
5070       \expandafter\newwrite\csname tf@#1\endcsname
5071       \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5072     \fi
5073     \@nobreakfalse
5074     \endgroup
5075   }%
5076   \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
5077 \fi
5078 }

```

25 Title strings

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

```

5079 \ifHy@usetitle
5080   \let\HyOrg@title\title
5081   \let\HyOrg@author\author
5082   \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
5083   \def\Hy@scanopttitle[#1]{%
5084     \gdef\Hy@title{#1}%
5085     \HyOrg@title{#1}%
5086   }%
5087   \def\Hy@scantitle#1{%
5088     \gdef\Hy@title{#1}%
5089     \HyOrg@title{#1}%
5090   }%
5091   \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
5092   \def\Hy@scanoptauthor[#1]{%
5093     \gdef\Hy@author{#1}%
5094     \HyOrg@author{#1}%

```

```

5095 }%
5096 \def\Hy@scanauthor#1{%
5097   \gdef\Hy@author{#1}%
5098   \HyOrg@author{#1}%
5099 }%

```

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.

```

5100 \begingroup
5101   \def\process@me#1\@nil#2{%
5102     \expandafter\let\expandafter\x\csname @#2\endcsname
5103     \edef\y{\expandafter\strip@prefix\meaning\x}%
5104     \def\c##1#1##2\@nil{%
5105       \ifx\\##1\\%
5106         \else
5107           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
5108             \expandafter{\x}%
5109         \fi
5110       }%
5111       \expandafter\c\y\relax#1\@nil
5112     }%
5113     \expandafter\process@me\string\@latex@\@nil{title}%
5114     \expandafter\process@me\string\@latex@\@nil{author}%
5115   \endgroup
5116 \fi
5117 \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.

```

5118 \def\Hy@UseMaketitleString#1{%
5119   \@ifundefined{Hy@#1}{-}{%
5120     \begingroup
5121       \let\Hy@saved@hook\pdfstringdefPreHook
5122       \pdfstringdefDisableCommands{%
5123         \expandafter\let\expandafter\\ \csname Hy@newline@#1\endcsname
5124         \let\newline\\%
5125       }%
5126       \expandafter\ifx\csname @pdf#1\endcsname\@empty
5127         \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
5128           \csname Hy@#1\endcsname\@empty
5129         }%
5130       \fi
5131       \global\let\pdfstringdefPreHook\Hy@saved@hook
5132     \endgroup
5133   }%
5134 }
5135 \def\Hy@newline@title#1{ #1}
5136 \def\Hy@newline@author#1{, #1}
5137 \def\Hy@UseMaketitleInfos{%
5138   \Hy@UseMaketitleString{title}%

```

```

5139 \Hy@UseMaketitleString{author}%
5140 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

5141 \RequirePackage{atbegshi}[2007/09/09]
5142 \def\Hy@EveryPageHook{}
5143 \def\Hy@EveryPageBoxHook{}
5144 \def\Hy@FirstPageHook{}
5145 \AtBeginShipout{%
5146 \Hy@EveryPageHook
5147 \ifx\Hy@EveryPageBoxHook\@empty
5148 \else
5149 \setbox\AtBeginShipoutBox=\vbox{%
5150 \offinterlineskip
5151 \Hy@EveryPageBoxHook
5152 \box\AtBeginShipoutBox
5153 }%
5154 \fi
5155 }
5156 \AtBeginShipoutFirst{%
5157 \Hy@FirstPageHook
5158 }
5159 \g@addto@macro\Hy@FirstPageHook{%
5160 \PDF@FinishDoc
5161 \gdef\PDF@FinishDoc{}}%
5162 }

```

27.1 PDF /PageLabels

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

```

5163 \ifHy@pagelabels
5164 \begingroup\expandafter\expandafter\expandafter\endgroup
5165 \expandafter\ifx\csname thepage\endcsname\relax
5166 \Hy@pagelabelsfalse
5167 \Hy@WarningNoLine{%
5168 Option 'pdfpagelabels' is turned off\MessageBreak
5169 because \string\thepage\space is undefined%
5170 }%
5171 \csname fi\endcsname
5172 \csname iffalse\expandafter\endcsname
5173 \fi

```

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

```

5174 \def\thispdfpagelabel#1{%
5175 \gdef\HyPL@thisLabel{#1}%
5176 }%
5177 \global\let\HyPL@thisLabel\relax

```

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

```

5178 \def\HyPL@Labels{}%

```

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

```
5179 \newcount\Hy@abspage
5180 \Hy@abspage=0 %
```

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

```
5181 \def\HyPL@LastType{init}%
5182 \def\HyPL@LastNumber{0}%
5183 \def\HyPL@LastPrefix{}
```

Definitions for the PDF names of the \LaTeX pendants.

```
5184 \def\HyPL@arabic{D}%
5185 \def\HyPL@Roman{R}%
5186 \def\HyPL@roman{r}%
5187 \def\HyPL@Alph{A}%
5188 \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.

```
5189 \def\HyPL@EveryPage{%
5190   \begingroup
5191   \ifx\HyPL@thisLabel\relax
5192     \let\HyPL@page\thepage
5193   \else
5194     \let\HyPL@page\HyPL@thisLabel
5195     \global\let\HyPL@thisLabel\relax
5196   \fi
5197   \let\HyPL@Type\relax
5198   \ifnum\the\c@page>0 %
5199     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
5200   \fi
5201   \let\Hy@temp Y%
5202   \ifx\HyPL@Type\HyPL@LastType
5203   \else
5204     \let\Hy@temp N%
5205   \fi
5206   \ifx\HyPL@Type\relax
5207     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
5208   \else
5209     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
5210   \fi
5211   \ifx\HyPL@Prefix\HyPL@LastPrefix
5212   \else
5213     \let\Hy@temp N%
5214   \fi
5215   \if Y\Hy@temp
5216     \advance\c@page by -1 %
5217     \ifnum\HyPL@LastNumber=\the\c@page\relax
5218     \else
5219       \let\Hy@temp N%
5220     \fi
5221     \Hy@StepCount\c@page
5222   \fi
5223   \if N\Hy@temp
5224     \ifx\HyPL@Type\relax
5225       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
5226     \else
5227       \HyPL@StorePageLabel{%
```

```

5228     \ifx\HyPL@Prefix\@empty
5229     \else
5230       /P(\HyPL@Prefix)%
5231     \fi
5232     /S/\csname HyPL\HyPL@Type\endcsname
5233     \ifnum\the\c@page=1 %
5234     \else
5235       \space/St \the\c@page
5236     \fi
5237   }%
5238   \fi
5239 \fi
5240 \xdef\HyPL@LastNumber{\the\c@page}%
5241 \global\let\HyPL@LastType\HyPL@Type
5242 \global\let\HyPL@LastPrefix\HyPL@Prefix
5243 \endgroup
5244 \Hy@GlobalStepCount\Hy@abspage
5245 }%

```

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

```

5246 \def\HyPL@CheckThePage#1\@nil{%
5247   \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
5248 }%

```

`\HyPL@@CheckThePage` The first check is, is `\thepage` is defined such as in L^AT_EX, 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`.

```

5249 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
5250   \def\Hy@tempa{#4}%
5251   \def\Hy@tempb{\csname\endcsname\c@page}%
5252   \ifx\Hy@tempa\Hy@tempb
5253     \expandafter\ifx\csname HyPL#3\endcsname\relax
5254     \else
5255       \def\HyPL@Type{#3}%
5256       \def\HyPL@Prefix{#2}%
5257     \fi
5258   \else
5259     \begingroup
5260     \let\Hy@next\endgroup
5261     \let\HyPL@found\@undefined
5262     \def\arabic{\HyPL@Format{arabic}}%
5263     \def\Roman{\HyPL@Format{Roman}}%
5264     \def\roman{\HyPL@Format{roman}}%
5265     \def\Alph{\HyPL@Format{Alph}}%
5266     \def\alph{\HyPL@Format{alph}}%
5267     \protected@edef\Hy@temp{#1}%
5268     \ifx\HyPL@found\relax
5269       \toks@\expandafter{\Hy@temp}%
5270     \edef\Hy@next{\endgroup
5271       \noexpand\HyPL@@@CheckThePage\the\toks@
5272       \noexpand\HyPL@found\relax\noexpand\@nil
5273     }%
5274     \fi
5275     \Hy@next
5276   \fi

```

5277 }%

`\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`.

```
5278 \def\HyPL@Format#1#2{%
5279   \ifx\HyPL@found\@undefined
5280     \expandafter\ifx\csname c@#2\endcsname\c@page
5281       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
5282     \else
5283       \expandafter\noexpand\csname#1\endcsname{#2}%
5284     \fi
5285   \else
5286     \expandafter\noexpand\csname#1\endcsname{#2}%
5287   \fi
5288 }%
```

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

```
5289 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
5290   \def\Hy@tempa{#3}%
5291   \def\Hy@tempb{\HyPL@found\relax}%
5292   \ifx\Hy@tempa\Hy@tempb
5293     \def\HyPL@Type{#2}%
5294     \def\HyPL@Prefix{#1}%
5295   \fi
5296 }%
```

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

```
5297 \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`.

```
5298 \def\HyPL@Useless{0<</S/D>>}%
5299 \@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.

```
5300 \def\HyPL@SetPageLabels{%
5301   \@onelevel@sanitize\HyPL@Labels
5302   \ifx\HyPL@Labels\@empty
5303     \else
5304       \ifx\HyPL@Labels\HyPL@Useless
5305         \else
5306           \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
5307         \fi
5308       \fi
5309 }%
```

```
5310 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
5311 \fi
```

Option 'pdfpagelabels' has been used and is now disabled.

```
5312 \Hy@DisableOption{pdfpagelabels}
5313 </package>
```

27.1.1 pdfTeX and VTeX

Because of pdfTeX's `\pdfcatalog` command the `/PageLabels` entry can set at end of document in the first run.

`\Hy@PutCatalog`

```
5314 <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.

```
5315 <*vtex>
5316 \providecommand*{\XR@ext}{pdf}
5317 \edef\Hy@VTeXversion{%
5318   \ifx\VTeXversion\@undefined
5319     \z@
5320   \else
5321     \ifx\VTeXversion\relax
5322       \z@
5323     \else
5324       \VTeXversion
5325     \fi
5326   \fi
5327 }
5328 \begingroup
5329   \ifnum\Hy@VTeXversion<660 %
5330     \gdef\Hy@PutCatalog#1{%
5331       \Hy@WarningNoLine{%
5332         VTeX 6.59g or above required for pdfpagelabels%
5333       }%
5334     }%
5335   \else
5336     \gdef\Hy@PutCatalog#1{%
5337       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5338     }%
5339     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5340       \ifx\#2\%
5341         \else
5342           \immediate\special{!pdfpagelabels #2}%
5343         \fi
5344       }%
5345     \fi
5346 \endgroup
5347 </vtex>

5348 <*pdfTeX | vtex>
```

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

```
5349 \ifHy@pagelabels
5350   \def\HyPL@StorePageLabel#1{%
5351     \toks@\expandafter{\HyPL@Labels}%
5352     \xdef\HyPL@Labels{%
5353       \the\toks@
5354       \the\Hy@abspage<<#1>>%
5355     }%
5356   }%
```


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.

```

5357 \RequirePackage{atveryend}[2009/12/07]%
5358 \AtVeryEndDocument{%
5359   \HyPL@SetPageLabels
5360 }%

5361 \fi
5362 </pdfTeX | vTeX>

```

27.1.2 xetex

```

5363 <*xetex>
5364 \HyPsd@LoadUnicode
5365 \Hy@unicodetrue
5366 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
5367 \else
5368   \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
5369 \fi
5370 \HyPsd@LoadStringEncoding
5371 \define@key{Hyp}{unicode}[true]{%
5372   \Hy@boolkey{unicode}{#1}%
5373   \ifHy@unicode
5374     \else
5375       \Hy@Warning{%
5376         XeTeX driver only supports 'unicode=true'.\MessageBreak
5377         Ignoring option setting 'unicode=false'%
5378       }%
5379       \Hy@unicodetrue
5380     \fi
5381   }
5382 \define@key{Hyp}{pdfencoding}{%
5383   \edef\HyPsd@temp{#1}%
5384   \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
5385     \let\HyPsd@pdfencoding\HyPsd@temp
5386   \else
5387     \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
5388       \let\HyPsd@pdfencoding\HyPsd@temp
5389     \else
5390       \HyWarning{%
5391         XeTeX driver only supports 'pdfencoding=unicode|auto.%
5392         \MessageBreak
5393         Ignoring option setting 'pdfencoding=\HyPsd@temp'%
5394       }%
5395     \fi
5396   \fi
5397 }
5398 \let\HyXeTeX@CheckUnicode\relax
5399 </xetex>

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

5400 <*pdfmarkbase>
5401 \begingroup
5402 \@ifundefined{headerps@out}{}{%
5403   \toks@\expandafter{\Hy@FirstPageHook}%
5404   \xdef\Hy@FirstPageHook{%

```

```

5405 \noexpand\headerps@out{%
5406 systemdict /pdfmark known%
5407 {%
5408 userdict /?pdfmark systemdict /exec get put%
5409 }{%
5410 userdict /?pdfmark systemdict /pop get put %
5411 userdict /pdfmark systemdict /cleartomark get put%
5412 }%
5413 ifelse%
5414 }%
5415 \the\toks@
5416 }%
5417 }%
5418 \endgroup
5419 \</pdfmarkbase>

```

\Hy@PutCatalog

```

5420 \<dvipdfm | xetex>\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
5421 \<*pdfmarkbase>
5422 \def\Hy@PutCatalog#1{%
5423 \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5424 }
5425 \</pdfmarkbase>

5426 \<*pdfmarkbase | dvipdfm | xetex>
5427 \ifHy@pagelabels

```

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

```

5428 \def\HyPL@StorePageLabel#1{%
5429 \if@filesw
5430 \begingroup
5431 \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5432 \immediate\write\@mainaux{%
5433 \string\HyPL@Entry{\Hy@tempa}%
5434 }%
5435 \endgroup
5436 \fi
5437 }%

```

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.

```

5438 \AfterBeginDocument{%
5439 \if@filesw
5440 \immediate\write\@mainaux{%
5441 \string\providecommand\string*\string\HyPL@Entry[1]{}%
5442 }%
5443 \fi
5444 \ifx\HyPL@Labels\@empty
5445 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5446 \else
5447 \HyPL@SetPageLabels
5448 \fi
5449 \let\HyPL@Entry\@gobble
5450 }%

```

\HyPL@Entry

```

5451 \def\HyPL@Entry#1{%

```

```

5452 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5453   \HyPL@Labels
5454   #1%
5455   }%
5456 }%

5457 \fi
5458 (/pdfmarkbase | dvipdfm | xetex)
5459 (*package)
5460 \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

```

5461 \def\Hy@CounterExists#1{%
5462   \begingroup\expandafter\expandafter\expandafter\endgroup
5463   \expandafter\ifx\csname c@#1\endcsname\relax
5464     \expandafter\@gobble
5465   \else
5466     \begingroup\expandafter\expandafter\expandafter\endgroup
5467     \expandafter\ifx\csname the#1\endcsname\relax
5468       \expandafter\expandafter\expandafter\@gobble
5469     \else
5470       \expandafter\expandafter\expandafter\@firstofone
5471     \fi
5472   \fi
5473 }
5474 \Hy@CounterExists{section}{%
5475   \newcommand\theHequation{\theHsection.\arabic{equation}}%
5476 }
5477 \Hy@CounterExists{part}{%
5478   \newcommand\theHpart{\arabic{part}}%
5479 }
5480 \@ifundefined{thechapter}{%
5481   \newcommand\theHsection   {\arabic{section}}%
5482   \newcommand\theHfigure    {\arabic{figure}}%
5483   \newcommand\theHtable     {\arabic{table}}%
5484 }{%
5485   \newcommand\theHchapter   {\arabic{chapter}}%

```

```

5486 \newcommand\theHfigure    {\theHchapter.\arabic{figure}}%
5487 \newcommand\theHtable    {\theHchapter.\arabic{table}}%
5488 \newcommand\theHsection   {\theHchapter.\arabic{section}}%
5489 }
5490 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
5491 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5492 \newcommand\theHparagraph  {\theHsubsubsection.\arabic{paragraph}}
5493 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5494 \newcommand\theHtheorem    {\theHsection.\arabic{theorem}}
5495 \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.

```

5496 \let\H@item\item
5497 \newcounter{Item}
5498 \def\theHItem{\arabic{Item}}
5499 \def\item{%
5500   \@hyper@itemfalse
5501   \if@nmbrlist\@hyper@itemtrue\fi
5502   \H@item
5503 }
5504 \newcommand\theHenumi     {\theHItem}
5505 \newcommand\theHenumii    {\theHItem}
5506 \newcommand\theHenumiii   {\theHItem}
5507 \newcommand\theHenumiv    {\theHItem}
5508 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5509 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5510 \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.

```

5511 \let\H@refstepcounter\refstepcounter
5512 \edef\name@of@eq{equation}%
5513 \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.

```

5514 \newif\if@hyper@item
5515 \newif\if@skiphyperref
5516 \@hyper@itemfalse
5517 \@skiphyperreffalse
5518 \def\refstepcounter#1{%
5519   \ifHy@pdfstring
5520   \else
5521     \H@refstepcounter{#1}%
5522     \edef\This@name{#1}%
5523     \ifx\This@name\name@of@slide
5524     \else
5525       \if@skiphyperref
5526       \else
5527         \if@hyper@item
5528           \stepcounter{Item}%
5529           \hyper@refstepcounter{Item}%
5530         \@hyper@itemfalse
5531       \else

```

```

5532     \hyper@refstepcounter{#1}%
5533     \fi
5534     \fi
5535     \fi
5536     \fi
5537 }

```

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

```

5538 \ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5539 \def\hyper@refstepcounter#1{%
5540   \edef\This@name{#1}%
5541   \ifx\This@name\name@of@eq
5542     \@ifundefined{theHequation}{%
5543       \make@stripped@name{\theequation}%
5544       \let\theHequation\newname
5545     }{}%
5546   \fi
5547   \@ifundefined{theH#1}{%
5548     \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5549   }{}%
5550   \hyper@makecurrent{#1}%
5551   \ifmeasuring@
5552     \else
5553     \Hy@raisedlink{%
5554       \hyper@anchorstart{\@currentHref}\hyper@anchorend
5555     }%
5556   \fi
5557 }

```

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`.

```

5558 \begingroup\expandafter\expandafter\expandafter\endgroup
5559 \expandafter\ifx\csname chapter\endcsname\relax
5560   \def\Hy@chapterstring{section}%
5561 \else
5562   \def\Hy@chapterstring{chapter}%
5563 \fi
5564 \def\Hy@appendixstring{appendix}
5565 \def\Hy@chapapp{\Hy@chapterstring}
5566 \let\HyOrg@appendix\appendix
5567 \def\appendix{%
5568   \@ifundefined{chapter}%
5569   {\gdef\theHsection{\Alph{section}}}%
5570   {\gdef\theHchapter{\Alph{chapter}}}%
5571   \xdef\Hy@chapapp{\Hy@appendixstring}%
5572   \HyOrg@appendix
5573 }

```

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

```

5574 \def\hyper@makecurrent#1{%
5575   \begingroup
5576   \edef\Hy@param{#1}%
5577   \ifx\Hy@param\Hy@chapterstring
5578     \let\Hy@param\Hy@chapapp
5579   \fi
5580   \ifHy@hypertexnames
5581     \let\@number\@firstofone
5582     \@ifundefined{latin@Alph}{}{%
5583       \ifx\@Alph\greek@Alph
5584         \def\@Alph{Alph\@arabic}%
5585       \fi
5586     }%
5587     \ifx\@Alph\@Alph@bul
5588       \def\@Alph{Alph\@arabic}%
5589     \fi
5590     \ifx\@alph\@alph@bul
5591       \def\@alph{alph\@arabic}%
5592     \fi
5593     \ifHy@naturalnames
5594       \let\textlatin\@firstofone
5595       \xdef\@currentHlabel{\csname the#1\endcsname}%
5596     \else
5597       \xdef\@currentHlabel{%
5598         \csname
5599           the%
5600           \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
5601           #1%
5602         \endcsname
5603       }%
5604     \fi
5605     \xdef\@currentHref{%
5606       \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5607     }%
5608   \else
5609     \Hy@GlobalStepCount\Hy@linkcounter
5610     \xdef\@currentHref{\Hy@param.\the\Hy@linkcounter}%
5611   \fi
5612 \endgroup
5613 }

5614 \@ifpackageloaded{fancyvrb}{%
5615   \@ifpackagelater{fancyvrb}{1998/05/20}{}{%
5616     \def\FV@StepLineNo{%
5617       \FV@SetLineNo
5618       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
5619     \FV@StepLineNo
5620   }%
5621 }%
5622 }{}

```

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 possi-

ble 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`

```

5623 \AtBeginDocument{%
5624   \@ifclassloaded{revtex4}{%
5625     \@namedef{ver@lastpage.sty}{1994/06/25}%
5626   }{}%
5627   \@ifpackageloaded{lastpage}{%
5628     \ifHy@pageanchor
5629     \else
5630       \Hy@WarningNoLine{%
5631         The \string\pageref{LastPage} link doesn't work\MessageBreak
5632         with disabled option 'pageanchor'%
5633       }%
5634     \fi
5635     \def\lastpage@putlabel{%
5636       \addtocounter{page}{-1}%
5637       \if@filesw
5638         \begingroup
5639           \let\@number\@firstofone
5640           \ifHy@pageanchor
5641             \ifHy@hypertextnames
5642               \ifHy@plainpages
5643                 \def\Hy@temp{\arabic{page}}%
5644               \else
5645                 \Hy@unicodedefalse
5646                 \pdfstringdef\Hy@temp{\thepage}%
5647             \fi
5648           \else
5649             \def\Hy@temp{\the\Hy@pagecounter}%
5650           \fi
5651         \fi
5652         \immediate\write\@auxout{%
5653           \string\newlabel
5654           {LastPage}{{}{\thepage}}{}%
5655           \ifHy@pageanchor page.\Hy@temp\fi}}{}%
5656       }%
5657     \endgroup
5658   \fi
5659   \addtocounter{page}{1}%
5660 }{}%
5661 \@ifclassloaded{revtex4}{%
5662   \begingroup
5663     \toks@\expandafter{\lastpage@putlabel}%
5664     \edef\x{\endgroup
5665       \def\noexpand\lastpage@putlabel{%
5666         \noexpand\stepcounter{page}%
5667         \the\toks@
5668         \noexpand\addtocounter{page}\noexpand\m@ne
5669       }%
5670     }%
5671     \x
5672   }{}%
5673 }{}%
```

```

5674 }
5675 </package>
5676 <*check>
5677 \checkpackage{lastpage}[1994/06/25]
5678 \checkcommand\def\lastpage@putlabel{%
5679 \addtocounter{page}{-1}%
5680 \immediate\write\@auxout{%
5681 \string\newlabel{LastPage}{\thepage}}%
5682 }%
5683 \addtocounter{page}{1}%
5684 }
5685 </check>
5686 <*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.

```

5687 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
5688 \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:

```

5689 \@ifpackageloaded{titlesec}{%
5690 \def\ttl@Hy@steplink#1{%
5691 \Hy@GlobalStepCount\Hy@linkcounter
5692 \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5693 \edef\ttl@Hy@saveanchor{%
5694 \noexpand\Hy@raisedlink{%
5695 \noexpand\hyper@anchorstart{\@currentHref}%
5696 \noexpand\hyper@anchorend
5697 \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
5698 \noexpand\ttl@Hy@PatchSaveWrite
5699 }%
5700 }%
5701 }%
5702 \def\ttl@Hy@PatchSaveWrite{%
5703 \begingroup
5704 \toks@\expandafter{\ttl@savewrite}%
5705 \edef\x{\endgroup
5706 \def\noexpand\ttl@savewrite{%
5707 \let\noexpand\@currentHref
5708 \noexpand\ttl@Hy@SavedCurrentHref
5709 \the\toks@
5710 }%
5711 }%
5712 \x
5713 }%
5714 \def\ttl@Hy@refstepcounter#1{%
5715 \let\ttl@b\Hy@raisedlink
5716 \def\Hy@raisedlink##1{%

```



```

5717 \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
5718 }%
5719 \refstepcounter{#1}%
5720 \let\Hy@raisedlink\ttl@b
5721 }%
5722 }{}

```

Package titletoc support:

```

5723 \@ifpackageloaded{titletoc}{%
5724 \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
5725 }{}

```

32 Package varioref support

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

```

5726 \def\Hy@varioref@undefined{??}{?}{-}{-}
5727 \@ifpackageloaded{varioref}{%
5728 \def\vref@pagenum#1#2{%
5729 \ifundefined{r@#2}{%
5730 \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
5731 }{}%
5732 \edef#1{\getpagerefnumber{#2}}%
5733 }%
5734 }{}

```

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

```

5735 \@ifpackageloaded{longtable}{%
5736 \begingroup
5737 \def\y{\LT@array}%
5738 \@ifundefined{scr@LT@array}{-}{\def\y{\scr@LT@array}}%
5739 \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
5740 \expandafter\endgroup
5741 \expandafter\def\y[##1]##2{%
5742 \H@refstepcounter{#1}%
5743 \hyper@makecurrent{table}%
5744 \let\Hy@LT@currentHlabel\@currentHlabel
5745 \let\Hy@LT@currentHref\@currentHref
5746 #2\@sharp###4%
5747 }%
5748 }%
5749 \expandafter\expandafter\expandafter\x\y[##1][##2]\@nil

```

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

```

5750 \begingroup
5751 \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
5752 \endgroup
5753 \def\LT@start{%
5754 #1%

```

```

5755 \let\@currentHlabel\Hy@LT@currentHlabel
5756 \let\@currentHref\Hy@LT@currentHref
5757 \Hy@raisedlink{%
5758   \hyper@anchorstart{\@currentHref}\hyper@anchorend
5759 }%
5760 \ifvoid\LT@firsthead\copy
5761   #2%
5762 }%
5763 }%
5764 \expandafter\x\LT@start\@nil
5765 }{}

```

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.

```

5766 \let\new@refstepcounter\refstepcounter
5767 \let\H@equation\equation
5768 \let\H@endequation\endequation

5769 \@ifpackageloaded{amsmath}{%
5770   \long\def\Hy@temp{%
5771     \incr@eqnum
5772     \mathdisplay@push
5773     \st@rredfalse \global\@eqnswtrue
5774     \mathdisplay{equation}%
5775   }%
5776   \ifx\Hy@temp\equation
5777     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
5778       \csname iftrue\endcsname
5779   \else
5780     \long\def\equation{%
5781       \mathdisplay@push
5782       \st@rredfalse \global\@eqnswtrue
5783       \mathdisplay{equation}%
5784       \incr@eqnum
5785     }%
5786   \fi
5787 \fi
5788 }{%
5789 \def\equation{%
5790   \let\refstepcounter\H@refstepcounter
5791   \H@equation
5792   \@ifundefined{theHequation}{%
5793     \make@stripped@name{\theequation}%
5794     \let\theHequation\newname
5795   }{}%
5796   \hyper@makecurrent{equation}%
5797   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
5798   \let\refstepcounter\new@refstepcounter
5799 }%
5800 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
5801 }

```

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.

```

5802 \newif\if@eqnstar
5803 \@eqnstarfalse
5804 \let\H@eqnarray\eqnarray
5805 \let\H@endeqnarray\endeqnarray
5806 \def\eqnarray{%
5807   \let\Hy@reserved@a\relax
5808   \def\@currentHref{}%
5809   \H@eqnarray
5810   \if@eqnstar
5811   \else
5812     \ifx\\\@currentHref\\%
5813     \else
5814       \@ifundefined{theHequation}{%
5815         \make@stripped@name{\theequation}%
5816         \let\theHequation\newname
5817         }{}%
5818         \hyper@makecurrent{equation}%
5819         \hyper@anchorstart{\@currentHref}{\hyper@anchorend
5820         \fi
5821         \fi
5822 }
5823 \def\endeqnarray{%
5824   \H@endeqnarray
5825 }

```

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.

```

5826 \@namedef{eqnarray*}{%
5827   \def\@eqnrcr{\nonumber\@seqnrcr}\@eqnstartrue\eqnarray
5828 }
5829 \@namedef{endeqnarray*}{%
5830   \nonumber\endeqnarray\@eqnstarfalse
5831 }

```

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

```

5832 \@ifundefined{subeqnarray}{%
5833   \let\H@subeqnarray\subeqnarray
5834   \let\H@endsubeqnarray\endsubeqnarray
5835   \def\subeqnarray{%
5836     \let\Hy@reserved@a\relax
5837     \H@subeqnarray
5838     \@ifundefined{theHequation}{%
5839       \make@stripped@name{\theequation}%
5840       \let\theHequation\newname
5841       }{}%
5842       \hyper@makecurrent{equation}%
5843       \hyper@anchorstart{\@currentHref}{\hyper@anchorend
5844       }%
5845   \def\endsubeqnarray{%
5846     \H@endsubeqnarray
5847     }%
5848   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
5849 }

```

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

```

5850 \def\make@stripped@name#1{%
5851   \begingroup
5852   \escapechar\m@ne
5853   \global\let\newname\@empty
5854   \protected@edef\Hy@tempa{#1}%
5855   \edef\@tempb{%
5856     \noexpand\@tfor\noexpand\Hy@tempa:=%
5857     \expandafter\strip@prefix\meaning\Hy@tempa
5858   }%
5859   \@tempb\do{%
5860     \if{\Hy@tempa\else
5861     \if}\Hy@tempa\else
5862     \xdef\newname{\newname\Hy@tempa}%
5863     \fi
5864     \fi
5865   }%
5866 \endgroup
5867 }

```

Support for amsmath's subequations:

```

5868 \begingroup\expandafter\expandafter\expandafter\endgroup
5869 \expandafter\ifx\csname subequations\endcsname\relax
5870 \else
5871   \let\HyOrg@subequations\subequations
5872   \def\subequations{%
5873     \stepcounter{equation}%
5874     \protected@edef\theHparentequation{%
5875       \@ifundefined{theHequation}\theequation\theHequation
5876     }%
5877     \addtocounter{equation}{-1}%
5878     \HyOrg@subequations
5879     \def\theHequation{\theHparentequation\alph{equation}}%
5880     \ignorespaces
5881   }%
5882 \fi

```

Support for package amsthm (Daniel Müllner):

```

5883 \@ifpackageloaded{amsthm}{%
5884   \def\@thm#1#2#3{%
5885     \ifhmode
5886       \unskip\unskip\par
5887     \fi
5888     \normalfont
5889     \trivlist
5890     \let\thmheadnl\relax
5891     \let\thm@swap\@gobble
5892     \thm@notefont{\fontseries\mddefault\upshape}%
5893     \thm@headpunct{.}% add period after heading
5894     \thm@headsep 5\p@ plus\p@ minus\p@\relax
5895     \thm@space@setup
5896     #1% style overrides
5897     \@topsep \thm@preskip           % used by thm head
5898     \@topsepadd \thm@postskip      % used by \@endparenv
5899     \def\dth@counter{#2}%
5900     \ifx\@empty\dth@counter
5901       \def\@tempa{%

```

```

5902     \@oparg{\@begintheorem{#3}{}}[]%
5903   }%
5904   \else
5905     \H@refstepcounter{#2}%
5906     \hyper@makecurrent{#2}%
5907     \def\@tempa{%
5908       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
5909     }%
5910     \fi
5911     \@tempa
5912   }%
5913   \dth@everypar={%
5914     \@minipagefalse
5915     \global\@newlistfalse
5916     \@noparitemfalse
5917     \if@inlabel
5918       \global\@inlabelfalse
5919     \begingroup
5920       \setbox\z@\lastbox
5921       \ifvoid\z@
5922         \kern-\itemindent
5923       \fi
5924     \endgroup
5925     \ifx\@empty\dth@counter
5926     \else
5927       \Hy@raisedlink{%
5928         \hyper@anchorstart{\@currentHref}\hyper@anchorend
5929       }%
5930     \fi
5931     \unhbox\@labels
5932     \fi
5933     \if@nobreak
5934       \@nobreakfalse \clubpenalty\@M
5935     \else
5936       \clubpenalty\@clubpenalty \everypar{}%
5937     \fi
5938   }%
5939 }{}

```

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.

```

5940 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
5941 \ifHy@hyperfootnotes
5942   \newcounter{Hfootnote}%
5943   \let\H@@footnotetext\@footnotetext
5944   \let\H@@footnotemark\@footnotemark
5945   \def\xfootnotenext[#1]{%
5946     \begingroup
5947       \csname c@\mpfn\endcsname #1\relax
5948     \unrestored@protected@xdef\@thefnmark{\thempfn}%
5949   \endgroup

```

```

5950 \ifx\@footnotetext\@mpfootnotetext
5951 \expandafter\H@\@mpfootnotetext
5952 \else
5953 \expandafter\H@\@footnotetext
5954 \fi
5955 }%
5956 \def\@xfootnotemark[#1]{%
5957 \begingroup
5958 \c@footnote #1\relax
5959 \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5960 \endgroup
5961 \H@\@footnotemark
5962 }%
5963 \let\H@\@mpfootnotetext\@mpfootnotetext
5964 \long\def\@mpfootnotetext#1{%
5965 \H@\@mpfootnotetext{%
5966 \ifHy@nesting
5967 \expandafter\hyper@@anchor\expandafter{%
5968 \Hy@footnote@currentHref
5969 }{#1}%
5970 \else
5971 \Hy@raisedlink{%
5972 \expandafter\hyper@@anchor\expandafter{%
5973 \Hy@footnote@currentHref
5974 }{\relax}%
5975 }#1%
5976 \fi
5977 }%
5978 }%
5979 \long\def\@footnotetext#1{%
5980 \H@\@footnotetext{%
5981 \ifHy@nesting
5982 \expandafter\hyper@@anchor\expandafter{%
5983 \Hy@footnote@currentHref
5984 }{#1}%
5985 \else
5986 \Hy@raisedlink{%
5987 \expandafter\hyper@@anchor\expandafter{%
5988 \Hy@footnote@currentHref
5989 }{\relax}%
5990 }%
5991 \let\@currentHlabel\Hy@footnote@currentHlabel
5992 \let\@currentHref\Hy@footnote@currentHref
5993 \let\@currentlabelname\@empty
5994 #1%
5995 \fi
5996 }%
5997 }%

```

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.

```

5998 \def\@footnotemark{%
5999 \leavevmode
6000 \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6001 \stepcounter{Hfootnote}%
6002 \global\let\Hy@saved@currentHlabel\@currentHlabel

```

```

6003 \global\let\Hy@saved@currentHref\@currentHref
6004 \hyper@makecurrent{Hfootnote}%
6005 \global\let\Hy@footnote@currentHlabel\@currentHlabel
6006 \global\let\Hy@footnote@currentHref\@currentHref
6007 \global\let\@currentHlabel\Hy@saved@currentHlabel
6008 \global\let\@currentHref\Hy@saved@currentHref
6009 \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6010 \@makefnmark
6011 \hyper@linkend
6012 \ifhmode\spacefactor\@x@sf\fi
6013 \relax
6014 }%

```

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

```

6015 \@ifpackageloaded{longtable}{%
6016 \CheckCommand*\LT@p@ftntext}[1]{%
6017 \edef\@tempa{%
6018 \the\LT@p@ftn
6019 \noexpand\footnotetext[\the\c@footnote]%
6020 }%
6021 \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6022 }%
6023 \long\def\LT@p@ftntext#1{%
6024 \edef\@tempa{%
6025 \the\LT@p@ftn
6026 \begingroup
6027 \noexpand\c@footnote=\the\c@footnote\relax
6028 \noexpand\protected@xdef
6029 \noexpand\@thefnmark{\noexpand\thempfn}%
6030 \noexpand\protected@xdef\noexpand\@thefnmark{%
6031 \noexpand\thempfn
6032 }%
6033 \expandafter\expandafter\expandafter\noexpand
6034 \expandafter\expandafter\expandafter\Hy@LT@footnotetext
6035 \expandafter\expandafter\expandafter{%
6036 \expandafter\Hy@footnote@currentHref\expandafter
6037 }\expandafter{\Hy@footnote@currentHlabel}%
6038 }%
6039 \global\LT@p@ftn\expandafter{%
6040 \@tempa{#1}%
6041 \endgroup
6042 }%
6043 }%
6044 \long\def\Hy@LT@footnotetext#1#2#3{%
6045 \H@@footnotetext{%
6046 \ifHy@nesting
6047 \hyper@@@anchor{#1}{#3}%
6048 \else
6049 \Hy@raisedlink{%
6050 \hyper@@@anchor{#1}{\relax}}%
6051 }%
6052 \def\@currentHlabel{#2}%
6053 \def\@currentHref{#1}%
6054 \let\@currentlabelname\@empty
6055 #3%

```

```

6056 \fi
6057 }%
6058 }%
6059 }{}%

```

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

```

6060 \ifpackageloaded{fancyvrb}{%
6061 \def\V@@footnotetext{%
6062 \insert\footins\bgroup
6063 \csname reset@font\endcsname
6064 \footnotesize
6065 \interlinepenalty\interfootnotelinepenalty
6066 \splittopskip\footnotesep
6067 \splitmaxdepth\dp\strutbox
6068 \floatingpenalty \@MM
6069 \hsize\columnwidth
6070 \@parboxrestore
6071 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
6072 \@makefnmark{}%
6073 \rule{\z@}{\footnotesep}%
6074 \bgroup
6075 \aftergroup\V@@@footnotetext
6076 \Hy@raisedlink{%
6077 \expandafter\hyper@@anchor\expandafter{%
6078 \Hy@footnote@currentHref
6079 }{\relax}%
6080 }%
6081 \let\@currentHlabel\Hy@footnote@currentHlabel
6082 \let\@currentHref\Hy@footnote@currentHref
6083 \let\@currentlabelname\@empty
6084 \ignorespaces
6085 }%
6086 }{}%

```

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

```

6087 \def\Hy@temp#1{%
6088 \begingroup
6089 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6090 \endgroup
6091 \@footnotemark
6092 }%
6093 \ifx\Hy@temp\footref
6094 \def\footref#1{%
6095 \begingroup
6096 \unrestored@protected@xdef\@thefnmark{\ref{#1}}%
6097 \endgroup
6098 \H@@@footnotemark
6099 }%
6100 \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.

```

6101 \let\HyOrg@maketitle\maketitle
6102 \def\maketitle{%
6103 \let\Hy@saved@footnotemark\@footnotemark
6104 \let\Hy@saved@footnotetext\@footnotetext
6105 \let\@footnotemark\H@@@footnotemark
6106 \let\@footnotetext\H@@@footnotetext

```



```

6107 \@ifnextchar{\Hy@maketitle@optarg{% ]
6108   \HyOrg@maketitle
6109   \Hy@maketitle@end
6110 }%
6111 }%
6112 \def\Hy@maketitle@optarg[#1]{%
6113   \HyOrg@maketitle[#1]}%
6114   \Hy@maketitle@end
6115 }%
6116 \def\Hy@maketitle@end{%
6117   \ifx\@footnotemark\H@\@footnotemark
6118     \let\@footnotemark\Hy@saved@footnotemark
6119   \fi
6120   \ifx\@footnotetext\H@\@footnotetext
6121     \let\@footnotetext\Hy@saved@footnotetext
6122   \fi
6123 }%

```

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

```

6124 \def\realfootnote{%
6125   \@ifnextchar{\@xfootnote{%
6126     \stepcounter{\@mpfn}%
6127     \protected@xdef\@thefnmark{\thempfn}%
6128     \H@\@footnotemark\H@\@footnotetext
6129   }%
6130 }%

6131 \fi
6132 \Hy@DisableOption{hyperfootnotes}

6133 </package>
6134 <*check>
6135 \checklatex
6136 \checkcommand\def\@xfootnotenext[#1]{%
6137   \begingroup
6138     \csname c@\@mpfn\endcsname #1\relax
6139     \unrestored@protected@xdef\@thefnmark{\thempfn}%
6140   \endgroup
6141   \@footnotetext
6142 }
6143 \checkcommand\def\@xfootnotemark[#1]{%
6144   \begingroup
6145     \c@footnote #1\relax
6146     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6147   \endgroup
6148   \@footnotemark
6149 }
6150 \checkcommand\def\@footnotemark{%
6151   \leavevmode
6152   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
6153   \@makefnmark
6154   \ifhmode\spacefactor\@x@sf\fi
6155   \relax
6156 }
6157 </check>
6158 <*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.

```
6159 \def\caption{%
6160   \ifx\@capttype\@undefined
6161     \@latex@error{\noexpand\caption outside float}\@ehd
6162     \expandafter\@gobble
6163   \else
6164     \H@refstepcounter\@capttype
6165     \let\Hy@tempa\@caption
6166     \ifundefined{float@caption}{%
6167     }{%
6168       \expandafter\ifx\csname @float@c@\@capttype\endcsname
6169         \float@caption
6170         \let\Hy@tempa\Hy@float@caption
6171       \fi
6172     }%
6173     \expandafter\@firstofone
6174   \fi
6175   {\@dblarg{\Hy@tempa\@capttype}}%
6176 }
6177 \long\def\@caption#1[#2]#3{%
6178   \expandafter\ifx\csname if@capstart\expandafter\endcsname
6179     \csname iftrue\endcsname
6180     \global\let\@currentHref\hc@currentHref
6181   \else
6182     \hyper@makecurrent{\@capttype}%
6183   \fi
6184   \@ifundefined{NR@gettitle}{%
6185     \def\@currentlabelname{#2}%
6186   }{%
6187     \NR@gettitle{#2}%
6188   }%
6189   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
6190     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6191   }%
6192   \begingroup
6193     \@parboxrestore
6194     \if@minipage
6195       \@setminipage
6196     \fi
6197     \normalsize
6198     \expandafter\ifx\csname if@capstart\expandafter\endcsname
6199       \csname iftrue\endcsname
6200     \global\@capstartfalse
6201     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
6202   \else
6203     \@makecaption{\csname fnum@#1\endcsname}{%
6204     \ignorespaces
```

If we cannot have nesting, the anchor is empty.

```
6205     \ifHy@nesting
6206       \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
6207     \else
6208       \Hy@raisedlink{%
6209         \expandafter\hyper@@anchor\expandafter{%
6210         \@currentHref
```

```

6211     }{\relax}%
6212     }%
6213     #3%
6214     \fi
6215     }%
6216     \fi
6217     \par
6218     \endgroup
6219 }

```

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.

```

6220 \let\Hy@float@caption\@caption
6221 \@ifpackageloaded{float}{%
6222   \def\Hy@float@caption{%
6223     \ifx\Hy@float@currentHref\@undefined
6224       \hyper@makecurrent{\@capttype}%
6225       \global\let\Hy@float@currentHref\@currentHref
6226     \else
6227       \let\@currentHref\Hy@float@currentHref
6228     \fi
6229     \float@caption
6230   }%
6231   \let\HyOrg@float@makebox\float@makebox
6232   \renewcommand{\float@makebox}[1]{%
6233     \HyOrg@float@makebox{%
6234       #1\relax
6235       \ifx\Hy@float@currentHref\@undefined
6236       \else
6237         \expandafter\hyper@@anchor\expandafter{%
6238           \Hy@float@currentHref
6239         }{\relax}%
6240       \global\let\Hy@float@currentHref\@undefined
6241     \fi
6242   }%
6243 }%
6244 }{-}

6245 \end{package}
6246 \ifcheck
6247 \checklatex[1999/06/01 - 2000/06/01]
6248 \checkcommand\def\caption{%
6249   \ifx\@capttype\@undefined
6250     \@latex@error{\noexpand\caption outside float}\@ehd
6251     \expandafter\@gobble
6252   \else
6253     \refstepcounter{\@capttype}
6254     \expandafter\@firstofone
6255   \fi
6256   {\@dblarg{\@caption\@capttype}}%
6257 }
6258 \checkcommand\long\def\@caption#1[#2]#3{%
6259   \par
6260   \addcontentsline{\csname ext@#1\endcsname}{#1}{%
6261     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
6262   }%
6263   \begingroup
6264   \@parboxrestore

```

```

6265 \if@minipage
6266 \setminipage
6267 \fi
6268 \normalsize
6269 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
6270 \endgroup
6271 }
6272 \check
6273 \*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.

```

6274 \def\hyper@natlinkstart#1{%
6275 \Hy@backout{#1}%
6276 \hyper@linkstart{cite}{cite.#1}%
6277 \def\hyper@nat@current{#1}%
6278 }
6279 \def\hyper@natlinkend{%
6280 \hyper@linkend
6281 }
6282 \def\hyper@natlinkbreak#1#2{%
6283 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
6284 }
6285 \def\hyper@natanchorstart#1{%
6286 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
6287 }
6288 \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.

```

6289 \@ifundefined{NAT@parse}{%
6290 \providecommand*\@extra@binfo{}%
6291 \providecommand*\@extra@b@citeb{}%
6292 \def\bibcite#1#2{%
6293 \@newl@bel{b}{#1\@extra@binfo}{%
6294 \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
6295 }%
6296 }%
6297 \gdef\@extra@binfo{}%

```

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

```

6298 \let\Hy@bibcite\bibcite
6299 \begingroup
6300 \@ifundefined{bbl@cite@choice}{}%
6301 \g@addto@macro\bbl@cite@choice%

```

```

6302     \let\bibcite\Hy@bibcite
6303     }%
6304 }%
6305 \endgroup
\@BIBLABEL is working around a ‘feature’ of RevTeX.
6306 \providecommand*{\@BIBLABEL}{\@biblabel}%
6307 \def\@bibitem[#1]#2{%
6308     \@skiphyperreftrue
6309     \H@item{%
6310         \ifx\Hy@raisedlink\@empty
6311             \hyper@anchorstart{cite.#2\@extra@b@citeb}%
6312             \@BIBLABEL{#1}%
6313             \hyper@anchorend
6314         \else
6315             \Hy@raisedlink{%
6316                 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
6317             }%
6318             \@BIBLABEL{#1}%
6319         \fi
6320         \hfill
6321     }%
6322     \@skiphyperreffalse
6323     \if@filesw
6324         \begingroup
6325         \let\protect\noexpand
6326         \immediate\write\@auxout{%
6327             \string\bibcite{#2}{#1}%
6328         }%
6329         \endgroup
6330     \fi
6331     \ignorespaces
6332 }%

```

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

```

6333 \def\@bibitem#1{%
6334     \@skiphyperreftrue\H@item\@skiphyperreffalse
6335     \Hy@raisedlink{%
6336         \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
6337     }%
6338     \if@filesw
6339         \begingroup
6340         \let\protect\noexpand
6341         \immediate\write\@auxout{%
6342             \string\bibcite{#1}{\the\value{\@listctr}}%
6343         }%
6344         \endgroup
6345     \fi
6346     \ignorespaces
6347 }%
6348 }{}
6349 </package>
6350 <*check>
6351 \checklatex
6352 \checkcommand\def\@bibitem[#1]#2{%
6353     \item[\@biblabel{#1}\hfill}%
6354     \if@filesw

```

```

6355 {%
6356 \let\protect\noexpand
6357 \immediate\write\@auxout{%
6358 \string\bibcite{#2}{#1}%
6359 }%
6360 }%
6361 \fi
6362 \ignorespaces
6363 }
6364 \checkcommand\def\@bibitem#1{%
6365 \item
6366 \if@filesw
6367 \immediate\write\@auxout{%
6368 \string\bibcite{#1}{\the\value{\@listctr}}%
6369 }%
6370 \fi
6371 \ignorespaces
6372 }
6373 \end{check}
6374 \end{package}

```

Revtext (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.

```

6375 \@ifclassloaded{revtext}{%
6376 \Hy@Info{*** compatibility with revtext **** }%
6377 \def\revtext@checking#1#2{%
6378 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
6379 \expandafter\def\csname b@#1\endcsname{#2}%
6380 \@SetMaxRnhefLabel{#1}%
6381 \expandafter\let\csname b@#1\endcsname\T@temp
6382 }%

```

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

```

6383 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
6384 \providecommand*\@extra@b@citeb{}%
6385 \def\CITEX[#1]#2{%
6386 \let\@citea\@empty
6387 \leavevmode
6388 \unskip
6389 $\^{}%
6390 \scriptstyle
6391 \@CITE{%
6392 \@for\@citeb:=#2\do{%
6393 \@citea
6394 \def\@citea{,\penalty\@m }%
6395 \edef\@citeb{\expandafter\@firstofone\@citeb}%
6396 \if@filesw
6397 \immediate\write\@auxout{\string\citation{\@citeb}}%
6398 \fi
6399 \@ifundefined{b@\@citeb\extra@b@citeb}{%
6400 \mbox{\reset@font\bfseries ?}}%
6401 \G@refundefinedtrue
6402 \@latex@warning{%
6403 Citation '\@citeb' on page \thepage \space undefined%
6404 }%
6405 }%

```

```

6406     {\csname b@\@citeb\@extra@b@citeb\endcsname}%
6407     }%
6408     }%
6409     }{#1}%
6410     }$%
6411     }%

```

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.

```

6412 \def\@citex[#1]#2{%
6413   \let\@citea\@empty
6414   \@cite{%
6415     \@for\@citeb:=#2\do{%
6416       \@citea
6417       \def\@citea{,\penalty\@m\ }%
6418       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6419       \if@filesw
6420         \immediate\write\@auxout{\string\citation{\@citeb}}%
6421         \fi
6422       \ifundefined{b@\@citeb\@extra@b@citeb}{%
6423         \mbox{\reset@font\bfseries ?}%
6424         \G@refundefinedtrue
6425         \@latex@warning{%
6426           Citation '\@citeb' on page \thepage \space undefined%
6427         }%
6428       }{#1}%
6429       \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
6430     }%
6431     }%
6432   }{#1}%
6433   }%
6434 }{}

```

37.1 Package harvard

Override Peter Williams' Harvard package; we have to a) make each of the citation types into a link; b) make each citation write a backref entry, and c) kick off a backreference section for each bibliography entry.

The redefinitions have to be deferred to \begin{document}, because if harvard.sty is loaded and html.sty is present and detects pdfTeX, then hyperref is already loaded at the begin of harvard.sty, and the \newcommand macros causes error messages.

```

6435 \ifpackageloaded{harvard}{%
6436   \AtBeginDocument{%
6437     \Hy@Info{*** compatibility with harvard **** }%
6438     \Hy@raiselinksfalse
6439     \def\harvardcite#1#2#3#4{%
6440       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
6441       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
6442       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
6443       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6444     }%
6445     \def\HAR@citetoaux#1{%
6446       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6447       \ifHy@backref
6448         \ifx\@empty\@currentlabel
6449           \else
6450             \@bspack

```

```

6451     \if@filesw
6452     \protected@write\@auxout{}{%
6453     \string\@writefile{brf}{%
6454     \string\backcite{#1}{%
6455     {\thepage}{\@currentlabel}{\@currentHref}%
6456     }%
6457     }%
6458     }%
6459     \fi
6460     \@esphack
6461     \fi
6462     \fi
6463     }%
6464     \def\harvarditem{%
6465     \ifnextchar{\@harvarditem}{\@harvarditem[\null]}%
6466     }%
6467     \def\@harvarditem[#1]#2#3#4#5\par{%
6468     \item[]%
6469     \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6470     \if@filesw
6471     \begingroup
6472     \def\protect##1{\string ##1\space}%
6473     \ifthenelse{\equal{#1}{\null}}%
6474     {\def\next{{#4}{#2}{#2}{#3}}}%
6475     {\def\next{{#4}{#2}{#1}{#3}}}%
6476     \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6477     \endgroup
6478     \fi
6479     \protect\hspace*{-\labelwidth}%
6480     \protect\hspace*{-\labelsep}%
6481     \ignorespaces
6482     #5%
6483     \ifHy@backref
6484     \newblock
6485     \backref{\csname br@#4\endcsname}%
6486     \fi
6487     \par
6488     }%

```

\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:

```

6489     \long\def\HAR@checkcitations#1#2#3#4{%
6490     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
6491     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6492     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
6493     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6494     \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
6495     \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6496     \else
6497     \@tempwatruel
6498     \fi
6499     \else
6500     \@tempwatruel
6501     \fi
6502     \else
6503     \@tempwatruel

```



```

6504   \fi
6505   }%
6506 }%

6507 }{}

```

37.2 Package chicago

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

```
6508 \@ifpackageloaded{chicago}{%
```

`\citeN`

```

6509 \def\citeN{%
6510   \def\@citeseppen{-1000}%
6511   \def\@cite##1##2{##1}%
6512   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
6513   \@citedata@opt
6514 }%

```

`\shortciteN`

```

6515 \def\shortciteN{%
6516   \def\@citeseppen{-1000}%
6517   \def\@cite##1##2{##1}%
6518   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6519   \@citedata@opt
6520 }%

```

`\@citedata@opt`

```

6521 \def\@citedata@opt{%
6522   \let\@cite@opt\@empty
6523   \@ifnextchar [{%
6524     \@tempswatru
6525     \@citedatax@opt
6526   }{%
6527     \@tempswafalse
6528     \@citedatax[]%
6529   }%
6530 }%

```

`\@citedatax@opt`

```

6531 \def\@citedatax@opt[#1]{%
6532   \def\@cite@opt{, #1}%
6533   \@citedatax[{#1}]%
6534 }%

6535 }{}

```

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.

```

6536 \def\Hy@EveryPageAnchor{%
6537   \Hy@DistillerDestFix
6538   \ifHy@pageanchor
6539     \ifHy@hypertextnames
6540     \ifHy@plainpages
6541       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the@c@page}}%
6542     \else
6543       \begingroup
6544         \let\@number\@firstofone
6545         \Hy@unicodefalse
6546         \pdfstringdef\@the@H@page{\thepage}%
6547       \endgroup
6548     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6549   \fi
6550 \else
6551   \Hy@GlobalStepCount\Hy@pagecounter
6552   \def\Hy@TempPageAnchor{%
6553     \hyper@@anchor{page.\the\Hy@pagecounter}%
6554   }%
6555 \fi
6556 \vbox to Opt{%
6557   \kern\voffset
6558   \kern\topmargin
6559   \kern-1bp\relax
6560   \hbox to Opt{%
6561     \kern\hoffset
6562     \kern\ifodd\value{page}%
6563       \oddsidemargin
6564     \else
6565       \evensidemargin
6566     \fi
6567   \kern-1bp\relax
6568   \Hy@TempPageAnchor
6569   \hss
6570 }%
6571 \vss
6572 }%
6573 \fi
6574 }
6575 \g@addto@macro\Hy@EveryPageBoxHook{%
6576   \Hy@EveryPageAnchor
6577 }

```

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.

```

6578 \def\addcontentsline#1#2#3{% toc extension, type, tag
6579   \begingroup
6580   \let\label\@gobble
6581   \ifx\@currentHref\@empty
6582     \Hy@Warning{%
6583       No destination for bookmark of \string\addcontentsline,%
6584       \MessageBreak destination is added%

```

```

6585 }%
6586 \phantomsection
6587 \fi
6588 \expandafter\ifx\csname toplevel@#2\endcsname\relax
6589 \begingroup
6590 \def\Hy@tempa{#1}%
6591 \ifx\Hy@tempa\Hy@bookmarkstype
6592 \Hy@WarningNoLine{%
6593     bookmark level for unknown #2 defaults to 0%
6594 }%
6595 \else
6596 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6597 \fi
6598 \endgroup
6599 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
6600 \fi
6601 \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
6602 \Hy@writebookmark{\csname the#2\endcsname}%
6603 {#3}%
6604 {\@currentHref}%
6605 {\Hy@toclevel}%
6606 {#1}%
6607 \ifHy@verbose
6608 \begingroup
6609 \def\Hy@tempa{#3}%
6610 \@onelevel@sanitize\Hy@tempa
6611 \let\temp@online\on@line
6612 \let\on@line\@empty
6613 \Hy@Info{%
6614     bookmark\temp@online:\MessageBreak
6615     thecounter {\csname the#2\endcsname}\MessageBreak
6616     text {\Hy@tempa}\MessageBreak
6617     reference {\@currentHref}\MessageBreak
6618     toplevel {\Hy@toclevel}\MessageBreak
6619     type {#1}%
6620 }%
6621 \endgroup
6622 \fi
6623 \addtocontents{#1}{%
6624 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6625 }%
6626 \endgroup
6627 }
6628 \def\contentsline#1#2#3#4{%
6629 \ifx\#4\%
6630 \csname l@#1\endcsname{#2}{#3}%
6631 \else
6632 \ifcase\Hy@linktoc % none
6633 \csname l@#1\endcsname{#2}{#3}%
6634 \or % section
6635 \csname l@#1\endcsname{%
6636 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6637 }{#3}%
6638 \or % page
6639 \csname l@#1\endcsname{#2}{#3}%
6640 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6641 }%

```

```

6642 \else % all
6643 \csname l@#1\endcsname{%
6644 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6645 }{%
6646 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6647 }%
6648 \fi
6649 \fi
6650 }

6651 </package>
6652 <*check>
6653 \checklatex
6654 \checkcommand\def\addcontentsline#1#2#3{%
6655 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
6656 }
6657 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6658 </check>
6659 <*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.

```

6660 \let\H@defincounter\@defincounter
6661 \def\@defincounter#1{%
6662 \H@defincounter{#1}%
6663 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6664 }

```

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.

```

6665 \let\H@newctr\@newctr
6666 \def\@newctr#1[#2]{%
6667 \H@newctr#1[{#2}]%
6668 \expandafter\def\csname theH#1\endcsname{%
6669 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
6670 }%
6671 }

```

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.

```

6672 \@ifpackageloaded{amsmath}{%
6673 \def\Hy@make@anchor{%
6674 \Hy@GlobalStepCount\Hy@linkcounter
6675 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6676 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6677 }%
6678 \def\Hy@make@df@tag@#1{%

```

```

6679 \gdef\df@tag{%
6680 \maketag@@@{\Hy@make@anchor#1}%
6681 \def\@currentlabel{#1}%
6682 }%
6683 }%
6684 \def\Hy@make@df@tag@@@#1{%
6685 \gdef\df@tag{%
6686 \tagform@{\Hy@make@anchor#1}%
6687 \toks@\@xp{\p@equation{#1}}%
6688 \edef\@currentlabel{\the\toks@}%
6689 }%
6690 }%
6691 \let\HyOrg@make@df@tag@@\make@df@tag@@
6692 \let\HyOrg@make@df@tag@@@#1\make@df@tag@@@
6693 \let\make@df@tag@@\Hy@make@df@tag@@
6694 \let\make@df@tag@@@#1\Hy@make@df@tag@@@
6695 }{}

```

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

```

6696 \@ifpackagewith{hyperref}{pdftex}{%
6697 \let\H@seteqlebal\@seteqlebal
6698 \def\@seteqlebal#1{%
6699 \H@seteqlebal{#1}%
6700 \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6701 \Hy@raisedlink{%
6702 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6703 }%
6704 }%
6705 }{}

```

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.

```

6706 \let\HyOrg@addtoreset\@addtoreset
6707 \def\@addtoreset#1#2{%
6708 \HyOrg@addtoreset{#1}{#2}%
6709 \expandafter\xdef\csname theH#1\endcsname{%
6710 \expandafter\noexpand
6711 \csname the@\ifundefined{theH#2}{}H#2\endcsname
6712 .\noexpand\the\noexpand\value{#1}%
6713 }%
6714 }

```

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

```

6715 </package>
6716 <*check>
6717 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
6718 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
6719 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6720 \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6721 \addtoreset{#2}{#3}%
6722 \xp\xdef\csname the#2\endcsname{%
6723 \xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6724 }%
6725 }%
6726 }%
6727 }%
6728 </check>
6729 <*package>
6730 \ifpackageloaded{amsmath}{%
6731 \ifpackagelater{amsmath}{1999/12/14}{%
6732 \renewcommand*{\numberwithin}[3][\arabic]{%
6733 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6734 \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6735 \HyOrg@addtoreset{#2}{#3}%
6736 \xp\xdef\csname the#2\endcsname{%
6737 \xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6738 }%
6739 \xp\xdef\csname theH#2\endcsname{%
6740 \xp\@nx
6741 \csname the\@ifundefined{theH#3}{H#3}\endcsname
6742 .\@nx#1{#2}%
6743 }%
6744 }%
6745 }%
6746 }%
6747 }{%
6748 \Hy@WarningNoLine{%
6749 \string\numberwithin\space of package 'amsmath' %
6750 only fixed\MessageBreak
6751 for version 2000/06/06 v2.12 or newer%
6752 }%
6753 }%
6754 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

6755 \ifHy@figures
6756 \let\Hy@Gin@setfile\Gin@setfile
6757 \def\Gin@setfile#1#2#3{%
6758 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
6759 }%
6760 \fi
6761 \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.

```

6762 \ifHy@hyperindex
6763   \def\HyInd@ParenLeft{()}%
6764   \def\HyInd@ParenRight{)}%
6765   \def\hyperindexformat#1#2{%
6766     \let\HyOrg@hyperpage\hyperpage
6767     \let\hyperpage\@firstofone
6768     #1{\HyOrg@hyperpage{#2}}%
6769     \let\hyperpage\HyOrg@hyperpage
6770   }%
6771   \Hy@nextfalse
6772   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
6773   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
6774   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
6775   \begingroup
6776     \lccode'\|=\expandafter'\HyInd@EncapChar\relax
6777     \lccode'\|/'\relax
6778   \lowercase{\endgroup
6779     \ifHy@next
6780       \let\HyInd@org@wrindex\@wrindex
6781       \def\@wrindex#1#2{\HyInd@\@wrindex{#1}#2||\}%
6782       \def\HyInd@\@wrindex#1#2|#3|#4\{\%
6783         \ifx\|#3\%
6784           \HyInd@org@wrindex{#1}{#2|hyperpage}%
6785         \else
6786           \HyInd@\@wrindex{#1}{#2}#3\%
6787         \fi
6788       }%
6789       \def\HyInd@\@wrindex#1#2#3#4\{\%
6790       \def\Hy@temp@A{#3}%
6791       \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6792         \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6793       \relax
6794       \HyInd@org@wrindex{#1}{%
6795         #2|hyperindexformat{/#3#4}%
6796       }%
6797     \else
6798       \ifx\|#4\%
6799         \ifx\Hy@temp@A\HyInd@ParenRight
6800           \HyInd@org@wrindex{#1}{#2|#3}%
6801         \else
6802           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
6803         \fi
6804       \else
6805         \HyInd@org@wrindex{#1}{%
6806           #2|#3hyperindexformat{/#4}%
6807         }%
6808       \fi
6809     \fi
6810   }%

```

```

6811 \else
6812 \def\@wrindex#1{\@@wrindex#1||\}%
6813 \def\@wrindex#1|#2|#3\{\%
6814 \if@filesw
6815 \ifx\|#2\%
6816 \protected@write\@indexfile{}\%
6817 \string\indexentry{#1|hyperpage}{\thepage}%
6818 }%
6819 \else
6820 \HyInd@@@wrindex{#1}#2\%
6821 \fi
6822 \fi
6823 \endgroup
6824 \@esphack
6825 }%
6826 \def\HyInd@@@wrindex#1#2#3\{\%
6827 \def\Hy@temp@A{#2}%
6828 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6829 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6830 \relax
6831 \protected@write\@indexfile{}\%
6832 \string\indexentry{%
6833 #1|hyperindexformat{/#2#3}%
6834 }{\thepage}%
6835 }%
6836 \else
6837 \ifx\|#3\%
6838 \ifx\Hy@temp@A\HyInd@ParenRight
6839 \protected@write\@indexfile{}\%
6840 \string\indexentry{#1|#2}{\thepage}%
6841 }%
6842 \else
6843 \protected@write\@indexfile{}\%
6844 \string\indexentry{#1|#2hyperpage}{\thepage}%
6845 }%
6846 \fi
6847 \else
6848 \protected@write\@indexfile{}\%
6849 \string\indexentry{%
6850 #1|#2hyperindexformat{/#3}%
6851 }{\thepage}%
6852 }%
6853 \fi
6854 \fi
6855 }%
6856 \fi
6857 }%
6858 \fi
6859 \Hy@DisableOption{hyperindex}
6860 \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.

```
6861 \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.


```

6862 \def\hyperpage#1{%
6863   \HyInd@hyperpage#1\nohyperpage{}\@nil
6864 }
6865 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
6866   \HyInd@@hyperpage{#1}%
6867   #2%
6868   \def\Hy@temp{#3}%
6869   \ifx\Hy@temp\@empty
6870     \else
6871       \Hy@ReturnAfterFi{%
6872         \HyInd@hyperpage#3\@nil
6873       }%
6874     \fi
6875 }
6876 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
6877 \def\@hyperpage#1--#2--#3\{\%
6878   \ifx\#2\%
6879     \@commahyperpage{#1}%
6880   \else
6881     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
6882   \fi
6883 }
6884 \def\@commahyperpage#1{\@commahyperpage#1, \}
6885 \def\@commahyperpage#1, #2,#3\{\%
6886   \ifx\#2\%
6887     \HyInd@pagelink{#1}%
6888   \else
6889     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
6890   \fi
6891 }

```

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

```

6892 \def\HyInd@pagelink#1{%
6893   \begingroup
6894   \toks@={}%
6895   \HyInd@removespaces#1 \@nil
6896   \endgroup
6897 }
6898 \def\HyInd@removespaces#1 #2\@nil{%
6899   \toks@=\expandafter{\the\toks@#1}%
6900   \ifx\#2\%
6901     \edef\x{\the\toks@}%
6902     \ifx\x\@empty
6903       \else
6904         \hyperlink{page.\the\toks@}{\the\toks@}%
6905       \fi
6906     \else
6907       \Hy@ReturnAfterFi{%
6908         \HyInd@removespaces#2\@nil
6909       }%
6910     \fi
6911 }

```

44 Compatibility with foiltex

```

6912 \@ifclassloaded{foils}{%

```

```

6913 \providecommand*\ext@table{lot}%
6914 \providecommand*\ext@figure{lof}%
6915 }{}

```

45 Compatibility with seminar slide package

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

```

6916 \@ifclassloaded{seminar}{%
6917 \Hy@seminarstrue\newcommand\theHslide{\arabic{slide}}}%
6918 }{%
6919 \Hy@seminarslidesfalse
6920 }
6921 \@ifpackageloaded{slidesec}{%
6922 \newcommand\theHslidesection {\arabic{slidesection}}%
6923 \newcommand\theHslidesubsection{%
6924 \theHslidesection.\arabic{slidesubsection}}%
6925 }%
6926 \def\slide@heading[#1]#2{%
6927 \H@refstepcounter{slidesection}%
6928 \@addtoreset{slidesubsection}{slidesection}%
6929 \addtocontents{los}{%
6930 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
6931 {\@SCTR}{slideheading.\theslidesection}}%
6932 }%
6933 \def\Hy@tempa{#2}%
6934 \ifx\Hy@tempa\@empty
6935 \else
6936 {%
6937 \edef\@currentlabel{%
6938 \csname p@slidesection\endcsname\theslidesection
6939 }%
6940 \makeslideheading{#2}%
6941 }%
6942 \fi
6943 \gdef\theslideheading{#1}%
6944 \gdef\theslidesubheading{}%
6945 \ifHy@bookmarksnumbered
6946 \def\Hy@slidetitle{\theslidesection\space #1}%
6947 \else
6948 \def\Hy@slidetitle{#1}%
6949 \fi
6950 \ifHy@hypertextnames
6951 \ifHy@naturalnames
6952 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
6953 \Hy@writebookmark
6954 {\theslidesection}%
6955 {\Hy@slidetitle}%
6956 {slideheading.\theslidesection}%
6957 {1}%
6958 {toc}%
6959 \else
6960 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
6961 \Hy@writebookmark
6962 {\theslidesection}%
6963 {\Hy@slidetitle}%
6964 {slideheading.\theHslidesection}%

```

```

6965     {1}%
6966     {toc}%
6967   \fi
6968 \else
6969   \Hy@GlobalStepCount\Hy@linkcounter
6970   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6971   \Hy@writebookmark
6972     {\theslidesection}%
6973     {\Hy@slidetitle}%
6974     {slideheading.\the\Hy@linkcounter}%
6975     {1}%
6976     {toc}%
6977   \fi
6978 }%
6979 \def\slide@subheading[#1]#2{%
6980   \H@refstepcounter{slidesubsection}%
6981   \addtocontents{los}{%
6982     \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
6983     {\@SCTR}{slideheading.\theslidesubsection}%
6984   }%
6985   \def\Hy@tempa{#2}%
6986   \ifx\Hy@tempa\@empty
6987   \else
6988     {%
6989       \edef\@currentlabel{%
6990         \csname p@slidesubsection\endcsname\theslidesubsection
6991       }%
6992       \makeslidesubheading{#2}%
6993     }%
6994   \fi
6995   \gdef\theslidesubheading{#1}%
6996   \ifHy@bookmarksnumbered
6997     \def\Hy@slidetitle{\theslidesubsection\space #1}%
6998   \else
6999     \def\Hy@slidetitle{#1}%
7000   \fi
7001   \ifHy@hypertextnames
7002     \ifHy@naturalnames
7003       \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7004       \Hy@writebookmark
7005         {\theslidesubsection}%
7006         {\Hy@slidetitle}%
7007         {slideheading.\theslidesubsection}%
7008         {2}%
7009         {toc}%
7010     \else
7011       \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7012       \Hy@writebookmark
7013         {\theslidesubsection}%
7014         {\Hy@slidetitle}%
7015         {slideheading.\theHslidesubsection}%
7016         {2}%
7017         {toc}%
7018     \fi
7019   \else
7020     \Hy@GlobalStepCount\Hy@linkcounter
7021     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%

```

```

7022 \Hy@writebookmark
7023 {\theslidesubsection}%
7024 {\Hy@slidetitle}%
7025 {slideheading.\the\Hy@linkcounter}%
7026 {1}%
7027 {toc}%
7028 \fi
7029 }%
7030 \providecommand*\listslidename{List of Slides}%
7031 \def\listofslides{%
7032 \section*{%
7033 \listslidename
7034 \@mkboth{%
7035 \expandafter\MakeUppercase\listslidename
7036 }{%
7037 \expandafter\MakeUppercase\listslidename
7038 }%
7039 }%
7040 \def\l@slide##1##2##3##4{%
7041 \slide@undottedcline{%
7042 \slidenumberline{##3}{\hyperlink{##4}{##2}}%
7043 }{##3}%
7044 }%
7045 \let\l@subslide\l@slide
7046 \@startlos
7047 }%
7048 \def\slide@contents{%
7049 \def\l@slide##1##2##3##4{%
7050 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
7051 }%
7052 \let\l@subslide\@gobblefour
7053 \@startlos
7054 }%
7055 \def\Slide@contents{%
7056 \def\l@slide##1##2##3##4{%
7057 \ifcase\lslide@flag
7058 \message{##1 ** \the\c@slidesection}%
7059 \ifnum##1>\c@slidesection
7060 \def\lslide@flag{1}%
7061 {%
7062 \large
7063 \slide@ccline{%
7064 \slidenumberline{\$ \Rightarrow \bullet$}%
7065 {\hyperlink{##4}{##2}}%
7066 }{##3}%
7067 }%
7068 \else
7069 {%
7070 \large
7071 \slide@ccline{%
7072 \slidenumberline{\$ \surd\; \bullet$}%
7073 {\hyperlink{##4}{##2}}%
7074 }{##3}%
7075 }%
7076 \fi
7077 \or
7078 \def\lslide@flag{2}%

```

```

7079     {%
7080     \large
7081     \slide@cline{%
7082     \slidenumberline{\$bullet$}%
7083     {\hyperlink{##4}{##2}}%
7084     }{##3}%
7085     }%
7086 \or
7087     {%
7088     \large
7089     \slide@cline{%
7090     \slidenumberline{\$bullet$}%
7091     {\hyperlink{##4}{##2}}%
7092     }{##3}%
7093     }%
7094 \fi
7095 }%
7096 \def\l@subslide##1##2##3##4{%
7097 \ifnum\lslide@flag=1 %
7098 \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
7099 \fi
7100 }%
7101 \def\lslide@flag{0}%
7102 \@startlos
7103 }%
7104 }{}

```

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.)

```

7105 \ifHy@texht
7106 \expandafter\endinput
7107 \fi
7108 \let\real@setref\@setref
7109 \def\@setref#1#2#3{% csname, extract group, refname
7110 \ifx#1\relax
7111 \protect\G@refundefinedtrue
7112 \nfss@text{\reset@font\bfseries ??}%
7113 \@latex@warning{%
7114 Reference '#3' on page \thepage \space undefined%
7115 }%
7116 \else
7117 \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
7118 \fi
7119 }

```

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

```

7120 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
7121 \begingroup
7122 \toks0={\hyper@@link{#5}{#4}}%
7123 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
7124 \edef\x{\endgroup
7125 \the\toks0 {\the\toks1 }}%
7126 }%
7127 \x
7128 }
7129 \def\@pagesetref#1#2#3{% csname, extract macro, ref

```

```

7130 \ifx#1\relax
7131 \protect\G@refundefinedtrue
7132 \nfss@text{\reset@font\bfseries ??}%
7133 \@latex@warning{%
7134   Reference '#3' on page \thepage \space undefined%
7135 }%
7136 \else
7137 \protect\hyper@@link
7138   {\expandafter\@fifthoffive#1}%
7139   {page.\expandafter\@secondoffive#1}%
7140   {\expandafter\@secondoffive#1}%
7141 \fi
7142 }

7143 </package>
7144 <*check>
7145 \checklatex
7146 \checkcommand\def\@setref#1#2#3{%
7147 \ifx#1\relax
7148 \protect\G@refundefinedtrue
7149 \nfss@text{\reset@font\bfseries ??}%
7150 \@latex@warning{%
7151   Reference '#3' on page \thepage\space undefined%
7152 }%
7153 \else
7154 \expandafter#2#1\null
7155 \fi
7156 }
7157 </check>
7158 <*package>

```

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

```

7159 \def\HyRef@StarSetRef#1{%
7160 \begingroup
7161 \Hy@safe@activestru
7162 \edef\x{#1}%
7163 \@onelevel@sanitize\x
7164 \edef\x{\endgroup
7165 \noexpand\HyRef@@StarSetRef
7166 \expandafter\noexpand\csname r@\x\endcsname{\x}%
7167 }%
7168 \x
7169 }

7170 \def\HyRef@@StarSetRef#1#2#3{%
7171 \ifx#1\@undefined
7172 \let#1\relax
7173 \fi
7174 \real@setref#1#3{#2}%
7175 }

7176 \def\@refstar#1{%
7177 \HyRef@StarSetRef{#1}\@firstoffive
7178 }

7179 \def\@pagerefstar#1{%
7180 \HyRef@StarSetRef{#1}\@secondoffive
7181 }

7182 \AtBeginDocument{%
7183 \@ifpackageloaded{varioref}{%

```

```

7184 \def\@Refstar#1{%
7185   \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
7186 }%
7187 \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
7188   \MakeUppercase#1%
7189 }%
7190 \DeclareRobustCommand*\Ref}{%
7191   \@ifstar\@Refstar\HyRef@Ref
7192 }%
7193 \def\HyRef@Ref#1{%
7194   \hyperref[#{1}]{\Ref*{#1}}%
7195 }%
7196 \def\Vr@f#1{%
7197   \leavevmode\unskip\vref@space
7198   \hyperref[#{1}]{%
7199     \Ref*{#1}%
7200     \let\vref@space\nobreakspace
7201     \@vpageref{\unskip}{#1}%
7202   }%
7203 }%
7204 \def\vr@f#1{%
7205   \leavevmode\unskip\vref@space
7206   \begingroup
7207   \let\T@pageref@pagerefstar
7208   \hyperref[#{1}]{%
7209     \ref*{#1}%
7210     \vpageref{\unskip}{#1}%
7211   }%
7212   \endgroup
7213 }%
7214 }{}%
7215 }
7216 \DeclareRobustCommand*\autopageref}{%
7217   \@ifstar{%
7218     \HyRef@autopagerefname\pageref*%
7219   }\HyRef@autopageref
7220 }
7221 \def\HyRef@autopageref#1{%
7222   \hyperref[#{1}]{\HyRef@autopagerefname\pageref*{#1}}%
7223 }
7224 \def\HyRef@autopagerefname{%
7225   \@ifundefined{pageautorefname}{%
7226     \@ifundefined{pagename}{%
7227       \Hy@Warning{No autoref name for 'page'}%
7228     }{%
7229       \pagename\nobreakspace
7230     }%
7231   }{%
7232     \pageautorefname\nobreakspace
7233   }%
7234 }
7235 \DeclareRobustCommand*\autoref}{%
7236   \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
7237 }
7238 \def\HyRef@autoref#1#2{%
7239   \begingroup
7240   \Hy@safe@activestru

```

```

7241 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
7242 \endgroup
7243 }
7244 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
7245 \HyRef@ShowKeysRef{#2}%
7246 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
7247 \edef\HyRef@thisref{%
7248 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7249 }%
7250 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
7251 \Hy@safe@activesfalse
7252 #3{%
7253 \expandafter\@fifthoffive#1\@empty\@empty\@empty
7254 }{%
7255 \expandafter\@fourthoffive#1\@empty\@empty\@empty
7256 }{%
7257 \HyRef@currentHtag
7258 \expandafter\@firstoffive#1\@empty\@empty\@empty
7259 \null
7260 }%
7261 \else
7262 \protect\G@refundefinedtrue
7263 \nfss@text{\reset@font\bfseries ??}%
7264 \@latex@warning{%
7265 Reference '#2' on page \thepage\space undefined%
7266 }%
7267 \fi
7268 }
7269 \def\HyRef@testreftype#1.#2\.\.%
7270 \@ifundefined{#1autorefname}{%
7271 \@ifundefined{#1name}{%
7272 \HyRef@StripStar#1\*\@\nil{#1}%
7273 \@ifundefined{\HyRef@name autorefname}{%
7274 \@ifundefined{\HyRef@name name}{%
7275 \def\HyRef@currentHtag{}%
7276 \Hy@Warning{No autoref name for '#1'}%
7277 }{%
7278 \edef\HyRef@currentHtag{%
7279 \expandafter\noexpand\csname\HyRef@name name\endcsname
7280 \noexpand~%
7281 }%
7282 }%
7283 }{%
7284 \edef\HyRef@currentHtag{%
7285 \expandafter\noexpand
7286 \csname\HyRef@name autorefname\endcsname
7287 \noexpand~%
7288 }%
7289 }%
7290 }{%
7291 \edef\HyRef@currentHtag{%
7292 \expandafter\noexpand\csname#1name\endcsname
7293 \noexpand~%
7294 }%
7295 }%
7296 }{%
7297 \edef\HyRef@currentHtag{%

```



```

7298 \expandafter\noexpand\csname#1\endcsname
7299 \noexpand~%
7300 }%
7301 }%
7302 }
7303 \def\HyRef@StripStar#1*\#2\@nil#3{%
7304 \def\HyRef@name{#2}%
7305 \ifx\HyRef@name\HyRef@CaseStar
7306 \def\HyRef@name{#1}%
7307 \else
7308 \def\HyRef@name{#3}%
7309 \fi
7310 }
7311 \def\HyRef@CaseStar{*\\}
7312 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

7313 \let\HyRef@ShowKeysRef@gobble
7314 \def\HyRef@ShowKeysInit{%
7315 \begingroup\expandafter\expandafter\expandafter\endgroup
7316 \expandafter\ifx\csname SK@@label\endcsname\relax
7317 \else
7318 \ifx\SK@ref\@empty
7319 \else
7320 \def\HyRef@ShowKeysRef{%
7321 \SK@\SK@@ref
7322 }%
7323 \fi
7324 \fi
7325 }
7326 \@ifpackageloaded{showkeys}{%
7327 \HyRef@ShowKeysInit
7328 }{%
7329 \AtBeginDocument{%
7330 \@ifpackageloaded{showkeys}{%
7331 \HyRef@ShowKeysInit
7332 }{}%
7333 }%
7334 }

```

Defaults for the names that \autoref uses.

```

7335 \providecommand*\AMSautorefname{\equationautorefname}
7336 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
7337 \providecommand*\Itemautorefname{\itemautorefname}
7338 \providecommand*\itemautorefname{item}
7339 \providecommand*\equationautorefname{Equation}
7340 \providecommand*\footnoteautorefname{footnote}
7341 \providecommand*\itemautorefname{item}
7342 \providecommand*\figureautorefname{Figure}
7343 \providecommand*\tableautorefname{Table}
7344 \providecommand*\partautorefname{Part}
7345 \providecommand*\appendixautorefname{Appendix}
7346 \providecommand*\chapterautorefname{chapter}
7347 \providecommand*\sectionautorefname{section}
7348 \providecommand*\subsectionautorefname{subsection}
7349 \providecommand*\subsubsectionautorefname{subsubsection}

```

```

7350 \providecommand*\paragraphautorefname{paragraph}
7351 \providecommand*\subparagraphautorefname{subparagraph}
7352 \providecommand*\FancyVerbLineautorefname{line}
7353 \providecommand*\theoremautorefname{Theorem}
7354 \providecommand*\pageautorefname{page}
7355 \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_TE_X offers `\pdfescapestring`.

```

7356 <*pdfTEX | dviPDFM | xTEX | vTEX | pdfmarkbase | dviwindo)
7357 \RequirePackage{pdfTEXcmds}[2009/04/10]
7358 \begingroup\expandafter\expandafter\expandafter\endgroup
7359 \expandafter\ifx\csname pdfTEXescapestring\endcsname\relax
7360 \begingroup
7361 \catcode\|=0 %
7362 \@makeoother\| %
7363 |@firstofone{ |endgroup
7364 |def|Hy@pstringdef#1#2{%
7365 |begingroup
7366 |edef~{|string~}%
7367 |xdef|Hy@gtemp{#2}%
7368 |endgroup
7369 |let#1|Hy@gtemp
7370 |@onelevel@sanitize#1%
7371 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
7372 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
7373 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
7374 }%
7375 |def|Hy@ExchangeBackslash#1\#2|@nil{%
7376 #1%
7377 |ifx|\#2|\| %
7378 |else
7379 \| %
7380 |Hy@ReturnAfterFi{%
7381 |Hy@ExchangeBackslash#2|@nil
7382 }%
7383 |fi
7384 }%
7385 }%
7386 \def|Hy@ExchangeLeftParenthesis#1(#2\@nil{%
7387 #1%
7388 \ifx\#2\| %
7389 \else
7390 \@backslashchar(%
7391 |Hy@ReturnAfterFi{%
7392 |Hy@ExchangeLeftParenthesis#2\@nil
7393 }%

```

```

7394 \fi
7395 }%
7396 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
7397 #1%
7398 \ifx\#2\%
7399 \else
7400 \@backslashchar)%
7401 \Hy@ReturnAfterFi{%
7402 \Hy@ExchangeRightParenthesis#2\@nil
7403 }%
7404 \fi
7405 }%
7406 \else
7407 \def\Hy@pstringdef#1#2{%
7408 \begingroup
7409 \edef~{\string~}%
7410 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
7411 \endgroup
7412 \let#1\Hy@gtemp
7413 }%
7414 \fi
7415 </pdfTEX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo)

```

46.2 pdfTEX

```

7416 (*pdfTEX)
7417 \providecommand*\XR@ext}{pdf}
7418 \Hy@setbreaklinks{true}

```

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

Set PDF version if requested by option `pdfversion`.

- pdfT_EX 1.10a, 2003-01-16: `\pdfoptionpdfminorversion`
- pdfT_EX 1.30, 2005-08-081: `\pdfminorversion`

```

7419 \let\Hy@pdfminorversion\relax
7420 \begingroup\expandafter\expandafter\expandafter\endgroup
7421 \expandafter\ifx\cname pdfminorversion\endcname\relax
7422 \begingroup\expandafter\expandafter\expandafter\endgroup
7423 \expandafter\ifx\cname pdfoptionpdfminorversion\endcname\relax
7424 \else
7425 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7426 \fi
7427 \else
7428 \def\Hy@pdfminorversion{\pdfminorversion}%
7429 \fi
7430 \@ifundefined{Hy@pdfminorversion}{%
7431 \PackageInfo{hyperref}{%
7432 PDF version is not set, because pdfTeX is too old (<1.10a)%
7433 }%
7434 }{%
7435 \ifHy@ocgcolorlinks
7436 \ifnum\Hy@pdfminorversion<5 %
7437 \setkeys{Hyp}{pdfversion=1.5}%
7438 \fi
7439 \fi

```

```

7440 \ifHy@setpdfversion
7441   \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7442   \else
7443     \Hy@pdfminorversion=\Hy@pdfversion\relax
7444   \fi
7445   \PackageInfo{hyperref}{%
7446     \expandafter\string\Hy@pdfminorversion
7447     :=\number\Hy@pdfversion\space
7448   }%
7449 \fi
7450 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7451 }
7452 \Hy@DisableOption{pdfversion}%

7453 \ifHy@ocgcolorlinks
7454 \immediate\pdfobj{%
7455   <<%
7456     /Type/OCG%
7457     /Name(View)%
7458     /Usage<<%
7459     /Print<<%
7460     /PrintState/OFF%
7461     >>%
7462     /View<<%
7463     /ViewState/ON%
7464     >>%
7465     >>%
7466     >>%
7467   }%
7468 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7469 \immediate\pdfobj{%
7470   <<%
7471     /Type/OCG%
7472     /Name(Print)%
7473     /Usage<<%
7474     /Print<<%
7475     /PrintState/ON%
7476     >>%
7477     /View<<%
7478     /ViewState/OFF%
7479     >>%
7480     >>%
7481     >>%
7482   }%
7483 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
7484 \immediate\pdfobj{%
7485   [%
7486     \OBJ@OCG@view\space\OBJ@OCG@print
7487   ]%
7488 }%
7489 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
7490 \pdfcatalog{%
7491   /OCProperties<<%
7492     /OCGs \OBJ@OCGs
7493     /D<<%
7494     /OFF[\OBJ@OCG@print]%
7495     /AS[%
7496     <<%

```

```

7497         /Event/View%
7498         /OCGs \OBJ@OCGs
7499         /Category[/View]%
7500     >>%
7501     <<%
7502         /Event/Print%
7503         /OCGs \OBJ@OCGs
7504         /Category[/Print]%
7505     >>%
7506     <<%
7507         /Event/Export%
7508         /OCGs \OBJ@OCGs
7509         /Category[/Print]%
7510     >>%
7511     ]%
7512     >>%
7513     >>%
7514     }%
7515     \begingroup
7516     \edef\x{\endgroup
7517     \pdfpageresources{%
7518         /Properties<<%
7519         /OCView \OBJ@OCG@view
7520         /OCPrint \OBJ@OCG@print
7521     >>%
7522     }%
7523     }%
7524     \x
7525     \AtBeginDocument{%
7526     \def\Hy@colorlink#1{%
7527     \begingroup
7528     \ifHy@ocgcolorlinks
7529     \def\Hy@ocgcolor{#1}%
7530     \setbox0=\color@hbox
7531     \else
7532     \HyColor@UseColor#1%
7533     \fi
7534     }%
7535     \def\Hy@endcolorlink{%
7536     \ifHy@ocgcolorlinks
7537     \color@endbox
7538     \mbox{%
7539     \pdfliteral page{/OC/OCPrint BDC}%
7540     \rlap{\copy0}%
7541     \pdfliteral page{EMC/OC/OCView BDC}%
7542     \begingroup
7543     \expandafter\HyColor@UseColor\Hy@ocgcolor
7544     \box0 %
7545     \endgroup
7546     \pdfliteral page{EMC}%
7547     }%
7548     \fi
7549     \endgroup
7550     }%
7551     }%
7552     \else
7553     \Hy@DisableOption{ocgcolorlinks}%

```

7554 \fi

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

```
7555 \def\setpdfinkmargin#1{\pdfinkmargin#1}
7556 \ifx\pdfstartlink\@undefined% less than version 14
7557 \let\pdfstartlink\pdfannotlink
7558 \let\pdfinkmargin\@tempdima
7559 \let\pdfxform\pdfform
7560 \let\pdflastxform\pdflastform
7561 \let\pdfrefxform\pdfrefform
7562 \else
7563 \pdfinkmargin1pt %
7564 \fi
```

First set up the default linking

```
7565 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```
7566 \def\new@pdfink#1{%
7567 \Hy@SaveLastskip
7568 \Hy@VerboseAnchor{#1}%
7569 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7570 \Hy@DestName\Hy@pstringDest\@pdfview
7571 \Hy@RestoreLastskip
7572 }
7573 \let\pdf@endanchor\@empty
```

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

```
7574 \def\Hy@DestName#1#2{%
7575 \pdfdest name{#1}#2\relax
7576 }
```

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.

```
7577 \providecommand*\@pdfborder{0 0 1}
7578 \providecommand*\@pdfborderstyle{}
7579 \def\Hy@undefinedname{UNDEFINED}
7580 \def\find@pdfink#1#2{%
7581 \leavevmode
7582 \protected@edef\Hy@testname{#2}%
7583 \ifx\Hy@testname\@empty
7584 \Hy@Warning{%
7585 Empty destination name,\MessageBreak
7586 using '\Hy@undefinedname'%
7587 }%
7588 \let\Hy@testname\Hy@undefinedname
7589 \else
7590 \Hy@pstringdef\Hy@testname{%
7591 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7592 }%
7593 \fi
7594 \Hy@StartlinkName{%
7595 \ifHy@pdfa /F 4\fi
7596 \Hy@setpdfborder
7597 \ifx\@pdfhighlight\@empty
```

```

7598 \else
7599 /H\@pdfhighlight
7600 \fi
7601 \ifx\CurrentBorderColor\relax
7602 \else
7603 /C[\CurrentBorderColor]%
7604 \fi
7605 }\Hy@testname
7606 \expandafter\Hy@colorlink\csname @#1color\endcsname
7607 }
7608 \def\Hy@StartlinkName#1#2{%
7609 \pdfstartlink attr{#1}goto name{#2}\relax
7610 }
7611 \def\close@pdfink{%
7612 \Hy@endcolorlink
7613 \pdfendlink
7614 }
7615 \def\hyper@anchor#1{%
7616 \new@pdfink{#1}\anchor@spot\pdf@endanchor
7617 }
7618 \def\hyper@anchorstart#1{%
7619 \new@pdfink{#1}%
7620 \Hy@activeanchortrue
7621 }
7622 \def\hyper@anchorend{%
7623 \pdf@endanchor
7624 \Hy@activeanchorfalse
7625 }
7626 \def\hyper@linkstart#1#2{%
7627 \Hy@VerboseLinkStart{#1}{#2}%
7628 \@ifundefined{@#1bordercolor}{%
7629 \let\CurrentBorderColor\relax
7630 }{%
7631 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7632 }%
7633 \find@pdfink{#1}{#2}%
7634 }
7635 \def\hyper@linkend{\close@pdfink}
7636 \def\hyper@link#1#2#3{%
7637 \Hy@VerboseLinkStart{#1}{#2}%
7638 \@ifundefined{@#1bordercolor}{%
7639 \let\CurrentBorderColor\relax
7640 }{%
7641 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7642 }%
7643 \find@pdfink{#1}{#2}#3%
7644 \close@pdfink
7645 }
7646 \let\CurrentBorderColor\@linkbordercolor
7647 \def\hyper@linkurl#1#2{%
7648 \begingroup
7649 \Hy@pstringdef\Hy@pstringURI{#2}%
7650 \hyper@chars
7651 \leavevmode
7652 \pdfstartlink
7653 attr{%
7654 \Hy@setpdfborder

```

```

7655     \ifx\@pdfhighlight\@empty
7656     \else
7657     /H\@pdfhighlight
7658     \fi
7659     \ifx\@urlbordercolor\relax
7660     \else
7661     /C[\@urlbordercolor]%
7662     \fi
7663   }%
7664   user{%
7665     /Subtype/Link%
7666     \ifHy@pdfa /F 4\fi
7667     /A<<%
7668     /Type/Action%
7669     /S/URI%
7670     /URI(\Hy@pstringURI)%
7671     >>%
7672   }%
7673   \relax
7674   \Hy@colorlink\@urlcolor#1%
7675   \close@pdfink
7676 \endgroup
7677 }
7678 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
7679   \begingroup
7680   \Hy@pstringdef\Hy@pstringF{#2}%
7681   \Hy@pstringdef\Hy@pstringD{#3}%
7682   \leavevmode
7683   \pdfstartlink
7684   attr{%
7685     \Hy@setpdfborder
7686     \ifx\@pdfhighlight\@empty
7687     \else
7688     /H\@pdfhighlight
7689     \fi
7690     \ifx\@filebordercolor\relax
7691     \else
7692     /C[\@filebordercolor]%
7693     \fi
7694   }%
7695   user {%
7696     /Subtype/Link%
7697     \ifHy@pdfa /F 4\fi
7698     /A<<%
7699     /F(\Hy@pstringF)%
7700     /S/GoToR%
7701     \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}

```



```

7702     \ifx\#3\%
7703     /D[0 \@pdfstartview]%
7704     \else
7705     /D(\Hy@pstringD)%
7706     \fi
7707     >>%
7708     }%
7709     \relax
7710     \Hy@colorlink\@filecolor#1%
7711     \close@pdfink
7712 \endgroup
7713 }
7714 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
7715 \begingroup
7716 \Hy@pstringdef\Hy@pstringF{#1}%
7717 \Hy@pstringdef\Hy@pstringP{#3}%
7718 \leavevmode
7719 \pdfstartlink
7720 attr{%
7721 \Hy@setpdfborder
7722 \ifx\@pdfhighlight\@empty
7723 \else
7724 /H\@pdfhighlight
7725 \fi
7726 \ifx\@runbordercolor\relax
7727 \else
7728 /C[\@runbordercolor]%
7729 \fi
7730 }%
7731 user {%
7732 /Subtype/Link%
7733 \ifHy@pdfa /F 4\fi
7734 /A<<%
7735 /F(\Hy@pstringF)%
7736 /S/Launch%
7737 \Hy@SetNewWindow
7738 \ifx\#3\%
7739 \else
7740 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
7741 \fi
7742 >>%
7743 }%
7744 \relax
7745 \Hy@colorlink\@runcolor#2%
7746 \close@pdfink
7747 \endgroup
7748 }

```

\@pdfproducer

```

7749 \ifx\@pdfproducer\relax
7750 \begingroup\expandafter\expandafter\expandafter\endgroup
7751 \expandafter\ifx\csname luatexversion\endcsname\relax
7752 \def\@pdfproducer{pdfTeX}%
7753 \ifx\eTeXversion\@undefined
7754 \else
7755 \ifx\eTeXversion\relax
7756 \else

```

```

7757     \ifnum\TeXversion>0 %
7758     \def\@pdfproducer{pdfTeX}%
7759     \fi
7760 \fi
7761 \fi
7762 \ifx\pdftexversion\@undefined
7763 \else
7764 \ifnum\pdftexversion<100 %
7765     \edef\@pdfproducer{%
7766     \@pdfproducer
7767     \the\pdftexversion.\pdftexrevision
7768     }%
7769 \else
7770 \ifnum\pdftexversion<130 %
7771     \edef\@pdfproducer{%
7772     \@pdfproducer-%
7773     \expandafter\@car\the\pdftexversion\@empty\@nil.%
7774     \expandafter\@cdr\the\pdftexversion\@empty\@nil
7775     \pdftexrevision
7776     }%
7777 \else
7778 \ifnum\pdftexversion<140 %
7779     \else
7780     \def\@pdfproducer{pdfTeX}%
7781     \fi
7782     \edef\@pdfproducer{%
7783     \@pdfproducer-%
7784     \expandafter\@car\the\pdftexversion\@empty\@nil.%
7785     \expandafter\@cdr\the\pdftexversion\@empty\@nil.%
7786     \pdftexrevision
7787     }%
7788     \fi
7789 \fi
7790 \fi
7791 \else
7792 \begingroup
7793 \count@=\luatexversion
7794 \divide\count@ by 100 %
7795 \edef\x{\the\count@}%
7796 \count@=-\x\relax
7797 \multiply\count@ by 100 %
7798 \advance\count@ by \luatexversion
7799 \edef\x{\endgroup
7800 \def\noexpand\@pdfproducer{%
7801     LuaTeX-\x.\the\count@.\luatexrevision
7802     }%
7803     }%
7804 \x
7805 \fi
7806 \fi

```

\PDF@SetupDox

```

7807 \def\PDF@SetupDoc{%
7808 \ifx\@pdfpagescrop\@empty
7809 \else
7810 \edef\process@me{%
7811 \pdfpagesattr={%

```

```

7812 /CropBox[\@pdfpagescrop]%
7813 \expandafter\ifx\expandafter\\\the\pdfpagesattr\%
7814 \else
7815   ^^J\the\pdfpagesattr
7816 \fi
7817 }%
7818 }%
7819 \process@me
7820 \fi
7821 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
7822 \pdfcatalog{%
7823 /PageMode/\@pdfpagemode
7824 \ifx\@baseurl\@empty
7825 \else
7826 /URI<</Base(\Hy@pstringB)>>%
7827 \fi
7828 }%
7829 \ifx\@pdfstartpage\@empty
7830 \else
7831 \ifx\@pdfstartview\@empty
7832 \else
7833 openaction goto page\@pdfstartpage{\@pdfstartview}%
7834 \fi
7835 \fi
7836 \edef\Hy@temp{%
7837 \ifHy@toolbar\else /HideToolbar true\fi
7838 \ifHy@menubar\else /HideMenubar true\fi
7839 \ifHy>windowui\else /HideWindowUI true\fi
7840 \ifHy@fitwindow /FitWindow true\fi
7841 \ifHy@centerwindow /CenterWindow true\fi
7842 \ifHy@displaydoctitle /DisplayDocTitle true\fi
7843 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7844 \Hy@UseNameKey{Direction}\@pdfdirection
7845 \Hy@UseNameKey{ViewArea}\@pdfviewarea
7846 \Hy@UseNameKey{ViewClip}\@pdfviewclip
7847 \Hy@UseNameKey{PrintArea}\@pdfprintarea
7848 \Hy@UseNameKey{PrintClip}\@pdfprintclip
7849 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7850 \Hy@UseNameKey{Duplex}\@pdfduplex
7851 \ifx\@pdfpicktraybypdfsize\@empty
7852 \else
7853 /PickTrayByPDFSize \@pdfpicktraybypdfsize
7854 \fi
7855 \ifx\@pdfprintpagerange\@empty
7856 \else
7857 /PrintPageRange\@pdfprintpagerange}%
7858 \fi
7859 \ifx\@pdfnumcopies\@empty
7860 \else
7861 /NumCopies \@pdfnumcopies
7862 \fi
7863 }%
7864 \pdfcatalog{%
7865 \ifx\Hy@temp\@empty
7866 \else
7867 /ViewerPreferences<<\Hy@temp>>%
7868 \fi

```

```

7869 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7870 \ifx\@pdflang\@empty
7871 \else
7872 /Lang(\@pdflang)%
7873 \fi
7874 }%
7875 }

```

\PDF@FinishDoc

```

7876 \def\PDF@FinishDoc{%
7877 \Hy@UseMaketitleInfos
7878 \HyInfo@GenerateAddons
7879 \pdfinfo{%
7880 /Author(\@pdfauthor)%
7881 /Title(\@pdftitle)%
7882 /Subject(\@pdfsubject)%
7883 /Creator(\@pdfcreator)%
7884 \ifx\@pdfcreationdate\@empty
7885 \else
7886 /CreationDate(\@pdfcreationdate)%
7887 \fi
7888 \ifx\@pdfmoddate\@empty
7889 \else
7890 /ModDate(\@pdfmoddate)%
7891 \fi
7892 \ifx\@pdfproducer\relax
7893 \else
7894 /Producer(\@pdfproducer)%
7895 \fi
7896 /Keywords(\@pdfkeywords)%
7897 \ifx\@pdftrapped\@empty
7898 \else
7899 /Trapped/\@pdftrapped
7900 \fi
7901 \HyInfo@Addons
7902 }%
7903 \Hy@DisableOption{pdfauthor}%
7904 \Hy@DisableOption{pdftitle}%
7905 \Hy@DisableOption{pdfsubject}%
7906 \Hy@DisableOption{pdfcreator}%
7907 \Hy@DisableOption{pdfcreationdate}%
7908 \Hy@DisableOption{pdfmoddate}%
7909 \Hy@DisableOption{pdfproducer}%
7910 \Hy@DisableOption{pdfkeywords}%
7911 \Hy@DisableOption{pdftrapped}%
7912 \Hy@DisableOption{pdfinfo}%
7913 }

```

\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.

```

7914 \def\hyper@pagetransition{%
7915 \ifx\@pdfpagetransition\relax
7916 \else
7917 \expandafter\Hy@RemoveTransPageAttr
7918 \the\pdfpageattr^^J/Trans{>>\END
7919 \ifx\@pdfpagetransition\@empty

```

```

7920 \else
7921 \edef\@processme{%
7922 \global\pdfpageattr{%
7923 \the\pdfpageattr
7924 ^^J/Trans << /S /\@pdfpagetransition\space >>%
7925 }%
7926 }%
7927 \@processme
7928 \fi
7929 \fi
7930 }

```

`\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.

```

7931 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
7932 \ifx\#2\%
7933 \global\pdfpageattr{#1}%
7934 \else
7935 \Hy@RemoveTransPageAttr#1#4\END
7936 \fi
7937 }

```

`\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`.

```

7938 \def\hyper@pageduration{%
7939 \ifx\@pdfpageduration\relax
7940 \else
7941 \expandafter
7942 \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{ } \END
7943 \ifx\@pdfpageduration\@empty
7944 \else
7945 \edef\@processme{%
7946 \global\pdfpageattr{%
7947 \the\pdfpageattr
7948 ^^J/Dur \@pdfpageduration\space
7949 }%
7950 }%
7951 \@processme
7952 \fi
7953 \fi
7954 }

```

`\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.

```

7955 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
7956 \ifx\#2\%
7957 \global\pdfpageattr{#1}%
7958 \else
7959 \Hy@RemoveDurPageAttr#1#4\END
7960 \fi
7961 }

```

`\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).

```

7962 \def\hyper@pagehidden{%
7963   \ifHy@useHidKey
7964   \expandafter
7965   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
7966   \ifHy@pdfpagehidden
7967   \edef\@processme{%
7968     \global\pdfpageattr{%
7969       \the\pdfpageattr
7970       ^^J/Hid true % SPACE
7971     }%
7972   }%
7973   \@processme
7974   \fi
7975   \fi
7976 }

```

`\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.

```

7977 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2##3 #4\END{%
7978   \ifx\#2\%
7979     \global\pdfpageattr{#1}%
7980   \else
7981     \Hy@RemoveHidPageAttr#1#4\END
7982   \fi
7983 }

7984 \g@addto@macro\Hy@EveryPageHook{%
7985   \hyper@pagetransition
7986   \hyper@pageduration
7987   \hyper@pagehidden
7988 }

```

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

```

7989 </pdfTEX>
7990 <*pdfTEX | xetex>
7991 \AtBeginDocument{%
7992   \ifHy@setpagesize
7993     \expandafter\@firstofone
7994   \else
7995     \expandafter\@gobble
7996   \fi
7997   {%
7998     \@ifclassloaded{seminar}{%
7999 <*pdfTEX>
8000     \setlength{\pdfhorigin}{1truein}%
8001     \setlength{\pdfvorigin}{1truein}%
8002 </pdfTEX>
8003     \ifportrait
8004       \ifdim\paperwidth=\z@
8005     \else
8006       \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%

```

```

8007     \fi
8008     \ifdim\paperheight=\z@
8009     \else
8010         \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
8011     \fi
8012     \else
8013         \ifdim\paperheight=\z@
8014         \else
8015             \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
8016         \fi
8017         \ifdim\paperwidth=\z@
8018         \else
8019             \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
8020         \fi
8021     \fi
8022 }{%
8023     \@ifundefined{stockwidth}{%
8024         \ifdim\paperwidth>\z@
8025             \setlength{\pdfpagewidth}{\paperwidth}%
8026         \fi
8027         \ifdim\paperheight>\z@
8028             \setlength{\pdfpageheight}{\paperheight}%
8029         \fi
8030     }{%
8031         \ifdim\stockwidth>\z@
8032             \setlength{\pdfpagewidth}{\stockwidth}%
8033         \fi
8034         \ifdim\stockheight>\z@
8035             \setlength{\pdfpageheight}{\stockheight}%
8036         \fi
8037     }%
8038 }%
8039 }%
8040 \Hy@DisableOption{setpagesize}%
8041 }
8042 </pdfTeX | xetex>
8043 <*pdfTeX>
8044 \def\Acrobatmenu#1#2{%
8045     \Hy@Acrobatmenu{#1}{#2}{%
8046         \pdfstartlink
8047         attr{%
8048             \Hy@setpdfborder
8049             \ifx\@pdfhighlight\@empty
8050             \else
8051                 /H\@pdfhighlight
8052             \fi
8053             \ifx\@menubordercolor\relax
8054             \else
8055                 /C[\@menubordercolor]%
8056             \fi
8057         }%
8058     user{%
8059         /Subtype/Link%
8060         \ifHy@pdfa /F 4\fi
8061         /A<<%
8062         /S/Named/N/#1%
8063         >>%

```

```

8064   }%
8065   \relax
8066   \Hy@colorlink\@menucolor#2%
8067   \close@pdfink
8068 }%
8069 }

```

46.2.1 Fix for problem with different nesting levels

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

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

```

8070 \def\Hy@FixNotFirstPage{%
8071   \gdef\Hy@FixNotFirstPage{%
8072     \setbox\AtBeginShipoutBox=\hbox{%
8073       \copy\AtBeginShipoutBox
8074     }%
8075   }%
8076 }
8077 \AtBeginShipout{\Hy@FixNotFirstPage}
8078 \pdfTeX

```

46.3 hypertext

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

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

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

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

that “” characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

8079 (*hypertext)
8080 \providecommand*\XR@ext}{dvi}
8081 \def\PDF@FinishDoc{}
8082 \def\PDF@SetupDoc{%
8083   \ifx\@baseurl\@empty
8084   \else
8085     \special{html:<base href="\@baseurl">}%
8086   \fi
8087 }
8088 \def\hyper@anchor#1{%
8089   \Hy@SaveLastskip
8090   \Hy@VerboseAnchor{#1}%
8091   \begingroup
8092     \let\protect=\string
8093     \hyper@chars
8094     \special{html:<a name=%
8095       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8096   \endgroup
8097   \Hy@activeanchortrue
8098   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8099   \special{html:</a>}%
8100   \Hy@activeanchorfalse
8101   \Hy@RestoreLastskip
8102 }
8103 \def\hyper@anchorstart#1{%
8104   \Hy@SaveLastskip
8105   \Hy@VerboseAnchor{#1}%
8106   \begingroup
8107     \hyper@chars
8108     \special{html:<a name=%
8109       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8110   \endgroup
8111   \Hy@activeanchortrue
8112 }
8113 \def\hyper@anchorend{%
8114   \special{html:</a>}%
8115   \Hy@activeanchorfalse
8116   \Hy@RestoreLastskip
8117 }
8118 \def\@urlltype{url}
8119 \def\hyper@linkstart#1#2{%
8120   \Hy@VerboseLinkStart{#1}{#2}%
8121   \expandafter\Hy@colorlink\csname @#1color\endcsname
8122   \def\Hy@tempa{#1}%
8123   \ifx\Hy@tempa\@urlltype
8124     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8125   \else
8126     \begingroup
8127       \hyper@chars
8128       \special{html:<a href=%
8129         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
8130     \endgroup
8131   \fi
8132 }
8133 \def\hyper@linkend{%

```

```

8134 \special{html:</a>}%
8135 \Hy@endcolorlink
8136 }
8137 \def\hyper@linkfile#1#2#3{%
8138 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
8139 }
8140 \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.

```

8141 \leavevmode
8142 \ifHy@raiselinks
8143 \setbox\@tempboxa=\color@hbox #1\color@endbox
8144 \@linkdim\dp\@tempboxa
8145 \lower\@linkdim\hbox{%
8146 \hyper@chars
8147 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8148 }%
8149 \Hy@colorlink\@urlcolor#1%
8150 \@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).

```

8151 \advance\@linkdim by -6.5\p@
8152 \raise\@linkdim\hbox{\special{html:</a>}}%
8153 \Hy@endcolorlink
8154 \else
8155 \begingroup
8156 \hyper@chars
8157 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
8158 \Hy@colorlink\@urlcolor#1%
8159 \special{html:</a>}%
8160 \Hy@endcolorlink
8161 \endgroup
8162 \fi
8163 }

```

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

```

8164 \def\hyper@link#1#2#3{%
8165 \Hy@VerboseLinkStart{#1}{#2}%
8166 \hyper@linkurl{#3}{\# \Hy@HyperDestNameFilter{#2}}%
8167 }

8168 \def\hyper@image#1#2{%
8169 \begingroup
8170 \hyper@chars
8171 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
8172 \endgroup
8173 }
8174 \</hypertex>
8175 \<*dviwindo>

```

46.4 dviwindo

[This was developed by David Carlisle]. Within a file `dviwindo` hyperlinking is used, for external URL's a call to `\wwwbrowser` is made. (You can define this command before or after loading the `hyperref` package if the default `c:/netscape/netscape` is not suitable)

Dviwindo could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the hypertext cfg. For dviwindo, \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.

```

8176 \providecommand*\XR@ext}{dvi}
8177 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
8178 \def\hyper@anchor#1{%
8179   \Hy@SaveLastskip
8180   \Hy@VerboseAnchor{#1}%
8181   \begingroup
8182     \let\protect=\string
8183     \special{mark: #1}%
8184   \endgroup
8185   \Hy@activeanchortrue
8186   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8187   \Hy@activeanchorfalse
8188   \Hy@RestoreLastskip
8189 }
8190 \def\hyper@anchorstart#1{%
8191   \Hy@SaveLastskip
8192   \Hy@VerboseAnchor{#1}%
8193   \special{mark: #1}%
8194   \Hy@activeanchortrue
8195 }
8196 \def\hyper@anchorend{%
8197   \Hy@activeanchorfalse
8198   \Hy@RestoreLastskip
8199 }
8200 \def\hyper@linkstart#1#2{%
8201   \Hy@VerboseLinkStart{#1}{#2}%
8202   \expandafter\Hy@colorlink\csname @#1color\endcsname
8203   \special{button: %
8204     10000000 %
8205     \number\baselineskip\space
8206     #2%
8207   }%
8208 }
8209 \def\hyper@linkend{%
8210   \Hy@endcolorlink
8211 }
8212 \def\hyper@link#1#2#3{%
8213   \Hy@VerboseLinkStart{#1}{#2}%
8214   \setbox\@tempboxa=\color@hbox #3\color@endbox
8215   \leavevmode
8216   \ifHy@raiselinks
8217     \@linkdim\dp\@tempboxa
8218     \lower\@linkdim\hbox{%
8219       \special{button: %
8220         \number\wd\@tempboxa\space
8221         \number\ht\@tempboxa\space
8222         #2%
8223       }%
8224     \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8225     \Hy@endcolorlink

```

```

8226 }%
8227 \@linkdim\ht\@tempboxa
8228 \advance\@linkdim by -6.5\p@
8229 \raise\@linkdim\hbox{}%
8230 \else
8231 \special{button: %
8232 \number\wd\@tempboxa\space
8233 \number\ht\@tempboxa\space
8234 #2%
8235 }%
8236 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
8237 \Hy@endcolorlink
8238 \fi
8239 }
8240 \def\hyper@linkurl#1#2{%
8241 \begingroup
8242 \hyper@chars
8243 \leavevmode
8244 \setbox\@tempboxa=\color@hbox #1\color@endbox
8245 \ifHy@raiselinks
8246 \@linkdim\dp\@tempboxa
8247 \lower\@linkdim\hbox{}%
8248 \special{button: %
8249 \number\wd\@tempboxa\space
8250 \number\ht\@tempboxa\space
8251 launch: \wwwbrowser\space
8252 #2%
8253 }%
8254 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8255 }%
8256 \@linkdim\ht\@tempboxa
8257 \advance\@linkdim by -6.5\p@
8258 \raise\@linkdim\hbox{}%
8259 \else
8260 \special{button: %
8261 \number\wd\@tempboxa\space
8262 \number\ht\@tempboxa\space
8263 launch: \wwwbrowser\space
8264 #2%
8265 }%
8266 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8267 \fi
8268 \endgroup
8269 }
8270 \def\hyper@linkfile#1#2#3{%
8271 \begingroup
8272 \hyper@chars
8273 \leavevmode
8274 \setbox\@tempboxa=\color@hbox #1\color@endbox
8275 \ifHy@raiselinks
8276 \@linkdim\dp\@tempboxa
8277 \lower\@linkdim\hbox{}%
8278 \special{button: %
8279 \number\wd\@tempboxa\space
8280 \number\ht\@tempboxa\space
8281 #3,%
8282 file: #2%

```

```

8283     }%
8284     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8285     }%
8286     \@linkdim\ht\@tempboxa
8287     \advance\@linkdim by -6.5\p@
8288     \raise\@linkdim\hbox{ }%
8289     \else
8290     \special{button: %
8291     \number\wd\@tempboxa\space
8292     \number\ht\@tempboxa\space
8293     #3,%
8294     file: #2%
8295     }%
8296     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8297     \fi
8298 \endgroup
8299 }
8300 \ifx\@pdfproducer\relax
8301 \def\@pdfproducer{dviwindo + Distiller}%
8302 \fi
8303 \HyInfo@AddonUnsupportedtrue
8304 \def\PDF@FinishDoc{%
8305 \Hy@UseMaketitleInfos
8306 \HyInfo@TrappedUnsupported
8307 \special{PDF: Keywords \@pdfkeywords}%
8308 \special{PDF: Title \@pdftitle}%
8309 \special{PDF: Creator \@pdfcreator}%
8310 \ifx\@pdfcreationdate\@empty
8311 \else
8312 \special{PDF: CreationDate \@pdfcreationdate}%
8313 \fi
8314 \ifx\@pdfmoddate\@empty
8315 \else
8316 \special{PDF: ModDate \@pdfmoddate}%
8317 \fi
8318 \special{PDF: Author \@pdfauthor}%
8319 \ifx\@pdfproducer\relax
8320 \else
8321 \special{PDF: Producer \@pdfproducer}%
8322 \fi
8323 \special{PDF: Subject \@pdfsubject}%
8324 \Hy@DisableOption{pdfauthor}%
8325 \Hy@DisableOption{pdftitle}%
8326 \Hy@DisableOption{pdfsubject}%
8327 \Hy@DisableOption{pdfcreator}%
8328 \Hy@DisableOption{pdfcreationdate}%
8329 \Hy@DisableOption{pdfmoddate}%
8330 \Hy@DisableOption{pdfproducer}%
8331 \Hy@DisableOption{pdfkeywords}%
8332 \Hy@DisableOption{pdftrapped}%
8333 \Hy@DisableOption{pdfinfo}%
8334 }
8335 \def\PDF@SetupDoc{%
8336 \ifx\@baseurl\@empty
8337 \else
8338 \special{PDF: Base \@baseurl}%
8339 \fi

```

```

8340 \ifx\@pdfpagescrop\@empty\else
8341 \special{PDF: BBox \@pdfpagescrop}%
8342 \fi
8343 \def\Hy@temp{}%
8344 \ifx\@pdfstartpage\@empty
8345 \else
8346 \ifx\@pdfstartview\@empty
8347 \else
8348 \edef\Hy@temp{%
8349     ,Page=\@pdfstartpage
8350     ,View=\@pdfstartview
8351     }%
8352 \fi
8353 \fi
8354 \edef\Hy@temp{%
8355     \noexpand\pdfmark{%
8356         pdfmark=/DOCVIEW,%
8357         PageMode=/\@pdfpagemode
8358         \Hy@temp
8359     }%
8360 }%
8361 \Hy@temp
8362 \ifx\@pdfpagescrop\@empty
8363 \else
8364 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8365 \fi
8366 \edef\Hy@temp{%
8367     \ifHy@toolbar\else /HideToolbar true\fi
8368     \ifHy@menubar\else /HideMenubar true\fi
8369     \ifHy>windowui\else /HideWindowUI true\fi
8370     \ifHy@fitwindow /FitWindow true\fi
8371     \ifHy@centerwindow /CenterWindow true\fi
8372     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8373     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8374     \Hy@UseNameKey{Direction}\@pdfdirection
8375     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8376     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8377     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8378     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8379     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8380     \Hy@UseNameKey{Duplex}\@pdfduplex
8381     \ifx\@pdfpicktraybypdfsize\@empty
8382     \else
8383         /PickTrayByPDFSize \@pdfpicktraybypdfsize
8384     \fi
8385     \ifx\@pdfprintpagerange\@empty
8386     \else
8387         /PrintPageRange\@pdfprintpagerange}%
8388 \fi
8389 \ifx\@pdfnumcopies\@empty
8390 \else
8391     /NumCopies \@pdfnumcopies
8392 \fi
8393 }%
8394 \pdfmark{pdfmark=/PUT,%
8395     Raw={%
8396     \string{Catalog\string}<<%

```

```

8397 \ifx\Hy@temp\@empty
8398 \else
8399 /ViewerPreferences<<\Hy@temp>>%
8400 \fi
8401 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8402 \ifx\@pdflang\@empty
8403 \else
8404 /Lang(\@pdflang)%
8405 \fi
8406 >>%
8407 }%
8408 }%
8409 }
8410 (/dviwindo)
8411 (*dvipdfm | xetex)

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

8412 \providecommand*{\XR@ext}{pdf}
8413 \Hy@setbreaklinks{true}
8414 \newsavebox{\pdfm@box}
8415 \def\@pdfm@mark#1{\special{pdf:#1}}
8416 \def\@pdfm@dest#1{%
8417 \Hy@SaveLastskip
8418 \Hy@VerboseAnchor{#1}%
8419 \begingroup
8420 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8421 \def\x{XYZ}%
8422 \ifx\x\@pdfview
8423 \def\x{XYZ @xpos @ypos null}%
8424 \else
8425 \def\x{FitH}%
8426 \ifx\x\@pdfview
8427 \def\x{FitH @ypos}%
8428 \else
8429 \def\x{FitBH}%
8430 \ifx\x\@pdfview
8431 \def\x{FitBH @ypos}%
8432 \else
8433 \def\x{FitV}%
8434 \ifx\x\@pdfview
8435 \def\x{FitV @xpos}%
8436 \else
8437 \def\x{FitBV}%
8438 \ifx\x\@pdfview
8439 \def\x{FitBV @xpos}%
8440 \else
8441 \def\x{Fit}%
8442 \ifx\x\@pdfview
8443 \let\x\@pdfview
8444 \else
8445 \def\x{FitB}%
8446 \ifx\x\@pdfview
8447 \let\x\@pdfview
8448 \else
8449 \def\x{FitR}%

```

```

8450         \ifx\x\@pdfview
8451             \Hy@Warning{'pdfview=FitR' is not supported}%
8452             \def\x{XYZ @xpos @ypos null}%
8453         \else
8454             \@onelevel@sanitize\@pdfview
8455             \Hy@Warning{%
8456                 Unknown value '\@pdfview' for pdfview%
8457             }%
8458             \def\x{XYZ @xpos @ypos null}%
8459         \fi
8460     \fi
8461 \fi
8462 \fi
8463 \fi
8464 \fi
8465 \fi
8466 \fi
8467 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
8468 \endgroup
8469 \Hy@RestoreLastskip
8470 }
8471 \providecommand*\@pdfview{XYZ}
8472 \providecommand*\@pdfborder{0 0 1}
8473 \providecommand*\@pdfborderstyle{}
8474 \def\hyper@anchor#1{%
8475     \@pdfm@dest{#1}%
8476 }
8477 \def\hyper@anchorstart#1{%
8478     \Hy@activeanchortrue
8479     \@pdfm@dest{#1}%
8480 }
8481 \def\hyper@anchorend{%
8482     \Hy@activeanchorfalse
8483 }
8484 \newcounter{Hy@AnnotLevel}
8485 \ifHy@ocgcolorlinks
8486     \def\OBJ@OCG@view{@OCG@view}%
8487     \@pdfm@mark{%
8488         obj \OBJ@OCG@view <<%
8489         /Type/OCG%
8490         /Name(View)%
8491         /Usage<<%
8492         /Print<<%
8493         /PrintState/OFF%
8494         >>%
8495         /View<<%
8496         /ViewState/ON%
8497         >>%
8498         >>%
8499         >>%
8500     }%
8501     \@pdfm@mark{close \OBJ@OCG@view}%
8502     \def\OBJ@OCG@print{@OCG@print}%
8503     \@pdfm@mark{%
8504         obj \OBJ@OCG@print <<%
8505         /Type/OCG%
8506         /Name(Print)%

```



```

8507 /Usage<<%
8508 /Print<<%
8509 /PrintState/ON%
8510 >>%
8511 /View<<%
8512 /ViewState/OFF%
8513 >>%
8514 >>%
8515 >>%
8516 }%
8517 \@pdfm@mark{close \OBJ@OCG@print}%
8518 \def\OBJ@OCGs{@OCGs}%
8519 \@pdfm@mark{%
8520 obj \OBJ@OCGs [%
8521 \OBJ@OCG@view\space\OBJ@OCG@print
8522 ]%
8523 }%
8524 \@pdfm@mark{close \OBJ@OCGs}%
8525 \@pdfm@mark{%
8526 put @catalog <<%
8527 /OCProperties<<%
8528 /OCGs \OBJ@OCGs
8529 /D<<%
8530 /OFF[\OBJ@OCG@print]%
8531 /AS[%
8532 <<%
8533 /Event/View%
8534 /OCGs \OBJ@OCGs
8535 /Category[/View]%
8536 >>%
8537 <<%
8538 /Event/Print%
8539 /OCGs \OBJ@OCGs
8540 /Category[/Print]%
8541 >>%
8542 <<%
8543 /Event/Export%
8544 /OCGs \OBJ@OCGs
8545 /Category[/Print]%
8546 >>%
8547 ]%
8548 >>%
8549 >>%
8550 >>%
8551 }%
8552 \AtBeginShipout{%
8553 \setbox\AtBeginShipoutBox=\hbox{%
8554 \copy\AtBeginShipoutBox
8555 \@pdfm@mark{%
8556 put @resources <<%
8557 /Properties<<%
8558 /OCView \OBJ@OCG@view
8559 /OCPrint \OBJ@OCG@print
8560 >>%
8561 >>%
8562 }%
8563 }%

```

```

8564 }%
8565 \AtBeginDocument{%
8566 \def\Hy@colorlink#1{%
8567 \begingroup
8568 \ifHy@ocgcolorlinks
8569 \def\Hy@ocgcolor{#1}%
8570 \setbox0=\color@hbox
8571 \else
8572 \HyColor@UseColor#1%
8573 \fi
8574 }%
8575 \def\Hy@endcolorlink{%
8576 \ifHy@ocgcolorlinks
8577 \color@endbox
8578 \mbox{%
8579 \@pdfm@mark{content /OC/OCPrint BDC}%
8580 \rlap{\copy0}%
8581 \@pdfm@mark{content EMC/OC/OCView BDC}%
8582 \begingroup
8583 \expandafter\HyColor@UseColor\Hy@ocgcolor
8584 \box0 %
8585 \endgroup
8586 \@pdfm@mark{content EMC}%
8587 }%
8588 \fi
8589 \endgroup
8590 }%
8591 }%
8592 \else
8593 \Hy@DisableOption{ocgcolorlinks}%
8594 \fi

8595 \def\Hy@BeginAnnot#1{%
8596 \stepcounter{Hy@AnnotLevel}%
8597 \ifnum\value{Hy@AnnotLevel}=\@ne
8598 #1%
8599 \fi
8600 }
8601 \def\Hy@EndAnnot{%
8602 \ifnum\value{Hy@AnnotLevel}=\@ne
8603 \Hy@endcolorlink
8604 \@pdfm@mark{eann}%
8605 \fi
8606 \addtocounter{Hy@AnnotLevel}\m@ne
8607 }

8608 \def\Hy@undefinedname{UNDEFINED}
8609 \def\hyper@linkstart#1#2{%
8610 \Hy@VerboseLinkStart{#1}{#2}%
8611 \Hy@BeginAnnot{%
8612 \protected@edef\Hy@testname{#2}%
8613 \ifx\Hy@testname\@empty
8614 \Hy@Warning{%
8615 Empty destination name,\MessageBreak
8616 using '\Hy@undefinedname'%
8617 }%
8618 \let\Hy@testname\Hy@undefinedname
8619 \else
8620 \Hy@pstringdef\Hy@testname{%

```

```

8621     \expandafter\HyperDestNameFilter\expandafter{%
8622         \Hy@testname
8623     }%
8624 }%
8625 \fi
8626 \@pdfm@mark{%
8627     bann<<%
8628     /Type/Annot%
8629     /Subtype/Link%
8630     \ifHy@pdfa /F 4\fi
8631     \Hy@setpdfborder
8632     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8633     \else
8634         /C[\csname @#1bordercolor\endcsname]%
8635     \fi
8636     /A<<%
8637     /S/GoTo%
8638     /D(\Hy@testname)%
8639     >>%
8640 >>%
8641 }%
8642 \expandafter\Hy@colorlink\csname @#1color\endcsname
8643 }%
8644 }
8645 \def\hyper@linkend{\Hy@EndAnnot}%
8646 \def\hyper@link#1#2#3{%
8647     \hyper@linkstart{#1}{#2}#3\hyper@linkend
8648 }
8649 \def\hyper@linkfile#1#2#3{%
8650     \leavevmode
8651     \Hy@BeginAnnot{%
8652         \Hy@pstringdef\Hy@pstringF{#2}%
8653         \Hy@pstringdef\Hy@pstringD{#3}%
8654         \@pdfm@mark{%
8655             bann<<%
8656             /Type/Annot%
8657             /Subtype/Link%
8658             \ifHy@pdfa /F 4\fi
8659             \Hy@setpdfborder
8660             \ifx\@filebordercolor\relax
8661             \else
8662                 /C[\@filebordercolor]%
8663             \fi
8664             /A<<%
8665             /S/GoToR%
8666             /F(\Hy@pstringF)%
8667             /D\ifx\#3\@0\@pdfstartview\else(\Hy@pstringD)\fi
8668             \Hy@SetNewWindow
8669             >>%
8670         >>%
8671     }%
8672     \Hy@colorlink\@filecolor
8673 }%
8674 #1%
8675 \Hy@EndAnnot
8676 }
8677 \def\hyper@linkurl#1#2{%

```

```

8678 \leavevmode
8679 \Hy@BeginAnnot{%
8680 \Hy@pstringdef\Hy@pstringURI{#2}%
8681 \@pdfm@mark{%
8682   bann<<%
8683     /Type/Annot%
8684     /Subtype/Link%
8685     \ifHy@pdfa /F 4\fi
8686     \Hy@setpdfborder
8687     \ifx\@urlbordercolor\relax
8688     \else
8689     /C[\@urlbordercolor]%
8690     \fi
8691     /A<<%
8692     /S/URI%
8693     /URI(\Hy@pstringURI)%
8694     >>%
8695     >>%
8696   }%
8697   \Hy@colorlink\@urlcolor
8698 }%
8699 #1%
8700 \Hy@endAnnot
8701 }
8702 \def\Acrobatmenu#1#2{%
8703 \Hy@Acrobatmenu{#1}{#2}{%
8704 \Hy@BeginAnnot{%
8705 \@pdfm@mark{%
8706   bann<<%
8707     /Type/Annot%
8708     /Subtype/Link%
8709     \ifHy@pdfa /F 4\fi
8710     /A<<%
8711     /S/Named%
8712     /N/#1%
8713     >>%
8714     \Hy@setpdfborder
8715     \ifx\@menubordercolor\relax
8716     \relax
8717     /C[\@menubordercolor]%
8718     \fi
8719     >>%
8720   }%
8721   \Hy@colorlink\@menucolor
8722 }%
8723 #2%
8724 \Hy@endAnnot
8725 }%
8726 }
8727 \ifx\@pdfproducer\relax
8728 \def\@pdfproducer{dvipdfm}%

```

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

```

8729 \begingroup\expandafter\expandafter\expandafter\endgroup
8730 \expandafter\ifx\csname XeTeXversion\endcsname\relax
8731 \else
8732 \def\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
8733 \fi

```

```

8734 \fi
8735 \def\PDF@FinishDoc{%
8736   \Hy@UseMaketitleInfos
8737   \HyInfo@GenerateAddons
8738   \@pdfm@mark{%
8739     docinfo<<%
8740     /Title(\@pdftitle)%
8741     /Subject(\@pdfsubject)%
8742     /Creator(\@pdfcreator)%
8743     \ifx\@pdfcreationdate\@empty
8744     \else
8745     /CreationDate(\@pdfcreationdate)%
8746     \fi
8747     \ifx\@pdfmoddate\@empty
8748     \else
8749     /ModDate(\@pdfmoddate)%
8750     \fi
8751     /Author(\@pdfauthor)%
8752     \ifx\@pdfproducer\relax
8753     \else
8754     /Producer(\@pdfproducer)%
8755     \fi
8756     /Keywords(\@pdfkeywords)%
8757     \ifx\@pdftrapped\@empty
8758     \else
8759     /Trapped/\@pdftrapped
8760     \fi
8761     \HyInfo@Addons
8762     >>%
8763   }%
8764   \Hy@DisableOption{pdfauthor}%
8765   \Hy@DisableOption{pdftitle}%
8766   \Hy@DisableOption{pdfsubject}%
8767   \Hy@DisableOption{pdfcreator}%
8768   \Hy@DisableOption{pdfcreationdate}%
8769   \Hy@DisableOption{pdfmoddate}%
8770   \Hy@DisableOption{pdfproducer}%
8771   \Hy@DisableOption{pdfkeywords}%
8772   \Hy@DisableOption{pdftrapped}%
8773   \Hy@DisableOption{pdfinfo}%
8774 }

8775 \def\PDF@SetupDoc{%
8776   \edef\Hy@temp{%
8777     \ifHy@toolbar\else /HideToolbar true\fi
8778     \ifHy@menubar\else /HideMenubar true\fi
8779     \ifHy>windowui\else /HideWindowUI true\fi
8780     \ifHy@fitwindow /FitWindow true\fi
8781     \ifHy@centerwindow /CenterWindow true\fi
8782     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8783     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8784     \Hy@UseNameKey{Direction}\@pdfdirection
8785     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8786     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8787     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8788     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8789     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8790     \Hy@UseNameKey{Duplex}\@pdfduplex

```

```

8791 \ifx\@pdfpicktraybypdfsize\@empty
8792 \else
8793   /PickTrayByPDFSize \@pdfpicktraybypdfsize
8794 \fi
8795 \ifx\@pdfprintpagerange\@empty
8796 \else
8797   /PrintPageRange[\@pdfprintpagerange]%
8798 \fi
8799 \ifx\@pdfnumcopies\@empty
8800 \else
8801   /NumCopies \@pdfnumcopies
8802 \fi
8803 }%
8804 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8805 \@pdfm@mark{%
8806   docview<<%
8807     \ifx\@pdfstartpage\@empty
8808     \else
8809       \ifx\@pdfstartview\@empty
8810       \else
8811         /OpenAction[@page\@pdfstartpage\@pdfstartview]%
8812       \fi
8813     \fi
8814     \ifx\@baseurl\@empty
8815     \else
8816       /URI<</Base(\Hy@pstringB)>>%
8817     \fi
8818     /PageMode/\@pdfpagemode
8819     \ifx\Hy@temp\@empty
8820     \else
8821       /ViewerPreferences<<\Hy@temp>>%
8822     \fi
8823     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8824     \ifx\@pdflang\@empty
8825     \else
8826       /Lang(\@pdflang)%
8827     \fi
8828   >>%
8829 }%
8830 \ifx\@pdfpagescrop\@empty
8831 \else
8832   \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
8833 \fi
8834 }
8835 </dvipdfm | xetex>

```

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

```

8836 (*dvipdfm)
8837 \AtBeginShipoutFirst{%
8838   \ifHy@setpagesize
8839   \begingroup
8840     \@ifundefined{stockwidth}{%
8841       \ifdim\paperwidth>\z@
8842       \ifdim\paperheight>\z@
8843         \special{papersize=\the\paperwidth,\the\paperheight}%
8844       \fi
8845     \fi

```

```

8846   }{%
8847     \ifdim\stockwidth>\z@
8848       \ifdim\stockheight>\z@
8849         \special{papersize=\the\stockwidth,\the\stockheight}%
8850       \fi
8851     \fi
8852   }%
8853 \endgroup
8854 \fi
8855 \Hy@DisableOption{setpagesize}%
8856 }
8857 </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.

```

8858 <*vtexhtml>
8859 \providecommand*\XR@ext}{htm}
8860 \RequirePackage{vtexhtml}
8861 \newif\if@Localurl
8862 \def\PDF@FinishDoc{}
8863 \def\PDF@SetupDoc{%
8864   \ifx\@baseurl\@empty
8865     \else
8866       \special{!direct <base href="\@baseurl">}%
8867     \fi
8868 }
8869 \def\@urltype{url}
8870 \def\hyper@link#1#2#3{%
8871   \Hy@VerboseLinkStart{#1}{#2}%
8872   \leavevmode
8873   \special{!direct <a href=%
8874     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
8875   #3%
8876   \special{!direct </a>}%
8877 }
8878 \def\hyper@linkurl#1#2{%
8879   \begingroup
8880     \hyper@chars
8881     \leavevmode
8882     \MathBSuppress=1\relax
8883     \special{!direct <a href=%
8884       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
8885     #1%
8886     \MathBSuppress=0\relax
8887     \special{!direct </a>}%
8888   \endgroup
8889 }
8890 \def\hyper@linkfile#1#2#3{%
8891   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
8892 }
8893 \def\hyper@linkstart#1#2{%
8894   \Hy@VerboseLinkStart{#1}{#2}%
8895   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
8896     \@Localurltrue
8897     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%

```

```

8898 \else
8899 \@Localurlfalse
8900 \begingroup
8901 \hyper@chars
8902 \special{!aref \HyperDestNameFilter{#2}}%
8903 \endgroup
8904 \fi
8905 }
8906 \def\hyper@linkend{%
8907 \if@Localurl
8908 \special{!endaref}%
8909 \else
8910 \special{!direct </a>}%
8911 \fi
8912 }
8913 \def\hyper@anchorstart#1{%
8914 \Hy@SaveLastskip
8915 \Hy@VerboseAnchor{#1}%
8916 \begingroup
8917 \hyper@chars
8918 \special{!aname #1}%
8919 \special{!direct <a name=%
8920 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8921 \endgroup
8922 \Hy@activeanchortrue
8923 }
8924 \def\hyper@anchorend{%
8925 \special{!direct </a>}%
8926 \Hy@activeanchorfalse
8927 \Hy@RestoreLastskip
8928 }
8929 \def\hyper@anchor#1{%
8930 \Hy@SaveLastskip
8931 \Hy@VerboseAnchor{#1}%
8932 \begingroup
8933 \let\protect=\string
8934 \hyper@chars
8935 \leavevmode
8936 \special{!aname #1}%
8937 \special{!direct <a name=%
8938 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8939 \endgroup
8940 \Hy@activeanchortrue
8941 \bgroup\anchor@spot\egroup
8942 \special{!direct </a>}%
8943 \Hy@activeanchorfalse
8944 \Hy@RestoreLastskip
8945 }
8946 \def\@Form[#1]{%
8947 \typeout{Sorry, TeXpider does not yet support FORMs}%
8948 }
8949 \def\@endForm{}
8950 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
8951 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
8952 }
8953 \def\@TextField[#1]#2{% parameters, label
8954 \typeout{Sorry, TeXpider does not yet support FORM text fields}%

```



```

8955 }
8956 \def\@CheckBox[#1]#2{% parameters, label
8957 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
8958 }
8959 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
8960 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
8961 }
8962 \def\@PushButton[#1]#2{% parameters, label
8963 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
8964 }
8965 \def\@Reset[#1]#2{%
8966 \typeout{Sorry, TeXpider does not yet support FORMs}%
8967 }
8968 \def\@Submit[#1]#2{%
8969 \typeout{Sorry, TeXpider does not yet support FORMs}%
8970 }
8971 \</vtexhtml>
8972 \<*/vtx>

```

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.

```

8973 \ifx\mediaheight\@undefined
8974 \else
8975 \ifx\mediaheight\relax
8976 \else
8977 \ifHy@setpagesize
8978 \providecommand*\VTeXInitMediaSize{%
8979 \ifundefined{stockwidth}{%
8980 \ifdim\paperheight>0pt %
8981 \setlength\mediaheight\paperheight
8982 \fi
8983 \ifdim\paperheight>0pt %
8984 \setlength\mediawidth\paperwidth
8985 \fi
8986 }{%
8987 \ifdim\stockheight>0pt %
8988 \setlength\mediaheight\stockheight
8989 \fi
8990 \ifdim\stockwidth>0pt %
8991 \setlength\mediawidth\stockwidth
8992 \fi
8993 }%
8994 }%
8995 \AtBeginDocument{\VTeXInitMediaSize}%
8996 \fi
8997 \Hy@DisableOption{setpagesize}%
8998 \fi
8999 \fi

```

Older versions of VTeX require xyz in lower case.

```

9000 \providecommand*\@pdfview{xyz}
9001 \providecommand*\@pdfborder{0 0 1}
9002 \providecommand*\@pdfborderstyle{}
9003 \let\CurrentBorderColor\@linkbordercolor
9004 \def\hyper@anchor#1{%
9005 \Hy@SaveLastskip
9006 \Hy@VerboseAnchor{#1}%

```

```

9007 \begingroup
9008 \let\protect=\string
9009 \hyper@chars
9010 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9011 \endgroup
9012 \Hy@activeanchortrue
9013 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9014 \Hy@activeanchorfalse
9015 \Hy@RestoreLastskip
9016 }
9017 \def\hyper@anchorstart#1{%
9018 \Hy@SaveLastskip
9019 \Hy@VerboseAnchor{#1}%
9020 \begingroup
9021 \hyper@chars
9022 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
9023 \endgroup
9024 \Hy@activeanchortrue
9025 }
9026 \def\hyper@anchorend{%
9027 \Hy@activeanchorfalse
9028 \Hy@RestoreLastskip
9029 }
9030 \def\@urltype{url}
9031 \def\Hy@undefinedname{UNDEFINED}
9032 \def\hyper@linkstart#1#2{%
9033 \Hy@VerboseLinkStart{#1}{#2}%
9034 \Hy@pstringdef\Hy@pstringURI{#2}%
9035 \expandafter\Hy@colorlink\csname @#1color\endcsname
9036 \@ifundefined{@#1bordercolor}{%
9037 \let\CurrentBorderColor\relax
9038 }{%
9039 \edef\CurrentBorderColor{%
9040 \csname @#1bordercolor\endcsname
9041 }%
9042 }%
9043 \def\Hy@tempa{#1}%
9044 \ifx\Hy@tempa\@urltype
9045 \special{!%
9046 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9047 a=<%
9048 \ifHy@pdfa /F 4\fi
9049 \Hy@setpdfborder
9050 \ifx\CurrentBorderColor\relax
9051 \else
9052 /C [\CurrentBorderColor]%
9053 \fi
9054 >%
9055 }%
9056 \else
9057 \protected@edef\Hy@testname{#2}%
9058 \ifx\Hy@testname\@empty
9059 \Hy@Warning{%
9060 Empty destination name,\MessageBreak
9061 using '\Hy@undefinedname'%
9062 }%
9063 \let\Hy@testname\Hy@undefinedname

```

```

9064 \fi
9065 \special{!%
9066   aref \expandafter\HyperDestNameFilter
9067     \expandafter{\Hy@testname};%
9068   a=<%
9069     \ifHy@pdfa /F 4\fi
9070     \Hy@setpdfborder
9071     \ifx\CurrentBorderColor\relax
9072     \else
9073     /C [\CurrentBorderColor]%
9074     \fi
9075   >%
9076   }%
9077 \fi
9078 }
9079 \def\hyper@linkend{%
9080 \special{!endaref}%
9081 \Hy@endcolorlink
9082 }
9083 \def\hyper@linkfile#1#2#3{%
9084 \leavevmode
9085 \special{!%
9086   aref <%
9087     \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
9088   f=#2>#3;%
9089   a=<%
9090     \ifHy@pdfa /F 4\fi
9091     \Hy@setpdfborder
9092     \ifx\@filebordercolor\relax
9093     \else
9094     /C [\@filebordercolor]%
9095     \fi
9096   >%
9097   }%
9098 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9099 \special{!endaref}%
9100 }
9101 \def\hyper@linkurl#1#2{%
9102 \begingroup
9103 \Hy@pstringdef\Hy@pstringURI{#2}%
9104 \hyper@chars
9105 \leavevmode
9106 \special{!%
9107   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
9108   a=<%
9109     \ifHy@pdfa /F 4\fi
9110     \Hy@setpdfborder
9111     \ifx\@urlbordercolor\relax
9112     \else
9113     /C [\@urlbordercolor]%
9114     \fi
9115   >%
9116   }%
9117 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9118 \special{!endaref}%
9119 \endgroup
9120 }

```

```

9121 \def\hyper@link#1#2#3{%
9122 \Hy@VerboseLinkStart{#1}{#2}%
9123 \@ifundefined{#1bordercolor}{%
9124 \let\CurrentBorderColor\relax
9125 }{%
9126 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
9127 }%
9128 \leavevmode
9129 \protected@edef\Hy@testname{#2}%
9130 \ifx\Hy@testname\@empty
9131 \Hy@Warning{%
9132 Empty destination name,\MessageBreak
9133 using '\Hy@undefinedname'%
9134 }%
9135 \let\Hy@testname\Hy@undefinedname
9136 \fi
9137 \special{!%
9138 aref \expandafter\HyperDestNameFilter
9139 \expandafter{\Hy@testname};%
9140 a=<%
9141 \ifHy@pdfa /F 4\fi
9142 \Hy@setpdfborder
9143 \ifx\CurrentBorderColor\relax
9144 \else
9145 /C [\CurrentBorderColor]%
9146 \fi
9147 >%
9148 }%
9149 \expandafter
9150 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
9151 \special{!endaref}%
9152 }
9153 \def\hyper@image#1#2{%
9154 \hyper@linkurl{#2}{#1}%
9155 }
9156 \def\@hyper@launch run:#1\#2#3{%
9157 \Hy@pstringdef\Hy@pstringF{#1}%
9158 \Hy@pstringdef\Hy@pstringP{#3}%
9159 \leavevmode
9160 \special{!aref %
9161 <u=%
9162 /Type/Action%
9163 /S/Launch%
9164 /F(\Hy@pstringF)%
9165 \Hy@SetNewWindow
9166 \ifx\#3\%
9167 \else
9168 /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
9169 \fi%
9170 >;%
9171 a=<%
9172 \ifHy@pdfa /F 4\fi
9173 \Hy@setpdfborder
9174 \ifx\@runbordercolor\relax
9175 \else
9176 /C[\@runbordercolor]%
9177 \fi

```

```

9178 >%
9179 }%
9180 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
9181 \special{!endaref}%
9182 }
9183 \def\Acrobatmenu#1#2{%
9184 \Hy@Acrobatmenu{#1}{#2}{%
9185 \special{!%
9186   aref <u=/S /Named /N /#1>;%
9187   a=<%
9188     \ifHy@pdfa /F 4\fi
9189     \Hy@setpdfborder
9190     \ifx\@menubordercolor\relax
9191     \else
9192       /C[\@menubordercolor]%
9193     \fi
9194   >%
9195   }%
9196   \Hy@colorlink\@menucolor#2\Hy@endcolorlink
9197   \special{!endaref}%
9198 }%
9199 }

```

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

The code below makes sense for $\text{V}\text{T}\text{E}\text{X}$ 7.02 or later.

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

```

9200 \ifnum\Hy@VTeXversion<702 %
9201 \else
9202 \def\hyper@pagetransition{%
9203 \ifx\@pdfpagetransition\relax
9204 \else
9205 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

9206 \else
9207 \hvtex@parse@trans\@pdfpagetransition
9208 \fi
9209 \fi
9210 }%

```

I have to write an “honest” parser to convert raw PDF code into $\text{V}\text{T}\text{E}\text{X}$ `\special`.
(AVK)

Syntax of $\text{V}\text{T}\text{E}\text{X}$ `\special{!trans <transition_effect>}`:

```

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

```

<transition_duration> ::= <number>

Transition codes:

```
9211 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
9212 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
9213 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
9214 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
9215 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
9216 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
9217 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
9218 \def\hvtex@par@dimension{/Dm}%
9219 \def\hvtex@par@direction{/Di}%
9220 \def\hvtex@par@duration{/D}%
9221 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
9222 \def\hvtex@gettoken{%
9223   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
9224 }%
```

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

```
9225 \def\hvtex@gettoken@#1 #2\@nil{%
9226   \edef\hvtex@token{#1}%
9227   \edef\hvtex@buffer{#2}%
9228 }%
9229 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
9230 \let\hvtex@trans@code\@empty
9231 \let\hvtex@param@dimension\@empty
9232 \let\hvtex@param@direction\@empty
9233 \let\hvtex@param@duration\@empty
9234 \let\hvtex@param@motion\@empty
9235 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
9236 \hvtex@gettoken
9237 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
9238   \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
9239   \else
9240     \hvtex@gettoken
9241   \fi
9242 \fi
9243 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
9244 \hvtex@trans@params
9245 }%
```

Reentrant macro to parse optional parameters.

```
9246 \def\hvtex@trans@params{%
9247   \ifx\hvtex@buffer\@empty
9248   \else
9249     \hvtex@gettoken
9250     \let\hvtex@trans@par\hvtex@token
```

```

9251 \ifx\hvtex@buffer\@empty
9252 \else
9253 \hvtex@gettoken
9254 \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```

9255 \let\hvtex@param@duration\hvtex@token
9256 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

9257 \expandafter\edef\expandafter\hvtex@param@motion
9258 \expandafter{\expandafter\@gobble\hvtex@token}%
9259 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

9260 \expandafter\edef\expandafter\hvtex@param@dimension
9261 \expandafter{\expandafter\@gobble\hvtex@token}%
9262 \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).

```

9263 \let\hvtex@param@direction\hvtex@token
9264 \fi\fi\fi
9265 \fi
9266 \fi
9267 \ifx\hvtex@buffer\@empty
9268 \let\next\hvtex@produce@trans
9269 \else
9270 \let\next\hvtex@trans@params
9271 \fi
9272 \next
9273 }%

```

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

```

9274 \def\hvtex@produce@trans{%
9275 \let\vtex@trans@special\@empty
9276 \if S\hvtex@trans@code
9277 \edef\vtex@trans@special{\hvtex@trans@code
9278 \hvtex@param@dimension\hvtex@param@motion}%
9279 \else\if B\hvtex@trans@code
9280 \edef\vtex@trans@special{%
9281 \hvtex@trans@code\hvtex@param@dimension
9282 }%
9283 \else\if X\hvtex@trans@code
9284 \edef\vtex@trans@special{%
9285 \hvtex@trans@code\hvtex@param@motion
9286 }%
9287 \else\if W\hvtex@trans@code
9288 \edef\vtex@trans@special{%
9289 \hvtex@trans@code\hvtex@param@direction
9290 }%
9291 \else\if D\hvtex@trans@code
9292 \let\vtex@trans@special\hvtex@trans@code
9293 \else\if R\hvtex@trans@code
9294 \let\vtex@trans@special\hvtex@trans@code
9295 \else\if G\hvtex@trans@code
9296 \edef\vtex@trans@special{%
9297 \hvtex@trans@code\hvtex@param@direction

```

```

9298   }%
9299   \fi\fi\fi\fi\fi\fi
9300   \ifx\vtex@trans@special\@empty
9301   \else
9302     \ifx\hvtex@param@duration\@empty
9303     \else
9304       \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

9305     \multiply\dimen@\@m
9306     \edef\vtex@trans@special{%
9307       \vtex@trans@special,\strip@pt\dimen@
9308     }%
9309   \fi

```

And all the mess is just for this.

```

9310   \special{!trans \vtex@trans@special}%
9311   \fi
9312 }%

9313 \def\hyper@pageduration{%
9314   \ifx\@pdfpageduration\relax
9315   \else
9316     \ifx\@pdfpageduration\@empty
9317     \special{!duration-}%
9318     \else
9319       \special{!duration \@pdfpageduration}%
9320     \fi
9321   \fi
9322 }%

9323 \def\hyper@pagehidden{%
9324   \ifHy@useHidKey
9325     \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
9326   \fi
9327 }%

9328 \g@addto@macro\Hy@EveryPageBoxHook{%
9329   \hyper@pagetransition
9330   \hyper@pageduration
9331   \hyper@pagehidden
9332 }%
9333 \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

```

9334 \ifx\@pdfproducer\relax
9335   \def\@pdfproducer{VTeX}%
9336   \ifnum\Hy@VTeXversion>\z@
9337     \count@\VTeXversion
9338     \divide\count@ 100 %
9339   \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
9340   \multiply\count@ -100 %

```



```

9341 \advance\count@\VTeXversion
9342 \edef\@pdfproducer{%
9343   \@pdfproducer
9344   .\ifnum\count@<10 0\fi\the\count@
9345   \ifx\VTeXOS\@undefined\else
9346     \ifnum\VTeXOS>0 %
9347       \ifnum\VTeXOS<6 %
9348         \space(%
9349         \ifcase\VTeXOS
9350           \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
9351         \fi
9352       )%
9353     \fi
9354   \fi
9355 \fi
9356 ,\space
9357 \ifnum\OpMode=\@ne PDF\else PS\fi
9358 \space backend%
9359 \ifx\gexmode\@undefined\else
9360   \ifnum\gexmode>z@\space with GeX\fi
9361 \fi
9362 }%
9363 \fi
9364 \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).

```

9365 \def\PDF@SetupDoc{%
9366   \ifx\@pdfpagescrop\@empty
9367   \else
9368     \special{!pdfinfo b=<\@pdfpagescrop>}%
9369   \fi
9370   \ifx\@pdfstartpage\@empty
9371   \else
9372     \ifx\@pdfstartview\@empty
9373     \else
9374       \special{!onopen Page\@pdfstartpage}%
9375     \fi
9376   \fi
9377   \special{!pdfinfo p=</\@pdfpagemode>}%
9378   \ifx\@baseurl\@empty
9379   \else
9380     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
9381   \fi
9382   \special{!pdfinfo v=<<<%

```

```

9383 \ifHy@toolbar\else /HideToolbar true\fi
9384 \ifHy@menubar\else /HideMenubar true\fi
9385 \ifHy@windowui\else /HideWindowUI true\fi
9386 \ifHy@fitwindow /FitWindow true\fi
9387 \ifHy@centerwindow /CenterWindow true\fi
9388 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9389 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9390 \Hy@UseNameKey{Direction}\@pdfdirection
9391 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9392 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9393 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9394 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9395 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9396 \Hy@UseNameKey{Duplex}\@pdfduplex
9397 \ifx\@pdfpicktraybypdfsize\@empty
9398 \else
9399 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9400 \fi
9401 \ifx\@pdfprintpagerange\@empty
9402 \else
9403 /PrintPageRange[\@pdfprintpagerange]%
9404 \fi
9405 \ifx\@pdfnumcopies\@empty
9406 \else
9407 /NumCopies \@pdfnumcopies
9408 \fi
9409 >>>}%
9410 \ifx\@pdfpagelayout\@empty
9411 \else
9412 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
9413 \fi
9414 }%
9415 \HyInfo@AddonUnsupportedtrue
9416 \def\PDF@FinishDoc{%
9417 \Hy@UseMaketitleInfos
9418 \HyInfo@TrappedUnsupported
9419 \special{!pdfinfo a=<\@pdfauthor>}%
9420 \special{!pdfinfo t=<\@pdftitle>}%
9421 \special{!pdfinfo s=<\@pdfsubject>}%
9422 \special{!pdfinfo c=<\@pdfcreator>}%
9423 \ifx\@pdfproducer\relax
9424 \else
9425 \special{!pdfinfo r=<\@pdfproducer>}%
9426 \fi
9427 \special{!pdfinfo k=<\@pdfkeywords>}%
9428 \Hy@DisableOption{pdfauthor}%
9429 \Hy@DisableOption{pdftitle}%
9430 \Hy@DisableOption{pdfsubject}%
9431 \Hy@DisableOption{pdfcreator}%
9432 \Hy@DisableOption{pdfcreationdate}%
9433 \Hy@DisableOption{pdfmoddate}%
9434 \Hy@DisableOption{pdfproducer}%
9435 \Hy@DisableOption{pdfkeywords}%
9436 \Hy@DisableOption{pdftrapped}%
9437 \Hy@DisableOption{pdfinfo}%
9438 }
9439 </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.

```
9440 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%  
9441 <package>\providecommand*\Hy@DistillerDestFix{}  
9442 <*pdfmark | dviwindo>  
9443 \def\Hy@DistillerDestFix{%  
9444   \begingroup  
9445   \let\x\literalps@out
```

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

```
9446   \ifnum \@ifundefined{OpMode}{0}{%  
9447     \@ifundefined{gexmode}{0}{%  
9448       \ifnum\gexmode>0 \OpMode\else 0\fi  
9449     }>1 %  
9450   \def\x##1{%  
9451     \immediate\special{!##1}%  
9452   }%  
9453   \fi  
9454   \x{%  
9455     /product where{%  
9456       pop %  
9457       product(Distiller)search{%  
9458         pop pop pop %  
9459         version(.)search{%  
9460           exch pop exch pop%  
9461           (3011)eq{%  
9462             gsave %  
9463             newpath 0 0 moveto closepath clip%  
9464             /Courier findfont 10 scalefont setfont %  
9465             72 72 moveto(.)show %  
9466             grestore%  
9467           }if%  
9468         }{pop}ifelse%  
9469       }{pop}ifelse%  
9470     }if%  
9471   }%  
9472   \endgroup  
9473 }  
9474 </pdfmark | dviwindo>
```

46.8 Direct pdfmark support

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

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

and the correct definitions of the following PostScript procedures:

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

```

9475 (*pdfmark)
9476 \Hy@breaklinks@unsupported
9477 \def\hyper@anchor#1{%
9478   \Hy@SaveLastskip
9479   \Hy@VerboseAnchor{#1}%
9480   \begingroup
9481     \pdfmark[\anchor@spot]{%
9482       pdfmark=/DEST,%
9483       linktype=anchor,%
9484       View=/\@pdfview \@pdfviewparams,%
9485       DestAnchor={#1}%
9486     }%
9487   \endgroup
9488   \Hy@RestoreLastskip
9489 }
9490 \@ifundefined{hyper@anchorstart}{\endinput}
9491 \def\hyper@anchorstart#1{%
9492   \Hy@SaveLastskip
9493   \Hy@VerboseAnchor{#1}%
9494   \literalps@out{H.S}%
9495   \xdef\hyper@currentanchor{#1}%
9496   \Hy@activeanchortrue
9497 }
9498 \def\hyper@anchorend{%
9499   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9500   \pdfmark{%
9501     pdfmark=/DEST,%
9502     linktype=anchor,%
9503     View=/\@pdfview \@pdfviewparams,%
9504     DestAnchor=\hyper@currentanchor,%
9505   }%
9506   \Hy@activeanchorfalse
9507   \Hy@RestoreLastskip
9508 }
9509 \def\hyper@linkstart#1#2{%
9510   \Hy@VerboseLinkStart{#1}{#2}%
9511   \ifHy@breaklinks
9512     \else
9513     \leavevmode\hbox\bgroup
9514     \fi
9515     \expandafter\Hy@colorlink\csname @#1color\endcsname
9516     \literalps@out{H.S}%
9517     \xdef\hyper@currentanchor{#2}%
9518     \gdef\hyper@currentlinktype{#1}%
9519 }
9520 \def\hyper@linkend{%
9521   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9522   \@ifundefined{@\hyper@currentlinktype bordercolor}{%
9523     \let\Hy@tempcolor\relax
9524   }{%

```

```

9525 \edef\Hy@tempcolor{%
9526   \csname @\hyper@currentlinktype bordercolor\endcsname
9527 }%
9528 }%
9529 \pdfmark{%
9530   pdfmark=/ANN,%
9531   linktype=link,%
9532   Subtype=/Link,%
9533   PDFAFlags=4,%
9534   Dest=\hyper@currentanchor,%
9535   AcroHighlight=\@pdfhighlight,%
9536   Border=\@pdfborder,%
9537   BorderStyle=\@pdfborderstyle,%
9538   Color=\Hy@tempcolor,%
9539   Raw=H.B%
9540 }%
9541 \Hy@endcolorlink
9542 \ifHy@breaklinks
9543 \else
9544 \egroup
9545 \fi
9546 }

```

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.

```

9547 \begingroup
9548 \catcode'P=12 %
9549 \catcode'T=12 %
9550 \lowercase{\endgroup
9551 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
9552 }
9553 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

`\hyper@pagetransition`

```

9554 \def\hyper@pagetransition{%
9555 \ifx\@pdfpagetransition\relax
9556 \else
9557 \ifx\@pdfpagetransition\@empty
9558 % 1. Does an old entry have to be deleted?
9559 % 2. If 1=yes, how to delete?
9560 \else
9561 \pdfmark{%
9562   pdfmark=/PUT,%
9563   Raw={%
9564     \string{ThisPage\string}%
9565     <</Trans << /S /\@pdfpagetransition\space >> >>%
9566   }%
9567 }%
9568 \fi
9569 \fi
9570 }

```

`\hyper@pageduration`

```

9571 \def\hyper@pageduration{%
9572 \ifx\@pdfpageduration\relax
9573 \else

```

```

9574 \ifx \@pdfpageduration \@empty
9575 % 1. Does an old entry have to be deleted?
9576 % 2. If 1=yes, how to delete?
9577 \else
9578 \pdfmark{%
9579 pdfmark=/PUT,%
9580 Raw={%
9581 \string{ThisPage\string}%
9582 <</Dur \@pdfpageduration>>%
9583 }%
9584 }%
9585 \fi
9586 \fi
9587 }

```

\hyper@pagehidden

```

9588 \def\hyper@pagehidden{%
9589 \ifHy@useHidKey
9590 \pdfmark{%
9591 pdfmark=/PUT,%
9592 Raw={%
9593 \string{ThisPage\string}%
9594 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
9595 }%
9596 }%
9597 \fi
9598 }

9599 \g@addto@macro\Hy@EveryPageBoxHook{%
9600 \hyper@pagetransition
9601 \hyper@pageduration
9602 \hyper@pagehidden
9603 }

9604 \def\hyper@image#1#2{%
9605 \hyper@linkurl{#2}{#1}%
9606 }

9607 \def\Hy@undefinedname{UNDEFINED}
9608 \def\hyper@link#1#2#3{%
9609 \Hy@VerboseLinkStart{#1}{#2}%
9610 \@ifundefined{@#1bordercolor}{%
9611 \let\Hy@tempcolor\relax
9612 }{%
9613 \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
9614 }%
9615 \begingroup
9616 \protected@edef\Hy@testname{#2}%
9617 \ifx\Hy@testname \@empty
9618 \Hy@Warning{%
9619 Empty destination name,\MessageBreak
9620 using '\Hy@undefinedname'%
9621 }%
9622 \let\Hy@testname\Hy@undefinedname
9623 \fi
9624 \pdfmark[#{#3}]{%
9625 Color=\Hy@tempcolor,%
9626 linktype={#1},%
9627 AcroHighlight=\@pdfhighlight,%

```

```

9628   Border=\@pdfborder,%
9629   BorderStyle=\@pdfborderstyle,%
9630   pdfmark=/ANN,%
9631   Subtype=/Link,%
9632   PDFAFlags=4,%
9633   Dest=\Hy@testname
9634   }%
9635 \endgroup
9636 }
9637 \newtoks\pdf@docset
9638 \def\PDF@FinishDoc{%
9639 \Hy@UseMaketitleInfos
9640 \HyInfo@GenerateAddons
9641 \let\Hy@temp\@empty
9642 \ifx\@pdfcreationdate\@empty
9643 \else
9644 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
9645 \fi
9646 \ifx\@pdfmoddate\@empty
9647 \else
9648 \expandafter\def\expandafter\Hy@temp\expandafter{%
9649 \Hy@temp
9650 ModDate=\@pdfmoddate,%
9651 }%
9652 \fi
9653 \ifx\@pdfproducer\relax
9654 \else
9655 \expandafter\def\expandafter\Hy@temp\expandafter{%
9656 \Hy@temp
9657 Producer=\@pdfproducer,%
9658 }%
9659 \fi
9660 \expandafter
9661 \pdfmark\expandafter{%
9662 \Hy@temp
9663 pdfmark=/DOCINFO,%
9664 Title=\@pdftitle,%
9665 Subject=\@pdfsubject,%
9666 Creator=\@pdfcreator,%
9667 Author=\@pdfauthor,%
9668 Keywords=\@pdfkeywords,%
9669 Trapped=\@pdftrapped
9670 }%
9671 \ifx\HyInfo@Addons\@empty
9672 \else
9673 \pdfmark{%
9674 pdfmark=/DOCINFO,%
9675 Raw={\HyInfo@Addons}%
9676 }%
9677 \fi
9678 \Hy@DisableOption{pdfauthor}%
9679 \Hy@DisableOption{pdftitle}%
9680 \Hy@DisableOption{pdfsubject}%
9681 \Hy@DisableOption{pdfcreator}%
9682 \Hy@DisableOption{pdfcreationdate}%
9683 \Hy@DisableOption{pdfmoddate}%
9684 \Hy@DisableOption{pdfproducer}%

```

```

9685 \Hy@DisableOption{pdfkeywords}%
9686 \Hy@DisableOption{pdftrapped}%
9687 \Hy@DisableOption{pdfinfo}%
9688 }
9689 \def\PDF@SetupDoc{%
9690 \def\Hy@temp{%
9691 \ifx\@pdfstartpage\@empty
9692 \else
9693 \ifx\@pdfstartview\@empty
9694 \else
9695 \edef\Hy@temp{%
9696 ,Page=\@pdfstartpage
9697 ,View=\@pdfstartview
9698 }%
9699 \fi
9700 \fi
9701 \edef\Hy@temp{%
9702 \noexpand\pdfmark{%
9703 pdfmark=/DOCVIEW,%
9704 PageMode=/\@pdfpagemode
9705 \Hy@temp
9706 }%
9707 }%
9708 \Hy@temp
9709 \ifx\@pdfpagescrop\@empty
9710 \else
9711 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9712 \fi
9713 \edef\Hy@temp{%
9714 \ifHy@toolbar\else /HideToolbar true\fi
9715 \ifHy@menubar\else /HideMenubar true\fi
9716 \ifHy>windowui\else /HideWindowUI true\fi
9717 \ifHy@fitwindow /FitWindow true\fi
9718 \ifHy@centerwindow /CenterWindow true\fi
9719 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9720 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9721 \Hy@UseNameKey{Direction}\@pdfdirection
9722 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9723 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9724 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9725 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9726 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9727 \Hy@UseNameKey{Duplex}\@pdfduplex
9728 \ifx\@pdfpicktraybypdfsize\@empty
9729 \else
9730 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9731 \fi
9732 \ifx\@pdfprintpagerange\@empty
9733 \else
9734 /PrintPageRange\@pdfprintpagerange}%
9735 \fi
9736 \ifx\@pdfnumcopies\@empty
9737 \else
9738 /NumCopies \@pdfnumcopies
9739 \fi
9740 }%
9741 \Hy@pstringdef\Hy@pstringB{\@baseurl}%

```



```

9742 \pdfmark{%
9743 pdfmark=/PUT,%
9744 Raw={%
9745   \string{Catalog\string}<<%
9746   \ifx\Hy@temp\@empty
9747   \else
9748     /ViewerPreferences<<\Hy@temp>>%
9749   \fi
9750   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9751   \ifx\@pdflang\@empty
9752   \else
9753     /Lang(\@pdflang)%
9754   \fi
9755   \ifx\@baseurl\@empty
9756   \else
9757     /URI<</Base(\Hy@pstringB)>>%
9758   \fi
9759   >>%
9760 }%
9761 }%
9762 }
9763 </pdfmark>
9764 <*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.

```

9765 \newif\ifHy@pdfmarkerror
9766 \def\pdfmark{\@ifnextchar{\pdfmark@}{\pdfmark@[]}}
9767 \def\pdfmark@[#1]#2{%
9768   \Hy@pdfmarkerrorfalse
9769   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
9770   \@processme
9771   \let\pdf@type\relax
9772   \setkeys{PDF}{#2}%
9773   \ifHy@pdfmarkerror
9774   \else
9775     \ifx\pdf@type\relax
9776       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
9777       \ifx\#1\%
9778       \else
9779         \pdf@rect{#1}%
9780       \fi
9781     \else
9782       \ifx\#1\%
9783         \literalps@out{%
9784           [\the\pdf@toks\space\pdf@type\space pdfmark%
9785           ]%
9786         \else
9787           \@ifundefined{@pdf@linktype color}{%
9788             \Hy@colorlink\@linkcolor
9789           }{%
9790             \expandafter\Hy@colorlink
9791             \csname @\pdf@linktype color\endcsname
9792           }%

```

```

9793     \pdf@rect{#1}%
9794     \literalps@out{%
9795       [\the\pdf@toks\space\pdf@type\space pdfmark%
9796       ]%
9797       \Hy@endcolorlink
9798     \fi
9799     \fi
9800 \fi
9801 }

```

The complicated bit is working out the right enclosing rectangle of some piece of T_EX text, needed by the /Rect key. This solution originates with Toby Thain (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}

```

```

9802 \newsavebox{\pdf@box}
9803 \providecommand*{\Hy@setouterhbox}{\sbox}
9804 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
9805 \def\Hy@DEST{/DEST}
9806 \def\pdf@rect#1{%
9807   \leavevmode
9808   \ifHy@breaklinks
9809     \Hy@setouterhbox\pdf@box{#1}%
9810   \else
9811     \sbox\pdf@box{#1}%
9812   \fi
9813   \dimen@ht\pdf@box
9814   \ifdim\dp\pdf@box=\z@
9815     \literalps@out{H.S}%
9816   \else
9817     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
9818   \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...).

```

9819 \ifHy@breaklinks
9820   \expandafter\Hy@breaklinksunhbox
9821 \else
9822   \expandafter\box
9823 \fi
9824 \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

```

```

9825 \ifdim\dimen@=\z@
9826   \literalps@out{H.R}%
9827 \else
9828   \raise\dimen@\hbox{\literalps@out{H.R}}%
9829 \fi

```

```

9830 \ifx\pdf@type\Hy@DEST
9831 \else
9832 \pdf@addtoksx{H.B}%
9833 \fi
9834 }

```

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.

```

9835 \newtoks\pdf@toks
9836 \newtoks\pdf@defaulttoks
9837 \pdf@defaulttoks={}%
9838 \def\pdf@addtoks#1#2{%
9839 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
9840 \@processme
9841 }
9842 \def\pdf@addtoksx#1{%
9843 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
9844 \@processme
9845 }
9846 \def\PDFdefaults#1{%
9847 \pdf@defaulttoks={#1}%
9848 }

```

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

```

9849 % what is the type of pdfmark?
9850 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
9851 % what is the link type?
9852 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
9853 \def\pdf@linktype{link}
9854 % parameter is a stream of PDF
9855 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
9856 % parameter is a name
9857 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
9858 % parameter is a array
9859 \define@key{PDF}{Border}{%
9860 \edef\Hy@temp{#1}%
9861 \ifx\Hy@temp\@empty
9862 \else
9863 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
9864 \fi
9865 }
9866 \let\Hy@BorderArrayPatch\@empty
9867 % parameter is a dictionary
9868 \define@key{PDF}{BorderStyle}{%
9869 \edef\Hy@temp{#1}%
9870 \ifx\Hy@temp\@empty
9871 \else
9872 \pdf@addtoks{<<#1>>}{BS}%
9873 \fi
9874 }
9875 % parameter is a array
9876 \define@key{PDF}{Color}{%
9877 \ifx\relax#1\relax
9878 \else
9879 \pdf@addtoks{[#1]}{Color}% hash-ok
9880 \fi
9881 }
9882 % parameter is a string

```

```

9883 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
9884 % parameter is a integer
9885 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
9886 % parameter is a array
9887 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
9888 % parameter is a string
9889 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
9890 % parameter is a string or file
9891 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
9892 % parameter is a destination
9893 \define@key{PDF}{Dest}{%
9894   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9895   \ifx\Hy@pstringDest\@empty
9896     \Hy@pdfmarkerrortrue
9897     \Hy@Warning{Destination with empty name ignored}%
9898   \else
9899     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9900   \fi
9901 }
9902 \define@key{PDF}{DestAnchor}{%
9903   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9904   \ifx\Hy@pstringDest\@empty
9905     \Hy@pdfmarkerrortrue
9906     \Hy@Warning{Destination with empty name ignored}%
9907   \else
9908     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9909   \fi
9910 }
9911 % parameter is a string
9912 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
9913 % parameter is a string
9914 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
9915 % parameter is a int
9916 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
9917 \define@key{PDF}{PDFAFlags}{%
9918   \ifHy@pdfa
9919     \pdf@addtoks{#1}{F}%
9920   \fi
9921 }
9922 % parameter is a name
9923 \define@key{PDF}{AcroHighlight}{%
9924   \begingroup
9925     \edef\x{#1}%
9926     \expandafter\endgroup\ifx\x\@empty
9927     \else
9928       \pdf@addtoks{#1}{H}%
9929     \fi
9930 }
9931 % parameter is a string
9932 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
9933 % parameter is a string
9934 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
9935 % parameter is a string
9936 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9937 % parameter is a string
9938 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
9939 % parameter is a Boolean

```

```

9940 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
9941 % parameter is a integer or name
9942 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
9943 % parameter is a name
9944 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
9945 % parameter is a string
9946 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
9947 % parameter is a array
9948 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
9949 % parameter is a integer
9950 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
9951 % parameter is a name
9952 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
9953 % parameter is a string
9954 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
9955 % parameter is a string
9956 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
9957 % parameter is a string
9958 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
9959 % parameter is an array
9960 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
9961 % parameter is a string
9962 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

9963 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
9964 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
9965 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
9966 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9967 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
9968 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
9969 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
9970 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9971 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
9972 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
9973 \define@key{PDF}{Trapped}{%
9974   \edef\Hy@temp{#1}%
9975   \ifx\Hy@temp\@empty
9976     \else
9977       \pdf@addtoks{/#1}{Trapped}%
9978     \fi
9979 }
9980
9981 </pdfmarkbase>
9982 <*pdfmark>
9983 \def\Acrobatmenu#1#2{%
9984   \Hy@Acrobatmenu{#1}{#2}{%
9985     \pdfmark{#2}{%
9986       linktype=menu,%
9987       pdfmark=/ANN,%
9988       AcroHighlight=\@pdfhighlight,%
9989       Border=\@pdfborder,%
9990       BorderStyle=\@pdfborderstyle,%
9991       Action={<< /Subtype /Named /N /#1 >>},%
9992       Subtype=/Link,%
9993       PDFAMFlags=4%
9994     }%
9995   }%

```

9996 }

And now for some useful examples:

```
9997 \def\PDFNextPage{\@ifnextchar{\PDFNextPage@}{\PDFNextPage@[]}}
9998 \def\PDFNextPage@[#1]#2{%
9999   \pdfmark[#{#2}]{%
10000     #1,%
10001     Border=\@pdfborder,%
10002     BorderStyle=\@pdfborderstyle,%
10003     Color=.2 .1 .5,%
10004     pdfmark=/ANN,%
10005     Subtype=/Link,%
10006     PDFAFlags=4,%
10007     Page=/Next%
10008   }%
10009 }
10010 \def\PDFPreviousPage{%
10011   \@ifnextchar{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
10012 }
10013 \def\PDFPreviousPage@[#1]#2{%
10014   \pdfmark[#{#2}]{%
10015     #1,%
10016     Border=\@pdfborder,%
10017     BorderStyle=\@pdfborderstyle,%
10018     Color=.4 .4 .1,%
10019     pdfmark=/ANN,%
10020     Subtype=/Link,%
10021     PDFAFlags=4,%
10022     Page=/Prev%
10023   }%
10024 }
10025 \def\PDFOpen#1{%
10026   \pdfmark{#1,pdfmark=/DOCVIEW}%
10027 }
```

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

```
10028 \def\hyper@linkurl#1#2{%
10029   \begingroup
10030   \Hy@pstringdef\Hy@pstringURI{#2}%
10031   \hyper@chars
10032   \leavevmode
10033   \pdfmark[#{#1}]{%
10034     pdfmark=/ANN,%
10035     linktype=url,%
10036     AcroHighlight=\@pdfhighlight,%
10037     Border=\@pdfborder,%
10038     BorderStyle=\@pdfborderstyle,%
10039     Color=\@urlbordercolor,%
10040     Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
10041     Subtype=/Link,%
10042     PDFAFlags=4%
10043   }%
10044   \endgroup
10045 }
10046 \def\hyper@linkfile#1#2#3{%
10047   \begingroup
10048   \Hy@pstringdef\Hy@pstringF{#2}%
10049   \Hy@pstringdef\Hy@pstringD{#3}%
```

```

10050 \leavevmode
10051 \pdfmark[#{#1}]{%
10052 pdfmark=/ANN,%
10053 Subtype=/Link,%
10054 PDFAFlags=4,%
10055 AcroHighlight=\@pdfhighlight,%
10056 Border=\@pdfborder,%
10057 BorderStyle=\@pdfborderstyle,%
10058 linktype=file,%
10059 Color=\@filebordercolor,%
10060 Action={%
10061 <<%
10062 /S/GoToR%
10063 \Hy@SetNewWindow
10064 /F(\Hy@pstringF)%
10065 /D\ifx\#3\@0 \@pdfstartview\else(\Hy@pstringD)cvn\fi
10066 >>%
10067 }%
10068 }%
10069 \endgroup
10070 }
10071 \def\@hyper@launch run:#{#1}\#2#3{%
10072 \begingroup
10073 \Hy@pstringdef\Hy@pstringF{#{#1}%
10074 \Hy@pstringdef\Hy@pstringP{#{#3}%
10075 \leavevmode
10076 \pdfmark[#{#2}]{%
10077 pdfmark=/ANN,%
10078 Subtype=/Link,%
10079 PDFAFlags=4,%
10080 AcroHighlight=\@pdfhighlight,%
10081 Border=\@pdfborder,%
10082 BorderStyle=\@pdfborderstyle,%
10083 linktype=run,%
10084 Color=\@runbordercolor,%
10085 Action={%
10086 <<%
10087 /S/Launch%
10088 \Hy@SetNewWindow
10089 /F(\Hy@pstringF)%
10090 \ifx\#3\%
10091 \else
10092 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
10093 \fi
10094 >>%
10095 }%
10096 }%
10097 \endgroup
10098 }
10099 \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.

```
10100 <*dvips>
10101 \providecommand*\XR@ext}{pdf}
10102 \def\Hy@raisedlink{}
10103 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
10104 \def\headerps@out#1{\special{! #1}}%
10105 \input{pdfmark.def}%
10106 \ifx\@pdfproducer\relax
10107 \def\@pdfproducer{dvips + Distiller}%
10108 \fi
10109 \providecommand*\@pdfborder{0 0 1}
10110 \providecommand*\@pdfborderstyle{}
10111 \providecommand*\@pdfview{XYZ}
10112 \providecommand*\@pdfviewparams{ H.V}
10113 \def\Hy@BorderArrayPatch{BorderArrayPatch}
10114 \g@addto@macro\Hy@FirstPageHook{%
10115 \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.

```
10116 /DvipsToPDF{72.27 mul Resolution div} def%
10117 /PDFToDvips{72.27 div Resolution mul} def%
10118 /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.

```
10119 /BorderArrayPatch{%
10120 [exch{%
10121 dup dup type/integertype eq exch type/realttype eq or%
10122 {BPToDvips}if%
10123 }forall]%
10124 }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.

```
10125 /HyperBorder {1 PDFToDvips} def%
10126 /H.V {pdf@hoff pdf@voff null} def%
10127 /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

```
10128 /H.S {%
10129 currentpoint %
10130 HyperBorder add /pdf@lly exch def %
10131 dup DvipsToPDF 72 add /pdf@hoff exch def %
10132 HyperBorder sub /pdf@llx exch def%
10133 } 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`

```

10134 /H.L {%
10135 2 sub dup%
10136 /HyperBasePt exch def %
10137 PDFToDvips /HyperBaseDvips exch def %
10138 currentpoint %
10139 HyperBaseDvips sub /pdf@ury exch def%
10140 /pdf@urx exch def%
10141 } def%
10142 /H.A {%
10143 H.L %
10144 % |/pdf@voff| = the distance from the top of the page to a point
10145 % |\baselineskip| above the current point in PDF coordinates
10146 currentpoint exch pop %
10147 vsize 72 sub exch DvipsToPDF %
10148 HyperBasePt sub % baseline skip
10149 sub /pdf@voff exch def%
10150 } def%
10151 /H.R {%
10152 currentpoint %
10153 HyperBorder sub /pdf@ury exch def %
10154 HyperBorder add /pdf@urx exch def %
10155 % |/pdf@voff| = the distance from the top of the page to the current point, in
10156 % PDF coordinates
10157 currentpoint exch pop vsize 72 sub %
10158 exch DvipsToPDF sub /pdf@voff exch def%
10159 } def%
10160 }%
10161 }
10162 \AtBeginShipoutFirst{%
10163 \ifHy@setpagesize
10164 \begingroup
10165 \@ifundefined{stockwidth}{%
10166 \ifdim\paperwidth>\z@
10167 \ifdim\paperheight>\z@
10168 \special{papersize=\the\paperwidth,\the\paperheight}%
10169 \fi
10170 \fi
10171 }{%
10172 \ifdim\stockwidth>\z@
10173 \ifdim\stockheight>\z@
10174 \special{papersize=\the\stockwidth,\the\stockheight}%
10175 \fi
10176 \fi
10177 }%
10178 \endgroup
10179 \fi
10180 \Hy@DisableOption{setpagesize}%
10181 }
10182 \</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.

```
10183 \*vtexpdfmark)
10184 \providecommand*\XR@ext}{pdf}
10185 \def\Hy@raisedlink{}
10186 \def\literalps@out#1{\special{pS:#1}}%
10187 \def\headerps@out#1{\immediate\special{pS:#1}}%
10188 \input{pdfmark.def}%
10189 \ifx\@pdfproducer\relax
10190 \ifnum\OpMode=\@one
10191 \def\@pdfproducer{VTeX}%
10192 \else
10193 \def\@pdfproducer{VTeX + Distiller}%
10194 \fi
10195 \fi
10196 \providecommand*\@pdfborder{0 0 1}
10197 \providecommand*\@pdfborderstyle{}
10198 \providecommand*\@pdfview{XYZ}
10199 \providecommand*\@pdfviewparams{ H.V}

10200 \g@addto@macro\Hy@FirstPageHook{%
10201 \headerps@out{%
10202 /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.

```
10203 /HyperBorder {1} def%
10204 /H.V {pdf@hoff pdf@voff null} def%
10205 /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```
10206 /H.S {%
10207 currentpoint %
10208 HyperBorder sub%
10209 /pdf@lly exch def %
10210 dup 72 add /pdf@hoff exch def %
10211 HyperBorder sub%
10212 /pdf@llx exch def%
10213 } def%
```

The x and y coordinates of the current point, minus the `\baselineskip`: $\text{pdf@ury} = Y_c + \text{HyperBasePt} + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```
10214 /H.L {%
10215 2 sub%
10216 /HyperBasePt exch def %
10217 currentpoint %
10218 HyperBasePt add HyperBorder add%
10219 /pdf@ury exch def %
10220 HyperBorder add%
10221 /pdf@urx exch def%
10222 } def%
10223 /H.A {%
```

```

10224     H.L %
10225     currentpoint exch pop %
10226     vsize 72 sub exch %
10227     HyperBasePt add add%
10228     /pdf@voff exch def%
10229     } def%
pdf@ury =  $Y_c + \text{HyperBorder}$ , pdf@urx =  $X_c + \text{HyperBorder}$ 
10230     /H.R {%
10231     currentpoint %
10232     HyperBorder add%
10233     /pdf@ury exch def %
10234     HyperBorder add%
10235     /pdf@urx exch def %
10236     currentpoint exch pop vsize 72 sub add%
10237     /pdf@voff exch def%
10238     } def%
10239     }%
10240 }
10241 </vtexpdfmark>

```

46.11 Textures

```

10242 <*textures>
10243 \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.

```

10244 \begingroup
10245 \obeylines %
10246 \gdef\Hy@ps@CR{\noexpand
10247 }%
10248 \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`.

```

10249 \def\literalps@out#1{%
10250   \special{postscript 0 0 transform}%
10251   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
10252 }%
10253 %

```

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.

```

10254 \def\headerps@out#1{%
10255   \special{%
10256     prepostscript TeXdict begin\Hy@ps@CR
10257       #1\Hy@ps@CR
10258     end%
10259   }%
10260 }%
10261 %

```

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.

```

10262 \g@addto@macro\Hy@FirstPageHook{%
10263   \headerps@out{%
10264     /betterpdfmark {%
10265       systemdict begin %
10266         dup /BP eq%
10267         {cleartomark gsave nulldevice []%
10268           {dup /EP eq%
10269             {cleartomark cleartomark grestore}%
10270           {cleartomark}%
10271           ifelse%
10272         }ifelse %
10273       end%
10274     }def\Hy@ps@CR
10275     ___pdfmark___ not{/pdfmark /betterpdfmark load def}if%
10276   }% end of \headerps@out
10277 }% end of \AtBeginShipoutFirst
10278 %
10279 \input{pdfmark.def}%
10280 %
10281 \ifx\@pdfproducer\relax
10282   \def\@pdfproducer{Textures + Distiller}%
10283 \fi
10284 \providecommand*\@pdfborder{0 0 1}
10285 \providecommand*\@pdfborderstyle{}
10286 \providecommand*\@pdfview{XYZ}
10287 \providecommand*\@pdfviewparams{ H.V}
10288 %

```

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 .

```

10289 \AfterBeginDocument{%
10290   \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

10291   /vsize {\Hy@pageheight} def%
10292   /DvipsToPDF {} def%
10293   /PDFToDvips {} def%
10294   /BPToDvips {} def%
10295   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
10296   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR

```

```

10297 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
10298 /H.S {%
10299   currentpoint %
10300   HyperBorder add /pdf@lly exch def %
10301   dup DvipsToPDF 72 add /pdf@hoff exch def %
10302   HyperBorder sub /pdf@llx exch def%
10303 } def\Hy@ps@CR
10304 /H.L {%
10305   2 sub %
10306   PDFToDvips /HyperBase exch def %
10307   currentpoint %
10308   HyperBase sub /pdf@ury exch def%
10309   /pdf@urx exch def%
10310 } def\Hy@ps@CR
10311 /H.A {%
10312   H.L %
10313   currentpoint exch pop %
10314   vsize 72 sub exch DvipsToPDF %
10315   HyperBase sub % baseline skip
10316   sub /pdf@voff exch def%
10317 } def\Hy@ps@CR
10318 /H.R {%
10319   currentpoint %
10320   HyperBorder sub /pdf@ury exch def %
10321   HyperBorder add /pdf@urx exch def %
10322   currentpoint exch pop vsize 72 sub %
10323   exch DvipsToPDF sub /pdf@voff exch def%
10324 } def\Hy@ps@CR
10325 }%
10326 }

10327 \AfterBeginDocument{%
10328   \ifHy@colorlinks
10329     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
10330   \fi
10331 }

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.

10332 \expandafter\let\expandafter\keepPDF@SetupDoc
10333   \csname PDF@SetupDoc\endcsname
10334 \def\PDF@SetupDoc{%
10335   \ifx\@baseurl\@empty
10336     \else
10337     \special{html:<base href="\@baseurl">}%
10338   \fi
10339   \keepPDF@SetupDoc
10340 }
10341 \def\hyper@anchor#1{%
10342   \Hy@SaveLastskip
10343   \Hy@VerboseAnchor{#1}%
10344   \begingroup
10345     \let\protect=\string
10346     \special{html:<a name=%
10347       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10348   \endgroup
10349   \Hy@activeanchortrue
10350   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink

```

```

10351 \special{html:</a>}%
10352 \Hy@activeanchorfalse
10353 \Hy@RestoreLastskip
10354 }
10355 \def\hyper@anchorstart#1{%
10356 \Hy@SaveLastskip
10357 \Hy@VerboseAnchor{#1}%
10358 \begingroup
10359 \hyper@chars
10360 \special{html:<a name=%
10361 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10362 \endgroup
10363 \Hy@activeanchortrue
10364 }
10365 \def\hyper@anchorend{%
10366 \special{html:</a>}%
10367 \Hy@activeanchorfalse
10368 \Hy@RestoreLastskip
10369 }
10370 \def\@urlltype{url}
10371 \def\hyper@linkstart#1#2{%
10372 \Hy@VerboseLinkStart{#1}{#2}%
10373 \expandafter\Hy@colorlink\csname @#1color\endcsname
10374 \def\Hy@tempa{#1}%
10375 \ifx\Hy@tempa\@urlltype
10376 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10377 \else
10378 \begingroup
10379 \hyper@chars
10380 \special{%
10381 html:<a href=%
10382 \hyper@quote#\HyperDestNameFilter{#2}\hyper@quote>%
10383 }%
10384 \endgroup
10385 \fi
10386 }
10387 \def\hyper@linkend{%
10388 \special{html:</a>}%
10389 \Hy@endcolorlink
10390 }
10391 \def\hyper@linkfile#1#2#3{%
10392 \hyper@linkurl{#1}{%
10393 \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
10394 }%
10395 }
10396 \def\hyper@linkurl#1#2{%
10397 \leavevmode
10398 \ifHy@raiselinks
10399 \setbox\@tempboxa=\color@hbox #1\color@endbox
10400 \@linkdim\dp\@tempboxa
10401 \lower\@linkdim\hbox{%
10402 \hyper@chars
10403 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10404 }%
10405 \Hy@colorlink\@urllcolor#1%
10406 \@linkdim\ht\@tempboxa
10407 \advance\@linkdim by -6.5\p@

```

```

10408 \raise\@linkdim\hbox{\special{html:</a>}}%
10409 \Hy@endcolorlink
10410 \else
10411 \begingroup
10412 \hyper@chars
10413 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
10414 \Hy@colorlink\@urlcolor#1%
10415 \special{html:</a>}%
10416 \Hy@endcolorlink
10417 \endgroup
10418 \fi
10419 }

```

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

```

10420 \def\hyper@link#1#2#3{%
10421 \Hy@VerboseLinkStart{#1}{#2}%
10422 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
10423 }
10424 \def\hyper@image#1#2{%
10425 \begingroup
10426 \hyper@chars
10427 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
10428 \endgroup
10429 }
10430 </textures>

```

46.12 dvipsone

```

10431 % \subsection{dvipsone driver}
10432 % Over-ride the default setup macro in pdfmark driver to use Y&Y
10433 % | \special| commands.
10434 < *dvipsone>
10435 \providecommand*{\XR@ext}{pdf}
10436 \def\Hy@raisedlink{}
10437 \providecommand*\@pdfborder{0 0 1}
10438 \providecommand*\@pdfborderstyle{}
10439 \def\literalps@out#1{\special{ps:#1}}%
10440 \def\headerps@out#1{\special{headertext=#1}}%
10441 \input{pdfmark.def}%
10442 \ifx\@pdfproducer\relax
10443 \def\@pdfproducer{dvipsone + Distiller}%
10444 \fi
10445 \HyInfo@AddonUnsupportedtrue
10446 \def\PDF@FinishDoc{%
10447 \Hy@UseMaketitleInfos
10448 \HyInfo@TrappedUnsupported
10449 \special{PDF: Keywords \@pdfkeywords}%
10450 \special{PDF: Title \@pdftitle}%
10451 \special{PDF: Creator \@pdfcreator}%
10452 \ifx\@pdfcreationdate\@empty
10453 \else
10454 \special{PDF: CreationDate \@pdfcreationdate}%
10455 \fi
10456 \ifx\@pdfmoddate\@empty
10457 \else
10458 \special{PDF: ModDate \@pdfmoddate}%
10459 \fi
10460 \special{PDF: Author \@pdfauthor}%

```

```

10461 \ifx\@pdfproducer\relax
10462 \else
10463 \special{PDF: Producer \@pdfproducer}%
10464 \fi
10465 \special{PDF: Subject \@pdfsubject}%
10466 \Hy@DisableOption{pdfauthor}%
10467 \Hy@DisableOption{pdftitle}%
10468 \Hy@DisableOption{pdfsubject}%
10469 \Hy@DisableOption{pdfcreator}%
10470 \Hy@DisableOption{pdfcreationdate}%
10471 \Hy@DisableOption{pdfmoddate}%
10472 \Hy@DisableOption{pdfproducer}%
10473 \Hy@DisableOption{pdfkeywords}%
10474 \Hy@DisableOption{pdftrapped}%
10475 \Hy@DisableOption{pdfinfo}%
10476 }
10477 \def\PDF@SetupDoc{%
10478 \def\Hy@temp{}%
10479 \ifx\@pdfstartpage\@empty
10480 \else
10481 \ifx\@pdfstartview\@empty
10482 \else
10483 \edef\Hy@temp{%
10484 ,Page=\@pdfstartpage
10485 ,View=\@pdfstartview
10486 }%
10487 \fi
10488 \fi
10489 \edef\Hy@temp{%
10490 \noexpand\pdfmark{%
10491 pdfmark=/DOCVIEW,%
10492 PageMode=/\@pdfpagemode
10493 \Hy@temp
10494 }%
10495 }%
10496 \Hy@temp
10497 \ifx\@pdfpagescrop\@empty
10498 \else
10499 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10500 \fi
10501 \edef\Hy@temp{%
10502 \ifHy@toolbar\else /HideToolbar true\fi
10503 \ifHy@menubar\else /HideMenubar true\fi
10504 \ifHy>windowui\else /HideWindowUI true\fi
10505 \ifHy@fitwindow /FitWindow true\fi
10506 \ifHy@centerwindow /CenterWindow true\fi
10507 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10508 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10509 \Hy@UseNameKey{Direction}\@pdfdirection
10510 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10511 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10512 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10513 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10514 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10515 \Hy@UseNameKey{Duplex}\@pdfduplex
10516 \ifx\@pdfpicktraybypdfsize\@empty
10517 \else

```



```

10518 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10519 \fi
10520 \ifx\@pdfprintpagerange\@empty
10521 \else
10522 /PrintPageRange\@pdfprintpagerange]%
10523 \fi
10524 \ifx\@pdfnumcopies\@empty
10525 \else
10526 /NumCopies \@pdfnumcopies
10527 \fi
10528 }%
10529 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10530 \pdfmark{%
10531 pdfmark=/PUT,%
10532 Raw={%
10533 \string{Catalog\string}<<%
10534 \ifx\Hy@temp\@empty
10535 \else
10536 /ViewerPreferences<<\Hy@temp>>%
10537 \fi
10538 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10539 \ifx\@pdflang\@empty
10540 \else
10541 /Lang(\@pdflang)%
10542 \fi
10543 \ifx\@baseurl\@empty
10544 \else
10545 /URI<</Base(\Hy@pstringB)>>%
10546 \fi
10547 >>%
10548 }%
10549 }%
10550 }
10551 \providecommand*\@pdfview{XYZ}
10552 \providecommand*\@pdfviewparams{ %
10553 gsave revscl currentpoint grestore %
10554 72 add exch pop null exch null%
10555 }
10556 \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.

```

10557 \g@addto@macro\Hy@FirstPageHook{%
10558 \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

10559 /DvipsToPDF { 65781 div } def%
10560 /PDFToDvips { 65781 mul } def%
10561 /BPToDvips{65781 mul}def%
10562 /HyperBorder { 1 PDFToDvips } def%
10563 /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.

```

10564 /BorderArrayPatch{%

```

```

10565 [exch{%
10566   dup dup type/integertype eq exch type/realttype eq or%
10567   {BPToDvips}if%
10568   }forall}%
10569 }def%
10570 /H.S {%
10571   currentpoint %
10572   HyperBorder add /pdf@lly exch def %
10573   dup DvipsToPDF 72 add /pdf@hoff exch def %
10574   HyperBorder sub /pdf@llx exch def%
10575   } def%
10576 /H.L {%
10577   2 sub %
10578   PDFToDvips /HyperBase exch def %
10579   currentpoint %
10580   HyperBase sub /pdf@ury exch def%
10581   /pdf@urx exch def%
10582   } def%
10583 /H.A {%
10584   H.L %
10585   currentpoint exch pop %
10586   HyperBase sub % baseline skip
10587   DvipsToPDF /pdf@voff exch def%
10588   } def%
10589 /H.R {%
10590   currentpoint %
10591   HyperBorder sub /pdf@ury exch def %
10592   HyperBorder add /pdf@urx exch def %
10593   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
10594   } def%
10595 }%
10596 }
10597 </dvipsone>

```

46.13 TeX4ht

```

10598 <*tex4ht>
10599 \providecommand*{\XR@ext}{html}
10600 \def\Hy@raisedlink{}
10601 \@ifpackageloaded{tex4ht}{%
10602   \typeout{hyperref tex4ht: tex4ht already loaded}%
10603 }{%
10604   \RequirePackage[hhtex4ht]{tex4ht}%
10605 }
10606 \hyperlinkfileprefix{}
10607 \def\PDF@FinishDoc{}
10608 \def\PDF@SetupDoc{%
10609   \ifx\@baseurl\@empty
10610   \else
10611     \special{t4ht=<base href="\@baseurl">}%
10612   \fi
10613 }
10614 \def\hyper@anchor#1{%
10615   \Hy@SaveLastskip
10616   \Hy@VerboseAnchor{#1}%
10617   \begingroup
10618     \let\protect=\string
10619     \special{t4ht=<a name=%

```

```

10620     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10621 \endgroup
10622 \Hy@activeanchortrue
10623 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10624 \special{t4ht=</a>}%
10625 \Hy@activeanchorfalse
10626 \Hy@RestoreLastskip
10627 }
10628 \def\hyper@anchorstart#1{%
10629 \Hy@SaveLastskip
10630 \Hy@VerboseAnchor{#1}%
10631 \begingroup
10632 \hyper@chars\special{t4ht=<a name=%
10633 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10634 \endgroup
10635 \Hy@activeanchortrue
10636 }
10637 \def\hyper@anchorend{%
10638 \special{t4ht=</a>}%
10639 \Hy@activeanchorfalse
10640 \Hy@RestoreLastskip
10641 }
10642 \def\@urltype{url}
10643 \def\hyper@linkstart#1#2{%
10644 \Hy@VerboseLinkStart{#1}{#2}%
10645 \expandafter\Hy@colorlink\csname @#1color\endcsname
10646 \def\Hy@tempa{#1}%
10647 \ifx\Hy@tempa\@urltype
10648 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10649 \else
10650 \begingroup
10651 \hyper@chars
10652 \special{t4ht=<a href=%
10653 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10654 \endgroup
10655 \fi
10656 }
10657 \def\hyper@linkend{%
10658 \special{t4ht=</a>}%
10659 \Hy@endcolorlink
10660 }
10661 \def\hyper@linkfile#1#2#3{%
10662 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\else\#3\fi}%
10663 }
10664 \def\hyper@linkurl#1#2{%
10665 \leavevmode
10666 \ifHy@raiselinks
10667 \setbox\@tempboxa=\color@hbox #1\color@endbox
10668 \@linkdim\dp\@tempboxa
10669 \lower\@linkdim\hbox{%
10670 \begingroup
10671 \hyper@chars
10672 \special{%
10673 t4ht=<a href=\hyper@quote#2\hyper@quote>%
10674 }%
10675 \endgroup
10676 }%

```

```

10677 \Hy@colorlink \@urlcolor#1\Hy@endcolorlink
10678 \@linkdim\ht\@tempboxa
10679 \advance\@linkdim by -6.5\p@
10680 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
10681 \else
10682 \begingroup
10683 \hyper@chars
10684 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10685 \Hy@colorlink \@urlcolor#1\Hy@endcolorlink
10686 \special{t4ht=</a>}%
10687 \endgroup
10688 \fi
10689 }

```

Poor implementation of \hyper@link without considering #1.

```

10690 \def\hyper@link#1#2#3{%
10691 \Hy@VerboseLinkStart{#1}{#2}%
10692 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
10693 }
10694 \def\hyper@image#1#2{%
10695 \begingroup
10696 \hyper@chars
10697 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
10698 \endgroup
10699 }
10700 \let\autoref\ref
10701 \ifx \rEfLiNK \UnDef
10702 \def\rEfLiNK #1#2{#2}%
10703 \fi
10704 \def\backref#1{}
10705 </tex4ht>
10706 <*tex4htcfg>
10707 \IfFileExists{\jobname.cfg}{\endinput}{}
10708 \Preamble{html}
10709 \begin{document}%
10710 \EndPreamble
10711 \def\TeX{TeX}
10712 \def\OMEGA{Omega}
10713 \def\LaTeX{LaTeX}
10714 \def\LaTeXe{\LaTeX2e}
10715 \def\eTeX{e-TeX}
10716 \def\MF{Metafont}
10717 \def\MP{MetaPost}
10718 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

10719 <*pdfmark>
10720 \long\def\@Form[#1]{%
10721 \g@addto@macro\Hy@FirstPageHook{%
10722 \headerps@out{%
10723 [%
10724 /_objdef{pdfDocEncoding}%
10725 /type/dict%
10726 /OBJ pdfmark%
10727 [%

```

10728 {pdfDocEncoding}%
10729 <<%
10730 /Type/Encoding%
10731 /Differences[%
10732 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
10733 /tilde %
10734 39/quotesingle %
10735 96/grave %
10736 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10737 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10738 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10739 /quoteright/quotesinglbase/trademark/ffi/fl/Lslash/OE/Scaron%
10740 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10741 164/currency %
10742 166/brokenbar %
10743 168/dieresis/copyright/ordfeminine %
10744 172/logicalnot/.notdef/registered/macron/degree/plusminus%
10745 /twosuperior/threesuperior/acute/mu %
10746 183/periodcentered/cedilla/onesuperior/ordmasculine %
10747 188/onequarter/onehalf/threequarters %
10748 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10749 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10750 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10751 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10752 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10753 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10754 /cedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10755 /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
10756 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
10757 /ucircumflex/udieresis/yacute/thorn/ydieresis%
10758]%
10759 >>%
10760 /PUT pdfmark%
10761 [%
10762 /_objdef{ZaDb}%
10763 /type/dict%
10764 /OBJ pdfmark%
10765 [%
10766 {ZaDb}%
10767 <<%
10768 /Type/Font%
10769 /Subtype/Type1%
10770 /Name/ZaDb%
10771 /BaseFont/ZapfDingbats%
10772 >>%
10773 /PUT pdfmark%
10774 [%
10775 /_objdef{Helv}%
10776 /type/dict%
10777 /OBJ pdfmark%
10778 [%
10779 {Helv}%
10780 <<%
10781 /Type/Font%
10782 /Subtype/Type1%
10783 /Name/Helv%
10784 /BaseFont/Helvetica%

```

10785 /Encoding{pdfDocEncoding}%
10786 >>%
10787 /PUT pdfmark%
10788 [%
10789 /_objdef{aform}%
10790 /type/dict%
10791 /OBJ pdfmark%
10792 [%
10793 /_objdef{afields}%
10794 /type/array%
10795 /OBJ pdfmark%
10796 {%
10797 [%
10798 /BBox[0 0 100 100]%
10799 /_objdef{Check}%
10800 /BP pdfmark %
10801 1 0 0 setrgbcolor%
10802 /ZapfDingbats 80 selectfont %
10803 20 20 moveto%
10804 (4)show%
10805 [/EP pdfmark%
10806 [%
10807 /BBox[0 0 100 100]%
10808 /_objdef{Cross}%
10809 /BP pdfmark %
10810 1 0 0 setrgbcolor%
10811 /ZapfDingbats 80 selectfont %
10812 20 20 moveto%
10813 (8)show%
10814 [/EP pdfmark%
10815 [%
10816 /BBox[0 0 250 100]%
10817 /_objdef{Submit}%
10818 /BP pdfmark %
10819 0.6 setgray %
10820 0 0 250 100 rectfill %
10821 1 setgray %
10822 2 2 moveto %
10823 2 98 lineto %
10824 248 98 lineto %
10825 246 96 lineto %
10826 4 96 lineto %
10827 4 4 lineto %
10828 fill %
10829 0.34 setgray %
10830 248 98 moveto %
10831 248 2 lineto %
10832 2 2 lineto %
10833 4 4 lineto %
10834 246 4 lineto %
10835 246 96 lineto %
10836 fill%
10837 /Helvetica 76 selectfont %
10838 0 setgray %
10839 8 22.5 moveto%
10840 (Submit)show%
10841 [/EP pdfmark%

```

```

10842 [%
10843   /BBox[0 0 250 100]%
10844   /_objdef{SubmitP}%
10845 /EP pdfmark %
10846 0.6 setgray %
10847 0 0 250 100 rectfill %
10848 0.34 setgray %
10849 2 2 moveto %
10850 2 98 lineto %
10851 248 98 lineto %
10852 246 96 lineto %
10853 4 96 lineto %
10854 4 4 lineto %
10855 fill %
10856 1 setgray %
10857 248 98 moveto %
10858 248 2 lineto %
10859 2 2 lineto %
10860 4 4 lineto %
10861 246 4 lineto %
10862 246 96 lineto %
10863 fill%
10864 /Helvetica 76 selectfont %
10865 0 setgray %
10866 10 20.5 moveto%
10867 (Submit)show%
10868 [/EP pdfmark%
10869 }?pdfmark%
10870 [%
10871 {aform}%
10872 <<%
10873   /Fields{afields}%
10874   /DR<<%
10875     /Font<<%
10876       /ZaDb{ZaDb}%
10877       /Helv{Helv}%
10878     >>%
10879   >>%
10880   /DA(/Helv 10 Tf 0 g)%
10881   /CO{corder}%
10882   \ifHy@pdfa
10883   \else
10884     /NeedAppearances true%
10885   \fi
10886 >>%
10887 /PUT pdfmark%
10888 [%
10889 {Catalog}%
10890 <<%
10891   /AcroForm{aform}%
10892 >>%
10893 /PUT pdfmark%
10894 [%
10895   /_objdef{corder}%
10896   /type/array%
10897 /OBJ pdfmark% dps
10898 ]}%

```

```

10899 \setkeys{Form}{#1}%
10900 }
10901 \def\@endForm{}
10902 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10903 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
10904 }
10905 \def\@TextField[#1]#2{% parameters, label
10906 \def\Fld@name{#2}%
10907 \def\Fld@default{}%
10908 \let\Fld@value\@empty
10909 \def\Fld@width{\DefaultWidthofText}%
10910 \def\Fld@height{%
10911 \ifFld@multiline
10912 \DefaultHeightofTextMultiline
10913 \else
10914 \DefaultHeightofText
10915 \fi
10916 }%
10917 \begingroup
10918 \Field@toks={ }%
10919 \expandafter\HyField@SetKeys\expandafter{%
10920 \DefaultOptionsofText,#1%
10921 }%
10922 \HyField@FlagsText
10923 \ifFld@hidden\def\Fld@width{1sp}\fi
10924 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10925 \LayoutTextField{#2}{%
10926 \Hy@escapeform\PDFForm@Text
10927 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
10928 pdfmark=/ANN,Raw={\PDFForm@Text}%
10929 }%
10930 }%
10931 \endgroup
10932 }
10933 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10934 \def\Fld@name{#2}%
10935 \let\Fld@default\relax
10936 \let\Fld@value\relax
10937 \def\Fld@width{\DefaultWidthofChoiceMenu}%
10938 \def\Fld@height{\DefaultHeightofChoiceMenu}%
10939 \begingroup
10940 \Fld@menulength=0 %
10941 \@tempdima\z@
10942 \@for\@curropt=#3\do{%
10943 \expandafter\Fld@checkequals\@curropt==\@%
10944 \Hy@StepCount\Fld@menulength
10945 \settowidth{\@tempdimb}{\@currDisplay}%
10946 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10947 }%
10948 \advance\@tempdima by 15\p@
10949 \Field@toks={ }%
10950 \begingroup
10951 \HyField@SetKeys{#1}%
10952 \edef\x{\endgroup
10953 \noexpand\expandafter
10954 \noexpand\HyField@SetKeys
10955 \noexpand\expandafter{%

```



```

10956 \expandafter\noexpand\csname DefaultOptionsof%
10957 \ifFld@radio
10958 Radio%
10959 \else
10960 \ifFld@combo
10961 \ifFld@popdown
10962 PopdownBox%
10963 \else
10964 ComboBox%
10965 \fi
10966 \else
10967 ListBox%
10968 \fi
10969 \fi
10970 \endcsname
10971 }%
10972 }\x
10973 \HyField@SetKeys{#1}%
10974 \ifFld@hidden\def\Fld@width{1sp}\fi
10975 \ifx\Fld@value\relax
10976 \let\Fld@value\Fld@default
10977 \fi
10978 \LayoutChoiceField{#2}{%
10979 \ifFld@radio
10980 \HyField@FlagsRadioButton
10981 \@@Radio{#3}%
10982 \else
10983 \begingroup
10984 \HyField@FlagsChoice
10985 \ifdim\Fld@width<\@tempdima
10986 \ifdim\@tempdima<1cm\@tempdima1cm\fi
10987 \edef\Fld@width{\the\@tempdima}%
10988 \fi
10989 \ifFld@combo
10990 \else
10991 \@tempdima=\the\Fld@menulength\Fld@charsize
10992 \advance\@tempdima by \Fld@borderwidth bp %
10993 \advance\@tempdima by \Fld@borderwidth bp %
10994 \edef\Fld@height{\the\@tempdima}%
10995 \fi
10996 \@@ListBox{#3}%
10997 \endgroup
10998 \fi
10999 }%
11000 \endgroup
11001 }
11002 \def\@@Radio#1{%
11003 \Fld@listcount=0 %
11004 \@for\@curropt=#1\do{%
11005 \expandafter\Fld@checkequals\@curropt==\%
11006 \Hy@StepCount\Fld@listcount
11007 \@currDisplay\space
11008 \Hy@escapeform\PDFForm@Radio
11009 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
11010 pdfmark=/ANN,%
11011 Raw={%
11012 \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%

```

```

11013 }%
11014 } % deliberate space between radio buttons
11015 }%
11016 }
11017 \newcount\Fld@listcount
11018 \def\@@ListBox#1{%
11019 \HyField@PDFChoices{#1}%
11020 \Hy@escapeform\PDFForm@List
11021 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
11022 pdfmark=/ANN,Raw={\PDFForm@List}%
11023 }%
11024 }
11025 \def\@PushButton[#1]#2{% parameters, label
11026 \def\Fld@name{#2}%
11027 \begingroup
11028 \Field@toks={ }%
11029 \expandafter\HyField@SetKeys\expandafter{%
11030 \DefaultOptionsofPushButton,#1%
11031 }%
11032 \ifHy@pdfa
11033 \PackageError{hyperref}{%
11034 PDF/A: Push button with JavaScript is prohibited%
11035 }{\@ehc
11036 \LayoutPushButtonField{%
11037 \leavevmode
11038 \MakeButtonField{#2}%
11039 }%
11040 \else
11041 \HyField@FlagsPushButton
11042 \ifFld@hidden\def\Fld@width{1sp}\fi
11043 \LayoutPushButtonField{%
11044 \leavevmode
11045 \Hy@escapeform\PDFForm@Push
11046 \pdfmark[\MakeButtonField{#2}]{%
11047 pdfmark=/ANN,Raw={\PDFForm@Push}%
11048 }%
11049 }%
11050 \fi
11051 \endgroup
11052 }
11053 \def\@Submit[#1]#2{%
11054 \Field@toks={ }%
11055 \def\Fld@width{\DefaultWidthofSubmit}%
11056 \def\Fld@height{\DefaultHeightofSubmit}%
11057 \begingroup
11058 \expandafter\HyField@SetKeys\expandafter{%
11059 \DefaultOptionsofSubmit,#1%
11060 }%
11061 \HyField@FlagsPushButton
11062 \HyField@FlagsSubmit
11063 \ifFld@hidden\def\Fld@width{1sp}\fi
11064 \Hy@escapeform\PDFForm@Submit
11065 \pdfmark[\MakeButtonField{#2}]{%
11066 pdfmark=/ANN,%
11067 Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
11068 }%
11069 \endgroup

```

```

11070 }
11071 \def\@Reset[#1]#2{%
11072   \Field@toks={ }%
11073   \def\Fld@width{\DefaultWidthofReset}%
11074   \def\Fld@height{\DefaultHeightofReset}%
11075   \begingroup
11076   \expandafter\HyField@SetKeys\expandafter{%
11077     \DefaultOptionsofReset,#1%
11078   }%
11079   \leavevmode
11080   \ifHy@pdfa
11081     \PackageError{hyperref}{%
11082       PDF/A: Reset action is prohibited%
11083     }\@ehc
11084     \MakeButtonField{#2}%
11085   \else
11086     \HyField@FlagsPushButton
11087     \ifFld@hidden\def\Fld@width{1sp}\fi
11088     \Hy@escapeform\PDFForm@Reset
11089     \pdfmark[\MakeButtonField{#2}]{%
11090       pdfmark=/ANN,Raw={\PDFForm@Reset}%
11091     }%
11092     \fi
11093   \endgroup
11094 }%
11095 \def\@CheckBox[#1]#2{% parameters, label
11096   \def\Fld@name{#2}%
11097   \def\Fld@default{0}%
11098   \begingroup
11099   \def\Fld@width{\DefaultWidthofCheckBox}%
11100   \def\Fld@height{\DefaultHeightofCheckBox}%
11101   \Field@toks={ }%
11102   \expandafter\HyField@SetKeys\expandafter{%
11103     \DefaultOptionsofCheckBox,#1%
11104   }%
11105   \HyField@FlagsCheckBox
11106   \ifFld@hidden\def\Fld@width{1sp}\fi
11107   \LayoutCheckField{#2}{%
11108     \Hy@escapeform\PDFForm@Check
11109     \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
11110       pdfmark=/ANN,Raw={\PDFForm@Check}%
11111     }%
11112   }%
11113   \endgroup
11114 }
11115 \pdfmark

```

47.2 HyperTeX

```

11116 \langle*hypertext\rangle
11117 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
11118 \def\@endForm{}
11119 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11120   \typeout{Sorry, HyperTeX does not support FORM gauges}%
11121 }
11122 \def\@TextField[#1]#2{% parameters, label
11123   \typeout{Sorry, HyperTeX does not support FORM text fields}%
11124 }

```

```

11125 \def\@CheckBox[#1]#2{% parameters, label
11126 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
11127 }
11128 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11129 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
11130 }
11131 \def\@PushButton[#1]#2{% parameters, label
11132 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
11133 }
11134 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11135 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
11136 </hypertext>

```

47.3 TeX4ht

```

11137 <*tex4ht>
11138 \def\@Form[#1]{%
11139 \setkeys{Form}{#1}%
11140 \HCode{<form action="\Form@action" method="\Form@method">}%
11141 }
11142 \def\@endForm{\HCode{</form>}}
11143 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11144 \typeout{Sorry, TeX4ht does not support gauges}%
11145 }
11146 \def\@TextField[#1]#2{% parameters, label
11147 \let\Hy@reserved@a\@empty
11148 \def\Fld@name{#2}%
11149 \def\Fld@default{}%
11150 \bgroup
11151 \Field@toks={ }%
11152 \setkeys{Field}{#1}%
11153 \HCode{<label for="\Fld@name">#2</label>}%
11154 \ifFld@password
11155 \@@PasswordField
11156 \else
11157 \@@TextField
11158 \fi
11159 \egroup
11160 }
11161 \def\@@PasswordField{%
11162 \HCode{%
11163 <input type="password" %
11164 id="\Fld@name" %
11165 name="\Fld@name" %
11166 \ifFld@hidden type="hidden" \fi
11167 value="\Fld@default" %
11168 \the\Field@toks
11169 >%
11170 }%
11171 }
11172 \def\@@TextField{%
11173 \ifFld@multiline
11174 \HCode{<textarea %
11175 \ifFld@readonly readonly \fi
11176 id="\Fld@name" %
11177 name="\Fld@name" %
11178 \ifFld@hidden type="hidden" \fi
11179 \the\Field@toks>%

```

```

11180 }%
11181 \Fld@default
11182 \HCode{</textarea>}%
11183 \else
11184 \HCode{<input type="textbox" %
11185 \ifFld@readonly readonly \fi
11186 id="\Fld@name" %
11187 name="\Fld@name" %
11188 \ifFld@hidden type="hidden" \fi
11189 value="\Fld@default" %
11190 \the\Field@toks>%
11191 }%
11192 \fi
11193 }
11194 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11195 \def\Fld@name{#2}%
11196 \def\Fld@default{#3}%
11197 \let\Hy@reserved@a\relax
11198 \begingroup
11199 \expandafter\Fld@findlength#3\\%
11200 \Field@toks={ }%
11201 \setkeys{Field}{#1}%
11202 #2%
11203 \ifFld@radio
11204 \expandafter\@@Radio#3\\%
11205 \else
11206 \expandafter\@@Menu#3\\%
11207 \fi
11208 \endgroup
11209 }
11210 \def\Fld@findlength#1\\{%
11211 \Fld@menulength=0 %
11212 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
11213 }
11214 \def\@@Menu#1\\{%
11215 \HCode{<select size="\the\Fld@menulength" %
11216 name="\Fld@name" %
11217 \the\Field@toks>%
11218 }%
11219 \@for\@curropt:=#1\do{%
11220 \expandafter\Fld@checkequals\@curropt==\\%
11221 \HCode{<option %
11222 \ifx\@curropt\Fld@default selected \fi
11223 value="\@currValue">\@currDisplay</option>%
11224 }%
11225 }%
11226 \HCode{</select>}%
11227 }
11228 \def\@@Radio#1\\{%
11229 \@for\@curropt:=#1\do{%
11230 \expandafter\Fld@checkequals\@curropt==\\%
11231 \HCode{<input type="radio" %
11232 \ifx\@curropt\Fld@default checked \fi
11233 name="\Fld@name" %
11234 value="\@currValue" %
11235 \the\Field@toks>%
11236 }%

```

```

11237 \currDisplay
11238 }%
11239 }
11240 \def\@PushButton[#1]#2{% parameters, label
11241 \def\Fld@name{#2}%
11242 \bgroup
11243 \Field@toks={ }%
11244 \setkeys{Field}{#1}%
11245 \HCode{<input type="button" %
11246 name="\Fld@name" %
11247 value="#2" %
11248 \the\Fld@toks>%
11249 }%
11250 \HCode{</button>}%
11251 \egroup
11252 }
11253 \def\@Submit[#1]#2{%
11254 \HCode{<button type="submit">#2</button>}%
11255 }
11256 \def\@Reset[#1]#2{%
11257 \HCode{<button type="reset">#2</button>}%
11258 }
11259 \def\@CheckBox[#1]#2{% parameters, label
11260 \let\Hy@reserved@a\@empty
11261 \def\Fld@name{#2}%
11262 \def\Fld@default{0}%
11263 \bgroup
11264 \Field@toks={ }%
11265 \setkeys{Field}{#1}%
11266 \HCode{<input type="checkbox" %
11267 \ifFld@checked checked \fi
11268 \ifFld@disabled disabled \fi
11269 \ifFld@readonly readonly \fi
11270 name="\Fld@name" %
11271 \ifFld@hidden type="hidden" \fi
11272 value="\Fld@default" %
11273 \the\Fld@toks>%
11274 #2%
11275 }%
11276 \egroup
11277 }
11278 </tex4ht>

```

47.4 pdfTeX

```

11279 <*pdftex>
11280 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11281 \typeout{Sorry, pdftex does not support FORM gauges}%
11282 }
11283 \def\MakeFieldObject#1#2{\sbox0{#1}%
11284 \immediate\pdfxform0 %
11285 \expandafter\edef\csname #2Object\endcsname{%
11286 \the\pdflastxform\space 0 R%
11287 }%
11288 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
11289 }%
11290 \def\HyField@afields{}
11291 \beginngroup\expandafter\expandafter\expandafter\endgroup

```

```

11292 \expandafter\ifx\csname pdflastlink\endcsname\relax
11293 \let\HyField@AddToFields\relax
11294 \PackageInfo{hyperref}{%
11295   You need pdfTeX 1.40.0 for setting the /Fields entry.%
11296   \MessageBreak
11297   Adobe Reader/Acrobat accepts an empty /Field array,%
11298   \MessageBreak
11299   but other PDF viewers might complain%
11300 }%
11301 \else
11302 \def\HyField@AddToFields{%
11303   \xdef\HyField@afields{%
11304     \ifx\HyField@afields\@empty
11305       \else
11306         \HyField@afields
11307         \space
11308       \fi
11309     \the\pdflastlink\space 0 R%
11310   }%
11311 }%
11312 \fi
11313 \def\@Form[#1]{%
11314   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
11315   \setkeys{Form}{#1}%
11316   \Hy@FormObjects
11317   \ifnum\pdftexversion>13 %
11318     \pdfrefobj\OBJ@pdfdocencoding
11319     \pdfrefobj\OBJ@ZaDb
11320     \pdfrefobj\OBJ@Helv
11321   \fi
11322   \AtEndDocument{%
11323     \immediate\pdfobj{%
11324       <<%
11325         /Fields[\HyField@afields]%
11326         /DR<<%
11327           /Font<<%
11328             /ZaDb \OBJ@ZaDb\space 0 R%
11329             /Helv \OBJ@Helv\space 0 R%
11330           >>%
11331         >>%
11332         /DA(/Helv 10 Tf 0 g)%
11333         \ifHy@pdfa
11334         \else
11335           /NeedAppearances true%
11336         \fi
11337       >>%
11338     }%
11339     \edef\OBJ@acroform{\the\pdflastobj}%
11340     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
11341   }%
11342   \MakeFieldObject{%
Same as \ding{123} of package pifont.
11343   \begingroup
11344     \fontfamily{pzd}%
11345     \fontencoding{U}%
11346     \fontseries{m}%
11347     \fontshape{n}%

```

```

11348 \selectfont
11349 \char123 %
11350 \endgroup
11351 }{Ding}%
11352 \MakeFieldObject{%
11353 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
11354 }{Submit}%
11355 \MakeFieldObject{%
11356 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
11357 }{SubmitP}%
11358 }
11359 \def\@endForm{}
11360 \def\@TextField[#1]#2{% parameters, label
11361 \def\Fld@name{#2}%
11362 \def\Fld@default{}%
11363 \let\Fld@value\@empty
11364 \def\Fld@width{\DefaultWidthofText}%
11365 \def\Fld@height{%
11366 \ifFld@multiline
11367 \DefaultHeightofTextMultiline
11368 \else
11369 \DefaultHeightofText
11370 \fi
11371 }%
11372 \begingroup
11373 \Field@toks={ }%
11374 \expandafter\HyField@SetKeys\expandafter{%
11375 \DefaultOptionsofText,#1%
11376 }%
11377 \PDFForm@Name
11378 \HyField@FlagsText
11379 \ifFld@hidden\def\Fld@width{1sp}\fi
11380 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
11381 \LayoutTextField{#2}{%
11382 \Hy@escapeform\PDFForm@Text
11383 \pdfstartlink user {\PDFForm@Text}\relax
11384 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
11385 \HyField@AddToFields
11386 }%
11387 \endgroup
11388 }
11389 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11390 \def\Fld@name{#2}%
11391 \let\Fld@default\relax
11392 \let\Fld@value\relax
11393 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11394 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11395 \begingroup
11396 \Fld@menulength=0 %
11397 \@tempdima\z@
11398 \@for\@curropt:=#3\do{%
11399 \expandafter\Fld@checkequals\@curropt==\%
11400 \Hy@StepCount\Fld@menulength
11401 \settowidth{\@tempdimb}{\@currDisplay}%
11402 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11403 }%
11404 \advance\@tempdima by 15\p@

```



```

11405 \Field@toks={ }%
11406 \begingroup
11407 \HyField@SetKeys{#1}%
11408 \edef\x{\endgroup
11409 \noexpand\expandafter
11410 \noexpand\HyField@SetKeys
11411 \noexpand\expandafter{%
11412 \expandafter\noexpand\csname DefaultOptionsof%
11413 \ifFld@radio
11414 Radio%
11415 \else
11416 \ifFld@combo
11417 \ifFld@popdown
11418 PopdownBox%
11419 \else
11420 ComboBox%
11421 \fi
11422 \else
11423 ListBox%
11424 \fi
11425 \fi
11426 \endcsname
11427 }%
11428 }\x
11429 \HyField@SetKeys{#1}%
11430 \PDFForm@Name
11431 \ifFld@hidden\def\Fld@width{1sp}\fi
11432 \ifx\Fld@value\relax
11433 \let\Fld@value\Fld@default
11434 \fi
11435 \LayoutChoiceField{#2}{%
11436 \ifFld@radio
11437 \HyField@FlagsRadioButton
11438 \@@Radio{#3}%
11439 \else
11440 \begingroup
11441 \HyField@FlagsChoice
11442 \ifdim\Fld@width<\@tempdima
11443 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11444 \edef\Fld@width{\the\@tempdima}%
11445 \fi
11446 \ifFld@combo
11447 \else
11448 \@tempdima=\the\Fld@menulength\Fld@charsize
11449 \advance\@tempdima by \Fld@borderwidth bp %
11450 \advance\@tempdima by \Fld@borderwidth bp %
11451 \edef\Fld@height{\the\@tempdima}%
11452 \fi
11453 \@@ListBox{#3}%
11454 \endgroup
11455 \fi
11456 }%
11457 \endgroup
11458 }
11459 \def\@@Radio#1{%
11460 \Fld@listcount=0 %
11461 \@for\@curropt:=#1\do{%

```

```

11462 \expandafter\Fld@checkequals\@curropt==\%
11463 \Hy@StepCount\Fld@listcount
11464 \@currDisplay\space
11465 \leavevmode
11466 \Hy@escapeform\PDFForm@Radio
11467 \pdfstartlink user {%
11468 \PDFForm@Radio
11469 /AP<<%
11470 /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.

```

11471 \/\@currValue\space \DingObject
11472 >>%
11473 >>%
11474 }%
11475 \relax
11476 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
11477 \ifnum\Fld@listcount=1 %
11478 \HyField@AddToFields
11479 \fi
11480 \space % deliberate space between radio buttons
11481 }%
11482 }
11483 \newcount\Fld@listcount
11484 \def\@@ListBox#1{%
11485 \HyField@PDFChoices{#1}%
11486 \leavevmode
11487 \Hy@escapeform\PDFForm@List
11488 \pdfstartlink user {\PDFForm@List}\relax
11489 \MakeChoiceField{\Fld@width}{\Fld@height}%
11490 \pdfendlink
11491 \HyField@AddToFields
11492 }
11493 \def\@PushButton[#1]#2{% parameters, label
11494 \def\Fld@name{#2}%
11495 \begingroup
11496 \Field@toks={ }%
11497 \expandafter\HyField@SetKeys\expandafter{%
11498 \DefaultOptionsofPushButton,#1%
11499 }%
11500 \PDFForm@Name
11501 \ifHy@pdfa
11502 \PackageError{hyperref}{%
11503 PDF/A: Push button with JavaScript is prohibited%
11504 }\@ehc
11505 \LayoutPushButtonField{%
11506 \leavevmode
11507 \MakeButtonField{#2}%
11508 }%
11509 \else
11510 \HyField@FlagsPushButton
11511 \ifFld@hidden\def\Fld@width{1sp}\fi
11512 \LayoutPushButtonField{%
11513 \leavevmode
11514 \Hy@escapeform\PDFForm@Push
11515 \pdfstartlink user {\PDFForm@Push}\relax

```

```

11516     \MakeButtonField{#2}%
11517     \pdfendlink
11518     \HyField@AddToFields
11519   }%
11520   \fi
11521 \endgroup
11522 }
11523 \def\@Submit[#1]#2{%
11524   \Field@toks={ }%
11525   \def\Fld@width{\DefaultWidthofSubmit}%
11526   \def\Fld@height{\DefaultHeightofSubmit}%
11527   \begingroup
11528     \expandafter\HyField@SetKeys\expandafter{%
11529       \DefaultOptionsofSubmit,#1%
11530     }%
11531     \HyField@FlagsPushButton
11532     \HyField@FlagsSubmit
11533     \ifFld@hidden\def\Fld@width{1sp}\fi
11534     \leavevmode
11535     \Hy@escapeform\PDFForm@Submit
11536     \pdfstartlink user {%
11537       \PDFForm@Submit
11538       /AP<</N \SubmitObject/D \SubmitPObject>>%
11539     }%
11540     \relax
11541     \MakeButtonField{#2}%
11542     \pdfendlink
11543     \HyField@AddToFields
11544 \endgroup
11545 }
11546 \def\@Reset[#1]#2{%
11547   \Field@toks={ }%
11548   \def\Fld@width{\DefaultWidthofReset}%
11549   \def\Fld@height{\DefaultHeightofReset}%
11550   \begingroup
11551     \expandafter\HyField@SetKeys\expandafter{%
11552       \DefaultOptionsofReset,#1%
11553     }%
11554     \leavevmode
11555     \ifHy@pdfa
11556       \PackageError{hyperref}{%
11557         PDF/A: Reset action is prohibited%
11558       }\@ehc
11559       \MakeButtonField{#2}%
11560     \else
11561       \HyField@FlagsPushButton
11562       \ifFld@hidden\def\Fld@width{1sp}\fi
11563       \Hy@escapeform\PDFForm@Reset
11564       \pdfstartlink user {\PDFForm@Reset}\relax
11565       \MakeButtonField{#2}%
11566       \pdfendlink
11567       \HyField@AddToFields
11568     \fi
11569 \endgroup
11570 }
11571 \def\@CheckBox[#1]#2{% parameters, label
11572   \def\Fld@name{#2}%

```

```

11573 \def\Fld@default{0}%
11574 \begingroup
11575 \def\Fld@width{\DefaultWidthofCheckBox}%
11576 \def\Fld@height{\DefaultHeightofCheckBox}%
11577 \Field@toks={ }%
11578 \expandafter\HyField@SetKeys\expandafter{%
11579 \DefaultOptionsofCheckBox,#1%
11580 }%
11581 \PDFForm@Name
11582 \HyField@FlagsCheckBox
11583 \ifFld@hidden\def\Fld@width{1sp}\fi
11584 \LayoutCheckField{#2}{%
11585 \Hy@escapeform\PDFForm@Check
11586 \pdfstartlink user {\PDFForm@Check}\relax
11587 \MakeCheckField{\Fld@width}{\Fld@height}%
11588 \pdfendlink
11589 \HyField@AddToFields
11590 }%
11591 \endgroup
11592 }
11593 \def\Hy@FormObjects{%
11594 \pdfobj {%
11595 <<%
11596 /Type/Encoding%
11597 /Differences%
11598 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
11599 /ring/tilde %
11600 39/quotesingle %
11601 96/grave %
11602 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11603 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11604 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11605 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
11606 /Scaron/Ydieresis/Zcaron/dotlessi/Islash/oe/scaron/zcaron %
11607 164/currency %
11608 166/brokenbar %
11609 168/dieresis/copyright/ordfeminine %
11610 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11611 /twosuperior/threesuperior/acute/mu %
11612 183/periodcentered/cedilla/onesuperior/ordmasculine %
11613 188/onequarter/onehalf/threequarters %
11614 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11615 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11616 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11617 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11618 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11619 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11620 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11621 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11622 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
11623 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
11624 ]%
11625 >>%
11626 }%
11627 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
11628 \pdfobj{%
11629 <<%

```

```

11630 /Type/Font%
11631 /Subtype/Type1%
11632 /Name/ZaDb%
11633 /BaseFont/ZapfDingbats%
11634 >>%
11635 }%
11636 \xdef\OBJ@ZaDb{\the\pdfastobj}%
11637 \pdfobj{f%
11638 <<%
11639 /Type/Font%
11640 /Subtype/Type1%
11641 /Name/Helv%
11642 /BaseFont/Helvetica%
11643 /Encoding \OBJ@pdfdocencoding\space 0 R%
11644 >>%
11645 }%
11646 \xdef\OBJ@Helv{\the\pdfastobj}%
11647 \global\let\Hy@FormObjects\relax
11648 }
11649 </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.

```
11650 (*dvipdfm | xetex)
```

\@Gauge

```

11651 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11652 \typeout{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
11653 }

```

\@Form

```

11654 \def\@Form[#1]{%
11655 \@ifundefined{textcolor}{\let\textcolor@gobble}{}}%
11656 \setkeys{Form}{#1}%
11657 \Hy@FormObjects
11658 \@pdfm@mark{obj @afields []}%
11659 \@pdfm@mark{obj @corder []}%
11660 \@pdfm@mark{%
11661 obj @aform <<%
11662 /Fields @afields%
11663 /DR<<%
11664 /Font<<%
11665 /ZaDb @OBJZaDb%
11666 /Helv @OBJHelv%
11667 >>%
11668 >>%
11669 /DA(/Helv 10 Tf 0 g)%
11670 /CO @corder%
11671 \ifHy@pdfa
11672 \else
11673 /NeedAppearances true%
11674 \fi
11675 >>%
11676 }%
11677 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
11678 }

```

\@endForm

11679 \def\@endForm{}

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

11680 \def\dvipdfm@setdim{%

11681 height \the\ht\pdfm@box\space

11682 width \the\wd\pdfm@box\space

11683 depth \the\dp\pdfm@box\space

11684 }

\HyField@AnnotCount

11685 \newcount\HyField@AnnotCount

11686 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount

11687 \def\HyField@AdvanceAnnotCount{%

11688 \global\advance\HyField@AnnotCount\@ne

11689 }

\HyField@TheAnnotCount

11690 \def\HyField@TheAnnotCount{%

11691 \the\HyField@AnnotCount

11692 }

\@TextField

11693 \def\@TextField[#1]#2{% parameters, label

11694 \def\Fld@name{#2}%

11695 \def\Fld@default{ }%

11696 \let\Fld@value\@empty

11697 \def\Fld@width{\DefaultWidthofText}%

11698 \def\Fld@height{%

11699 \ifFld@multiline

11700 \DefaultHeightofTextMultiline

11701 \else

11702 \DefaultHeightofText

11703 \fi

11704 }%

11705 \begingroup

11706 \Field@toks={ }%

11707 \expandafter\HyField@SetKeys\expandafter{%

11708 \DefaultOptionsofText,#1%

11709 }%

11710 \PDFForm@Name

11711 \HyField@FlagsText

11712 \ifFld@hidden\def\Fld@width{1sp}\fi

11713 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi

11714 \setbox\pdfm@box=\hbox{%

11715 \MakeTextField{\Fld@width}{\Fld@height}%

11716 }%

11717 \HyField@AdvanceAnnotCount

11718 \LayoutTextField{#2}{%

11719 \Hy@escapeform\PDFForm@Text

11720 \@pdfm@mark{%

11721 ann @text\HyField@TheAnnotCount\space

11722 \dvipdfm@setdim << \PDFForm@Text >>%

11723 }%

```

11724 }%
11725 \unhbox\pdfm@box
11726 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
11727 % record in @afields array
11728 \endgroup
11729 }

```

\@ChoiceMenu

```

11730 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11731 \def\Fld@name{#2}%
11732 \let\Fld@default\relax
11733 \let\Fld@value\relax
11734 \def\Fld@width{\DefaultWidthofChoiceMenu}%
11735 \def\Fld@height{\DefaultHeightofChoiceMenu}%
11736 \begingroup
11737 \Fld@menulength=0 %
11738 \@tempdima\z@
11739 \@for\@curropt:=#3\do{%
11740 \expandafter\Fld@checkequals\@curropt==\%
11741 \Hy@StepCount\Fld@menulength
11742 \settowidth{\@tempdimb}{\@currDisplay}%
11743 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11744 }%
11745 \advance\@tempdima by 15\p@
11746 \Field@toks={ }%
11747 \begingroup
11748 \HyField@SetKeys{#1}%
11749 \edef\x{\endgroup
11750 \noexpand\expandafter
11751 \noexpand\HyField@SetKeys
11752 \noexpand\expandafter{%
11753 \expandafter\noexpand\csname DefaultOptionsof%
11754 \ifFld@radio
11755 Radio%
11756 \else
11757 \ifFld@combo
11758 \ifFld@popdown
11759 PopdownBox%
11760 \else
11761 ComboBox%
11762 \fi
11763 \else
11764 ListBox%
11765 \fi
11766 \fi
11767 \endcsname
11768 }%
11769 }\x
11770 \HyField@SetKeys{#1}%
11771 \PDFForm@Name
11772 \ifFld@hidden\def\Fld@width{1sp}\fi
11773 \ifx\Fld@value\relax
11774 \let\Fld@value\Fld@default
11775 \fi
11776 \LayoutChoiceField{#2}{%
11777 \ifFld@radio
11778 \HyField@FlagsRadioButton

```

```

11779 \@@Radio{#3}%
11780 \else
11781 \beginingroup
11782 \HyField@FlagsChoice
11783 \ifdim\Fld@width<\@tempdima
11784 \ifdim\@tempdima<1cm\@tempdima1cm\fi
11785 \edef\Fld@width{\the\@tempdima}%
11786 \fi
11787 \ifFld@combo
11788 \else
11789 \@tempdima=\the\Fld@menulength\Fld@charsize
11790 \advance\@tempdima by \Fld@borderwidth bp %
11791 \advance\@tempdima by \Fld@borderwidth bp %
11792 \edef\Fld@height{\the\@tempdima}%
11793 \fi
11794 \@@ListBox{#3}%
11795 \endgroup
11796 \fi
11797 }%
11798 \endgroup
11799 }

```

\@@Radio

```

11800 \def\@@Radio#1{%
11801 \Fld@listcount=0 %
11802 \setbox\pdfm@box=\hbox{%
11803 \MakeRadioField{\Fld@width}{\Fld@height}%
11804 }%
11805 \@for\@curropt:=#1\do{%
11806 \expandafter\Fld@checkequals\@curropt==\%
11807 \Hy@StepCount\Fld@listcount
11808 \@currDisplay\space
11809 \leavevmode
11810 \Hy@escapeform\PDFForm@Radio
11811 \ifnum\Fld@listcount=1 %
11812 \HyField@AdvanceAnnotCount
11813 \fi
11814 \@pdfm@mark{%
11815 ann %
11816 \ifnum\Fld@listcount=1 %
11817 @radio\HyField@TheAnnotCount%
11818 \space
11819 \fi
11820 \dviPDFm@setdim
11821 <<%
11822 \PDFForm@Radio
11823 /AP<</N<</\@currValue /null>>>>%
11824 >>%
11825 }%
11826 \unhcopy\pdfm@box\space% deliberate space between radio buttons
11827 \ifnum\Fld@listcount=1 %
11828 \@pdfm@mark{%
11829 put @afields @radio\HyField@TheAnnotCount
11830 }%
11831 \fi
11832 }%
11833 }

```


\Fld@listcount

11834 \newcount\Fld@listcount

\@@ListBox

```
11835 \def\@@ListBox#1{%
11836   \HyField@PDFChoices{#1}%
11837   \setbox\pdfm@box=\hbox{%
11838     \MakeChoiceField{\Fld@width}{\Fld@height}%
11839   }%
11840   \leavevmode
11841   \Hy@escapeform\PDFForm@List
11842   \HyField@AdvanceAnnotCount
11843   \@pdfm@mark{%
11844     ann @list\HyField@TheAnnotCount\space
11845     \dvipdfm@setdim
11846     <<\PDFForm@List>>%
11847   }%
11848   \unhbox\pdfm@box
11849   \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
11850 }
```

\@PushButton

```
11851 \def\@PushButton[#1]#2{% parameters, label
11852   \def\Fld@name{#2}%
11853   \begingroup
11854   \Field@toks={ }%
11855   \expandafter\HyField@SetKeys\expandafter{%
11856     \DefaultOptionsofPushButton,#1%
11857   }%
11858   \PDFForm@Name
11859   \ifHy@pdfa
11860     \PackageError{hyperref}{%
11861       PDF/A: Push button with JavaScript is prohibited%
11862     }{\@ehc}
11863     \LayoutPushButtonField{%
11864       \leavevmode
11865       \MakeButtonField{#2}%
11866     }%
11867   \else
11868     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11869     \HyField@FlagsPushButton
11870     \ifFld@hidden\def\Fld@width{1sp}\fi
11871     \HyField@AdvanceAnnotCount
11872     \LayoutPushButtonField{%
11873       \leavevmode
11874       \Hy@escapeform\PDFForm@Push
11875       \@pdfm@mark{%
11876         ann @push\HyField@TheAnnotCount\space
11877         \dvipdfm@setdim
11878         <<\PDFForm@Push>>%
11879       }%
11880     }%
11881     \unhbox\pdfm@box
11882     \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
11883   \fi
11884   \endgroup
11885 }
```

\@Submit

```
11886 \def\@Submit[#1]#2{%
11887 \Field@toks={ }%
11888 \def\Fld@width{\DefaultWidthofSubmit}%
11889 \def\Fld@height{\DefaultHeightofSubmit}%
11890 \begingroup
11891 \expandafter\HyField@SetKeys\expandafter{%
11892 \DefaultOptionsofSubmit,#1%
11893 }%
11894 \HyField@FlagsPushButton
11895 \HyField@FlagsSubmit
11896 \ifFld@hidden\def\Fld@width{1sp}\fi
11897 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11898 \leavevmode
11899 \Hy@escapeform\PDFForm@Submit
11900 \HyField@AdvanceAnnotCount
11901 \@pdfm@mark{%
11902 ann @submit\HyField@TheAnnotCount\space
11903 \dvipdfm@setdim
11904 <<\PDFForm@Submit>>%
11905 }%
11906 \unhbox\pdfm@box%
11907 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
11908 \endgroup
11909 }
```

\@Reset

```
11910 \def\@Reset[#1]#2{%
11911 \Field@toks={ }%
11912 \def\Fld@width{\DefaultWidthofReset}%
11913 \def\Fld@height{\DefaultHeightofReset}%
11914 \begingroup
11915 \expandafter\HyField@SetKeys\expandafter{%
11916 \DefaultOptionsofReset,#1%
11917 }%
11918 \leavevmode
11919 \ifHy@pdfa
11920 \PackageError{hyperref}{%
11921 PDF/A: Reset action is prohibited%
11922 }\@ehc
11923 \MakeButtonField{#2}%
11924 \else
11925 \HyField@FlagsPushButton
11926 \ifFld@hidden\def\Fld@width{1sp}\fi
11927 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11928 \Hy@escapeform\PDFForm@Reset
11929 \HyField@AdvanceAnnotCount
11930 \@pdfm@mark{%
11931 ann @reset\HyField@TheAnnotCount\space
11932 \dvipdfm@setdim
11933 <<\PDFForm@Reset>>%
11934 }%
11935 \unhbox\pdfm@box
11936 \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
11937 \fi
11938 \endgroup
11939 }
```

\@CheckBox

```
11940 \def\@CheckBox[#1]#2{% parameters, label
11941 \def\Fld@name{#2}%
11942 \def\Fld@default{0}%
11943 \begingroup
11944 \def\Fld@width{\DefaultWidthofCheckBox}%
11945 \def\Fld@height{\DefaultHeightofCheckBox}%
11946 \Field@toks={ }%
11947 \expandafter\HyField@SetKeys\expandafter{%
11948 \DefaultOptionsofCheckBox,#1%
11949 }%
11950 \PDFForm@Name
11951 \HyField@FlagsCheckBox
11952 \ifFld@hidden\def\Fld@width{1sp}\fi
11953 \setbox\pdfm@box=\hbox{%
11954 \MakeCheckField{\Fld@width}{\Fld@height}%
11955 }%
11956 \HyField@AdvanceAnnotCount
11957 \LayoutCheckField{#2}{%
11958 \Hy@escapeform\PDFForm@Check
11959 \@pdfm@mark{%
11960 ann @check\HyField@TheAnnotCount\space
11961 \dvipdfm@setdim
11962 <<\PDFForm@Check>>%
11963 }%
11964 \unhbox\pdfm@box
11965 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
11966 }%
11967 \endgroup
11968 }

11969 \def\Hy@FormObjects{%
11970 \@pdfm@mark{obj @OBJpdfdocencoding%
11971 <<%
11972 /Type/Encoding%
11973 /Differences[%
11974 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
11975 39/quotesingle %
11976 96/grave %
11977 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11978 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11979 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
11980 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
11981 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11982 164/currency %
11983 166/brokenbar %
11984 168/dieresis/copyright/ordfeminine %
11985 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11986 /twosuperior/threesuperior/acute/mu %
11987 183/periodcentered/cedilla/onesuperior/ordmasculine %
11988 188/onequarter/onehalf/threequarters %
11989 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11990 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
11991 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
11992 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
11993 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
11994 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
```

```

11995      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
11996      /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
11997      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
11998      /thorn/ydieresis%
11999      ]%
12000      >>%
12001      }%
12002      \@pdfm@mark{obj @OBJZaDb%
12003      <<%
12004      /Type/Font%
12005      /Subtype/Type1%
12006      /Name/ZaDb%
12007      /BaseFont/ZapfDingbats%
12008      >>%
12009      }%
12010      \@pdfm@mark{obj @OBJHelv%
12011      <<%
12012      /Type/Font%
12013      /Subtype/Type1%
12014      /Name/Helv%
12015      /BaseFont/Helvetica%
12016      /Encoding @OBJpdfdocencoding%
12017      >>%
12018      }%
12019      \global\let\Hy@FormObjects\relax
12020      }
12021      </dvipdfm | xetex>

```

47.6 Common forms part

```
12022 <*pdfmform>
```

\Hy@escapestring

```

12023 \begingroup\expandafter\expandafter\expandafter\endgroup
12024 \expandafter\ifx\csname pdfescapestring\endcsname\relax
12025 \let\Hy@escapestring\@firstofone
12026 \def\Hy@escapeform#1{%
12027   \ifHy@escapeform
12028     \def\Hy@escapestring##1{%
12029       \noexpand\Hy@escapestring{\noexpand##1}%
12030     }%
12031     \edef\Hy@temp{#1}%
12032     \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring}\@nil
12033   \def\Hy@escapestring##1{%
12034     \@ifundefined{Hy@esc@\string##1}{%
12035       ##1%
12036       \ThisShouldNotHappen
12037     }{%
12038       \csname Hy@esc@\string##1\endcsname
12039     }%
12040   }%
12041   \else
12042     \let\Hy@escapestring\@firstofone
12043   \fi
12044 }%
12045 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
12046   \ifx\#3\%

```

```

12047 \else
12048 \expandafter
12049 \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
12050 \Hy@ReturnAfterFi{%
12051 \Hy@@@escapeform#3\@nil
12052 }%
12053 \fi
12054 }%
12055 \else
12056 \def\Hy@escapeform#1{%
12057 \ifHy@escapeform
12058 \let\Hy@escapestring\pdfescapestring
12059 \else
12060 \let\Hy@escapestring\@firstofone
12061 \fi
12062 }%
12063 \Hy@escapeform{}}%
12064 \fi

```

\PDFForm@Name

```

12065 \def\PDFForm@Name{%
12066 \begingroup
12067 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
12068 \ifHy@unicode
12069 \Hy@unicodefalse
12070 \fi
12071 \fi
12072 \HyPsd@XeTeXBigCharstrue
12073 \pdfstringdef\Hy@gtemp\Fld@name
12074 \endgroup
12075 \let\Fld@name\Hy@gtemp
12076 }

```

\PDFForm@Check

```

12077 \def\PDFForm@Check{%
12078 /Subtype/Widget%
12079 \Fld@annotflags
12080 /T(\Fld@name)%
12081 /FT/Btn%
12082 \Fld@flags
12083 /Q \Fld@align
12084 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
12085 /MK<<%
12086 \ifnum\Fld@rotation=\z@
12087 \else
12088 /R \Fld@rotation
12089 \fi
12090 \ifx\Fld@bordercolor\relax
12091 \else
12092 /BC[\Fld@bordercolor]%
12093 \fi
12094 \ifx\Fld@bcolor\relax
12095 \else
12096 /BG[\Fld@bcolor]%
12097 \fi
12098 /CA(\Hy@escapestring{\Fld@cbsymbol})%
12099 >>%

```

```

12100 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12101 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12102 /H/P%
12103 \ifFld@checked /V/Yes\else /V/Off\fi
12104 }

```

\PDFForm@Push

```

12105 \ifHy@pdfa
12106 \else
12107 \def\PdfForm@Push{%
12108 /Subtype/Widget%
12109 \Fld@annotflags
12110 /T(\Fld@name)%
12111 /FT/Btn%
12112 \Fld@flags
12113 /H/P%
12114 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12115 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12116 \ifx\Fld@bordercolor\relax\else 1\fi
12117 \space
12118 \else
12119 /MK<<%
12120 \ifnum\Fld@rotation=\z@
12121 \else
12122 /R \Fld@rotation
12123 \fi
12124 \ifx\Fld@bordercolor\relax
12125 \else
12126 /BC[\Fld@bordercolor]%
12127 \fi
12128 >>%
12129 \fi
12130 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
12131 }%
12132 \fi

```

\Fld@additionalactions

```

12133 \def\Fld@@additionalactions{%
K input (keystroke) format
12134 \ifx\Fld@keystroke@code\@empty
12135 \else
12136 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
12137 \fi
F display format
12138 \ifx\Fld@format@code\@empty
12139 \else
12140 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
12141 \fi
V validation
12142 \ifx\Fld@validate@code\@empty
12143 \else
12144 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
12145 \fi
C calculation
12146 \ifx\Fld@calculate@code\@empty

```

```

12147 \else
12148   /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
12149 \fi

Fo receiving the input focus
12150 \ifx\Fld@onfocus@code\@empty
12151 \else
12152   /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
12153 \fi

Bl loosing the input focus (blurred)
12154 \ifx\Fld@onblur@code\@empty
12155 \else
12156   /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
12157 \fi

D pressing the mouse button (down)
12158 \ifx\Fld@onmousedown@code\@empty
12159 \else
12160   /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
12161 \fi

U releasing the mouse button (up)
12162 \ifx\Fld@onmouseup@code\@empty
12163 \else
12164   /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
12165 \fi

E cursor enters the annotation's active area.
12166 \ifx\Fld@onenter@code\@empty
12167 \else
12168   /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
12169 \fi

X cursor exits the annotation's active area.
12170 \ifx\Fld@onexit@code\@empty
12171 \else
12172   /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
12173 \fi
12174 }
12175 \def\Fld@additionalactions{%
12176 \if\Fld@@additionalactions-%
12177 \else
12178   \ifHy@pdfa
12179   \else
12180     /AA<<\Fld@@additionalactions>>%
12181   \fi
12182 \fi
12183 }

```

\PDFForm@List

```

12184 \def\PDFForm@List{%
12185 /Subtype/Widget%
12186 \Fld@annotflags
12187 /T(\Fld@name)%
12188 /FT/Ch%
12189 \Fld@flags
12190 /Q \Fld@align
12191 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12192 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi

```

```

12193     \ifx\Fld@bordercolor\relax\else 1\fi
12194     \ifx\Fld@bcolor\relax    \else 1\fi
12195     \space
12196 \else
12197 /MK<<%
12198   \ifnum\Fld@rotation=\z@
12199   \else
12200   /R \Fld@rotation
12201   \fi
12202   \ifx\Fld@bordercolor\relax
12203   \else
12204   /BC[\Fld@bordercolor]%
12205   \fi
12206   \ifx\Fld@bcolor\relax
12207   \else
12208   /BG[\Fld@bcolor]%
12209   \fi
12210 >>%
12211 \fi
12212 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12213   \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12214 \Fld@choices
12215 \Fld@additionalactions
12216 }

```

\PDFForm@Radio

```

12217 \def\PDFForm@Radio{%
12218 /Subtype/Widget%
12219 \Fld@annotflags
12220 /T(\Fld@name)%
12221 /FT/Btn%
12222 \Fld@flags
12223 /H/P%
12224 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12225 /MK<<%
12226   \ifnum\Fld@rotation=\z@
12227   \else
12228   /R \Fld@rotation
12229   \fi
12230   \ifx\Fld@bordercolor\relax
12231   \else
12232   /BC[\Fld@bordercolor]%
12233   \fi
12234   \ifx\Fld@bcolor\relax
12235   \else
12236   /BG[\Fld@bcolor]%
12237   \fi
12238   /CA(\Fld@radiosymbol)%
12239 >>%
12240 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
12241   \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12242 \ifx\@currValue\Fld@default
12243 /V/\Fld@default
12244 \else
12245 /V/Off%
12246 \fi
12247 \Fld@additionalactions

```


12248 }

\PDFForm@Text

```
12249 \def\PDFForm@Text{%
12250 /Subtype/Widget%
12251 \Fld@annotflags
12252 /T(\Fld@name)%
12253 /FT/Tx%
12254 \Fld@flags
12255 /Q \Fld@align
12256 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
12257 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12258     \ifx\Fld@bordercolor\relax\else 1\fi
12259     \ifx\Fld@bcolor\relax \else 1\fi
12260     \space
12261 \else
12262 /MK<<%
12263     \ifnum\Fld@rotation=\z@
12264     \else
12265     /R \Fld@rotation
12266     \fi
12267     \ifx\Fld@bordercolor\relax
12268     \else
12269     /BC[\Fld@bordercolor]%
12270     \fi
12271     \ifx\Fld@bcolor\relax
12272     \else
12273     /BG[\Fld@bcolor]%
12274     \fi
12275 >>%
12276 \fi
12277 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
12278     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
12279 /DV(\Hy@escapestring{\Fld@default})%
12280 /V(\Hy@escapestring{\Fld@value})%
12281 \Fld@additionalactions
12282 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
12283 }
```

\PDFForm@Submit

```
12284 \def\PDFForm@Submit{%
12285 /Subtype/Widget%
12286 \Fld@annotflags
12287 /T(\Fld@name)%
12288 /FT/Btn%
12289 \Fld@flags
12290 /H/P%
12291 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12292 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12293     \ifx\Fld@bordercolor\relax\else 1\fi
12294     \space
12295 \else
12296 /MK<<%
12297     \ifnum\Fld@rotation=\z@
12298     \else
12299     /R \Fld@rotation
12300     \fi
```

```

12301 \ifx\Fld@bordercolor\relax
12302 \else
12303 /BC[\Fld@bordercolor]%
12304 \fi
12305 >>%
12306 \fi
12307 /A<<%
12308 /S/SubmitForm%
12309 /F<<%
12310 /FS/URL%
12311 /F(\Hy@escapestring{\Form@action})%
12312 >>%
12313 \Fld@submitflags
12314 >>%
12315 }

```

\PDFForm@Reset

```

12316 \ifHy@pdfa
12317 \else
12318 \def\PDFForm@Reset{%
12319 /Subtype/Widget%
12320 \Fld@annotflags
12321 /T(\Fld@name)%
12322 /FT/Btn%
12323 \Fld@flags
12324 /H/P%
12325 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
12326 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
12327 \ifx\Fld@bordercolor\relax\else 1\fi
12328 \space
12329 \else
12330 /MK<<%
12331 \ifnum\Fld@rotation=\z@
12332 \else
12333 /R \Fld@rotation
12334 \fi
12335 \ifx\Fld@bordercolor\relax
12336 \else
12337 /BC[\Fld@bordercolor]%
12338 \fi
12339 % /CA (Clear)
12340 % /AC (Done)
12341 >>%
12342 \fi
12343 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
12344 /A<</S/ResetForm>>%
12345 }%
12346 \fi

12347 </pdfform>
12348 <*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`

```

12349 \def\phantomsection{%
12350   \Hy@GlobalStepCount\Hy@linkcounter
12351   \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12352   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
12353 }
12354 \end{package}

```

48.1 Bookmarks

```
12355 \begin{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.

```

12356 \def\Hy@writebookmark#1#2#3#4#5{%
12357   % section number, text, label, level, file
12358   \ifx\WriteBookmarks\relax%
12359     \else
12360     \ifnum#4>\Hy@bookmarksdepth\relax
12361     \else
12362     \@@writetorep{#1}{#2}{#3}{#4}{#5}%
12363     \fi
12364   \fi
12365 }
12366 \def\Hy@currentbookmarklevel{0}
12367 \def\Hy@numberline#1{#1 }
12368 \def\@@writetorep#1#2#3#4#5{%
12369   \begingroup
12370   \edef\Hy@tempa{#5}%
12371   \ifx\Hy@tempa\Hy@bookmarkstype
12372     \edef\Hy@level{#4}%
12373     \ifx\Hy@levelcheck Y%
12374       \@tempcnta\Hy@level\relax
12375       \advance\@tempcnta by -1 %
12376       \ifnum\Hy@currentbookmarklevel<\@tempcnta
12377         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
12378         \advance\@tempcnta by 1 %
12379       \Hy@Warning{%
12380         Difference (\the\@tempcnta) between bookmark levels is %
12381         greater \MessageBreak than one, level fixed%
12382       }%

```

```

12383     \@tempcnta\Hy@currentbookmarklevel
12384     \advance\@tempcnta by 1 %
12385     \edef\Hy@level{\the\@tempcnta}%
12386     \fi
12387     \else
12388     \global\let\Hy@levelcheck Y%
12389     \fi
12390     \global\let\Hy@currentbookmarklevel\Hy@level
12391     \@tempcnta\Hy@level\relax
12392     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
12393     \advance\@tempcnta by -1 %
12394     \edef\Hy@tempa{#3}%
12395     \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
12396     \ifx\Hy@tempa\Hy@tempb
12397     \Hy@Warning{%
12398     The anchor of a bookmark and its parent's must not%
12399     \MessageBreak be the same. Added a new anchor%
12400     }%
12401     \phantomsection
12402     \fi
12403     \ifHy@bookmarksnumbered
12404     \let\numberline\Hy@numberline
12405     \let\partnumberline\Hy@numberline
12406     \let\chapternumberline\Hy@numberline
12407     \else
12408     \let\numberline@gobble
12409     \let\partnumberline@gobble
12410     \let\chapternumberline@gobble
12411     \fi
12412     \HyPsd@XeTeXBigCharstrue
12413     \pdfstringdef\Hy@tempa{#2}%
12414     \if@filesw
12415     \stepcounter{bookmark@seq@number}%
12416     \@ifundefined{@outlinefile}{%
12417     }{%
12418     \protected@write\@outlinefile}{%
12419     \protect\BOOKMARK
12420     [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
12421     {\Hy@tempa}{\Hy@tempb}%
12422     \@percentchar\space\thebookmark@seq@number
12423     }%
12424     }%
12425     \fi
12426     \fi
12427     \endgroup
12428 }
12429 \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].

```

12430 \newcommand{\currentpdfbookmark}{%
12431 \pdfbookmark[\Hy@currentbookmarklevel]%
12432 }
12433 \newcommand{\subpdfbookmark}{%
12434 \@tempcnta\Hy@currentbookmarklevel
12435 \Hy@StepCount\@tempcnta
12436 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
12437 }

```

```

12438 \newcommand{\belowpdfbookmark}[2]{%
12439   \@tempcnta\Hy@currentbookmarklevel
12440   \Hy@StepCount\@tempcnta
12441   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
12442   \advance\@tempcnta by -1 %
12443   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
12444 }

```

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.

```

12445 \renewcommand\pdfbookmark[3][0]{%
12446   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
12447   \hyper@anchorstart{#3.#1}\hyper@anchorend
12448 }
12449 \def\BOOKMARK{%
12450   \@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-%
12451   ]}
12452   \def\@BOOKMARK[#1]{%
12453     \@ifnextchar[{\@BOOKMARK[#1]}{\@@BOOKMARK[#1][-%
12454     ]}

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

48.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

12455 \RequirePackage{rerunfilecheck}[2009/12/10]
12456 \def\Hy@OutlineRerunCheck{%
12457   \RerunFileCheck{\jobname.out}{%
12458     \immediate\closeout\@outlinefile
12459   }{%
12460     Rerun to get outlines right\MessageBreak
12461     or use package 'bookmark'%
12462   }%
12463 }

```

48.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```

12464 <*vtex>
12465 \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.

```

12466 \begingroup
12467   \catcode'\'=12 %
12468   \ifnum\Hy@VTeXversion<650 %
12469     \catcode'\ "=12 %
12470     \gdef\hv@pdf@char#1#2#3{%
12471       \char
12472       \ifcase'#1#2#3 %
12473         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%

```

12474 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
12475 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
12476 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
12477 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
12478 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
12479 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
12480 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
12481 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
12482 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
12483 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
12484 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
12485 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
12486 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
12487 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
12488 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
12489 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
12490 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
12491 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
12492 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
12493 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
12494 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
12495 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
12496 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
12497 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
12498 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
12499 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
12500 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
12501 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
12502 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
12503 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
12504 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
12505 \fi
12506 }%
12507 \else
12508 \gdef\hv@pdf@char{\char'}%
12509 \fi
12510 \endgroup

\@@BOOKMARK

12511 \def\@@BOOKMARK[#1][#2]#3#4#5{%
12512 \expandafter\edef\csname @count@#3\endcsname{%
12513 \the\@serial@counter
12514 }%
12515 \edef\@mycount{\the\@serial@counter}%
12516 \Hy@StepCount\@serial@counter
12517 \edef\@parcount{%
12518 \expandafter\ifx\csname @count@#5\endcsname\relax
12519 0%
12520 \else
12521 \csname @count@#5\endcsname
12522 \fi
12523 }%
12524 \immediate\special{%
12525 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
12526 s=\ifx#2-c\else o\fi,t=#4%
12527 }%
12528 }%

\ReadBookmarks

```
12529 \def\ReadBookmarks{%
12530 \begingroup
12531 \def\0{\hv@pdf@char 0}%
12532 \def\1{\hv@pdf@char 1}%
12533 \def\2{\hv@pdf@char 2}%
12534 \def\3{\hv@pdf@char 3}%
12535 \def\({}%
12536 \def\)}%
12537 \def\do##1{%
12538 \ifnum\the\catcode'##1=\active
12539 \@makeother##1%
12540 \fi
12541 }%
12542 \dospecials
12543 \InputIfFileExists{\jobname.out}{-}{-}%
12544 \endgroup
12545 \ifx\WriteBookmarks\relax
12546 \else
12547 \if@filesw
12548 \newwrite\@outlinefile
12549 \Hy@OutlineRerunCheck
12550 \immediate\openout\@outlinefile=\jobname.out\relax
12551 \ifHy@typexml
12552 \immediate\write\@outlinefile{<relaxxml>\relax}%
12553 \fi
12554 \fi
12555 \fi
12556 }

12557 </vtx>
12558 <!*vtx>
12559 \def\ReadBookmarks{%
12560 \begingroup
12561 \escapechar='\%
12562 \let\escapechar\@gobble %
12563 \def\@@BOOKMARK[##1][##2]##3##4##5{%
12564 \calc@bm@number{##5}%
12565 }%
12566 \InputIfFileExists{\jobname.out}{-}{-}%
12567 \ifx\WriteBookmarks\relax
12568 \global\let\WriteBookmarks\relax
12569 \fi
12570 \def\@@BOOKMARK[##1][##2]##3##4##5{%
12571 \def\Hy@temp{##4}%
12572 <*pdfTex>
12573 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12574 \Hy@OutlineName{ }\Hy@pstringName{%
12575 ##2\check@bm@number{##3}%
12576 }{%
12577 \expandafter\strip@prefix\meaning\Hy@temp
12578 }%
12579 </pdfTex>
12580 <*pdfmark>
12581 \pdfmark{%
12582 pdfmark=/OUT,%
12583 Count={##2\check@bm@number{##3}},%
```

```

12584     Dest={##3},%
12585     Title=\expandafter\strip@prefix\meaning\Hy@temp
12586   }%
12587 </pdfmark>
12588 <*dvipdfm | xetex>
12589   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12590   \@pdfm@mark{%
12591     outline \ifHy@DvipdfmxOutlineOpen
12592       [%
12593       \ifnum##21>\z@
12594       \else
12595       -%
12596       \fi
12597     ] %
12598     \fi
12599     ##1<<%
12600     /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
12601     /A<<%
12602     /S/GoTo%
12603     /D(\Hy@pstringName)%
12604     >>%
12605     >>%
12606   }%
12607 </dvipdfm | xetex>
12608 }%
12609 {%
12610   \def\WriteBookmarks{0}%
12611   \InputIfFileExists{\jobname.out}{-}{-}%
12612 }%
12613 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
12614 \ifx\WriteBookmarks\relax
12615 \else
12616   \if@filesw
12617     \newwrite\@outlinefile
12618     \Hy@OutlineRerunCheck
12619     \immediate\openout\@outlinefile=\jobname.out\relax
12620     \ifHy@typexml
12621       \immediate\write\@outlinefile{<relaxxml>\relax}%
12622     \fi
12623   \fi
12624 \fi
12625 \endgroup
12626 }
12627 <*pdftex>
12628 \def\Hy@OutlineName#1#2#3#4{%
12629   \pdfoutline goto name{#2}count#3{#4}%
12630 }
12631 </pdftex>
12632 \def\check@bm@number#1{%
12633   \expandafter\ifx\csname B_#1\endcsname\relax
12634     0%
12635   \else
12636     \csname B_#1\endcsname
12637   \fi
12638 }
12639 \def\calc@bm@number#1{%
12640   \@tempcnta=\check@bm@number{#1}\relax

```



```

12641 \advance\@tempcnta by 1 %
12642 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
12643 }
12644 \!/vtex)
12645 \ifHy@implicit
12646 \else
12647 \expandafter\endinput
12648 \fi
12649 \!/outlines)
12650 \(*outlines | hypertex)
12651 \newlength\Hy@SectionHShift
12652 \def\Hy@SectionAnchorHref#1{%
12653 \ifx\protect\@typeset@protect
12654 \Hy@@@SectionAnchor{#1}%
12655 \fi
12656 }
12657 \DeclareRobustCommand*\Hy@@@SectionAnchor}[1]{%
12658 \leavevmode
12659 \hbox to 0pt{%
12660 \kern-\Hy@SectionHShift
12661 \Hy@raisedlink{%
12662 \hyper@anchorstart{#1}\hyper@anchorend
12663 }%
12664 \hss
12665 }%
12666 }
12667 \let\H@old@ssect\@ssect
12668 \def\@ssect#1#2#3#4#5{%
12669 \Hy@GlobalStepCount\Hy@linkcounter
12670 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12671 \setlength{\Hy@SectionHShift}{#1}%
12672 \begingroup
12673 \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
12674 \toks\tw@\expandafter{%
12675 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
12676 #5%
12677 }%
12678 \edef\x{\endgroup
12679 \the\toks@\the\toks\tw@}%
12680 }\x
12681 }
12682 \let\H@old@schapter\@schapter
12683 \def\@schapter#1{%
12684 \begingroup
12685 \let\@mkboth\@gobbletwo
12686 \Hy@GlobalStepCount\Hy@linkcounter
12687 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12688 \Hy@raisedlink{%
12689 \hyper@anchorstart{\@currentHref}\hyper@anchorend
12690 }%
12691 \endgroup
12692 \H@old@schapter{#1}%
12693 }

```

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:

```

12694 \@ifundefined{@chapter}{-}{%
12695   \let\Hy@org@chapter\@chapter
12696   \def\@chapter{%
12697     \def\Hy@next{%
12698       \Hy@GlobalStepCount\Hy@linkcounter
12699       \xdef\@currentHref{\Hy@chapapp*. \the\Hy@linkcounter}%
12700       \Hy@raisedlink{%
12701         \hyper@anchorstart{\@currentHref}\hyper@anchorend
12702       }%
12703     }%
12704     \ifnum\c@secnumdepth>\m@ne
12705       \@ifundefined{if@mainmatter}%
12706       \iftrue{\csname if@mainmatter\endcsname}%
12707       \let\Hy@next\relax
12708     \fi
12709   \fi
12710   \Hy@next
12711   \Hy@org@chapter
12712 }%
12713 }

12714 \let\H@old@part\@part
12715 \begingroup\expandafter\expandafter\expandafter\endgroup
12716 \expandafter\ifx\csname chapter\endcsname\relax
12717   \let\Hy@secnum@part\z@
12718 \else
12719   \let\Hy@secnum@part\m@ne
12720 \fi
12721 \def\@part{%
12722   \ifnum\Hy@secnum@part>\c@secnumdepth
12723     \phantomsection
12724   \fi
12725   \H@old@part
12726 }

12727 \let\H@old@spart\@spart
12728 \def\@spart#1{%
12729   \Hy@GlobalStepCount\Hy@linkcounter
12730   \xdef\@currentHref{part*. \the\Hy@linkcounter}%
12731   \Hy@raisedlink{%
12732     \hyper@anchorstart{\@currentHref}\hyper@anchorend
12733   }%
12734   \H@old@spart{#1}%
12735 }

12736 \let\H@old@sect\@sect
12737 \def\@sect#1#2#3#4#5#6[#7]#8{%
12738   \ifnum #2>\c@secnumdepth
12739     \expandafter\@firstoftwo
12740   \else
12741     \expandafter\@secondoftwo
12742   \fi
12743   {%
12744     \Hy@GlobalStepCount\Hy@linkcounter
12745     \xdef\@currentHref{section*. \the\Hy@linkcounter}%
12746     \setlength{\Hy@SectionHShift}{#3}%
12747     \begingroup
12748     \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
12749     \toks\tw@\expandafter{%
12750       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%

```

```

12751     #8%
12752   }%
12753   \edef\x{\endgroup
12754     \the\toks@\the\toks\tw@}%
12755   }\x
12756 }{%
12757   \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
12758 }%
12759 }

12760 </outlines | hypertex>
12761 <*outlines>

12762 \expandafter\def\csname Parent-4\endcsname{}
12763 \expandafter\def\csname Parent-3\endcsname{}
12764 \expandafter\def\csname Parent-2\endcsname{}
12765 \expandafter\def\csname Parent-1\endcsname{}
12766 \expandafter\def\csname Parent0\endcsname{}
12767 \expandafter\def\csname Parent1\endcsname{}
12768 \expandafter\def\csname Parent2\endcsname{}
12769 \expandafter\def\csname Parent3\endcsname{}
12770 \expandafter\def\csname Parent4\endcsname{}

12771 </outlines>

```

49 Compatibility with koma-script classes

```
12772 <*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.

```

12773 \def\Hy@tempa{%
12774   \def\@addchap{##1}##2{%
12775     \typeout{##2}%
12776     \if@twoside
12777       \@mkboth{##1}{}%
12778     \else
12779       \@mkboth{}{##1}%
12780     \fi
12781     \addtocontents{lof}{\protect\addvspace{10\p@}}%
12782     \addtocontents{lot}{\protect\addvspace{10\p@}}%
12783     \Hy@GlobalStepCount\Hy@linkcounter
12784     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12785     \Hy@raisedlink{%
12786       \hyper@anchorstart{\@currentHref}\hyper@anchorend
12787     }%
12788     \if@twocolumn
12789       \@topnewpage[\@makeschapterhead{##2}]%
12790     \else
12791       \@makeschapterhead{##2}%
12792       \@afterheading
12793     \fi
12794     \addcontentsline{toc}{chapter}{##1}%
12795   }%
12796 }
12797 \@ifclassloaded{scrbook}{%

```

```

12798 \@ifclasslater{scrbook}{2001/01/01}{%
12799   \let\Hy@tempa\@empty
12800 }{}%
12801 }{%
12802 \@ifclassloaded{scrreprt}{%
12803   \@ifclasslater{scrreprt}{2001/01/01}{%
12804     \let\Hy@tempa\@empty
12805   }{}%
12806 }{}%
12807   \let\Hy@tempa\@empty
12808 }%
12809 }%
12810 \Hy@tempa
12811 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```

12812 <*pd1enc>
12813 \DeclareFontEncoding{PD1}{}{}

```

Accents

```

12814 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
12815 \DeclareTextAccent{\'}{PD1}{\textacute}
12816 \DeclareTextAccent{\^}{PD1}{\textasciicircum}
12817 \DeclareTextAccent{\~}{PD1}{\texttilde}
12818 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
12819 \DeclareTextAccent{\r}{PD1}{\textring}
12820 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
12821 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
12822 \DeclareTextAccent{\c}{PD1}{\textcedilla}
12823 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
12824 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
12825 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
12826 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
12827 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
12828 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
12829 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
12830 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
12831 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
12832 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
12833 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
12834 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
12835 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
12836 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
12837 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
12838 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
12839 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
12840 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
12841 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
12842 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
12843 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
12844 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
12845 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}

```

12846 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
 12847 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
 12848 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
 12849 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
 12850 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
 12851 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
 12852 \DeclareTextCommand{\newtie}{PD1}[1]{%
 12853 \TextSymbolUnavailable{\newtie{#1}}#1%
 12854 }

Special white space escape characters not for use in bookmarks but for other PDF strings.

12855 % U+0009 (CHARACTER TABULATION)
 12856 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
 12857 % U+000A (LINE FEED)
 12858 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
 12859 % U+000D (CARRIAGE RETURN)
 12860 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

Accent glyph names

12861 % U+02D8 BREVE; breve
 12862 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
 12863 % U+02C7 CARON; caron
 12864 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
 12865 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
 12866 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
 12867 % U+02D9 DOT ABOVE; dotaccent
 12868 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
 12869 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 12870 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
 12871 % U+02DB OGONEK; ogonek
 12872 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 12873 % U+02DA RING ABOVE; ring
 12874 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 12875 % U+02DC SMALL TILDE; ilde, *tilde
 12876 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

12877 % U+0022 QUOTATION MARK; quotedbl

12878 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022

12879 % U+0023 NUMBER SIGN; numbersign

12880 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023

12881 % U+0024 DOLLAR SIGN; dollar

12882 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024

12883 % U+0025 PERCENT SIGN; percent

12884 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025

12885 % U+0026 AMPERSAND; ampersand

12886 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

\047: U+0027 APOSTROPHE; quotesingle

12887 % U+0028 LEFT PARENTHESIS; parenleft

12888 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028

12889 % U+0029 RIGHT PARENTHESIS; parenright

12890 \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
12891 % U+002E FULL STOP; period
12892 \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
12893 % U+003C LESS-THAN SIGN; less
12894 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
\075: U+003D EQUALS SIGN; equal
12895 % U+003E GREATER-THAN SIGN; greater
12896 \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
12897 % U+005C REVERSE SOLIDUS; backslash
12898 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
\135: U+005D RIGHT SQUARE BRACKET; bracketright
12899 % U+005E CIRCUMFLEX ACCENT; asciicircum
12900 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
12901 % U+005F LOW LINE; underscore
12902 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
12903 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
12904 % U+0060 GRAVE ACCENT; grave
12905 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
12906 % U+0069 LATIN SMALL LETTER I; i
12907 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
\152: U+006A LATIN SMALL LETTER J; j
...
\172: U+007A LATIN SMALL LETTER Z; z
12908 % U+007B LEFT CURLY BRACKET; braceleft
12909 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
12910 % U+007C VERTICAL LINE; *bar, verticalbar
12911 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
12912 % U+007D RIGHT CURLY BRACKET; braceright
12913 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
12914 % U+007E TILDE; asciitilde
12915 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
12916 % U+2022 BULLET; bullet
12917 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
12918 % U+2020 DAGGER; dagger
12919 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
12920 % U+2021 DOUBLE DAGGER; daggerdbl
12921 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
12922 % U+2026 HORIZONTAL ELLIPSIS; ellipsis

12923 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
12924 % U+2014 EM DASH; emdash
12925 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
12926 % U+2013 EN DASH; endash
12927 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
12928 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
12929 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
12930 % U+2044 FRACTION SLASH; fraction
12931 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
12932 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
12933 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
12934 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
ingright
12935 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
12936 % U+2212 MINUS SIGN; minus
12937 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
12938 % U+2030 PER MILLE SIGN; perthousand
12939 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
12940 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
12941 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
12942 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
12943 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
12944 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
12945 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
12946 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
12947 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
12948 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
12949 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
12950 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
12951 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
12952 % U+2122 TRADE MARK SIGN; trademark
12953 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
12954 % U+FB01 LATIN SMALL LIGATURE FI; fi
12955 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
12956 % U+FB02 LATIN SMALL LIGATURE FL; fl
12957 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
12958 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
12959 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
12960 % U+0152 LATIN CAPITAL LIGATURE OE; OE
12961 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
12962 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
12963 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
12964 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
12965 \DeclareTextCompositeCommand{"}{PD1}{Y}{\230}% U+0178
12966 \DeclareTextCommand{\IJ}{PD1}{\230}
12967 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
12968 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
12969 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
12970 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
12971 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
12972 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
12973 % U+0153 LATIN SMALL LIGATURE OE; oe
12974 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
12975 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
12976 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
12977 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron

12978 \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.

12979 % U+20AC EURO SIGN; *Euro, euro
12980 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
12981 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
12982 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
12983 % U+00A2 CENT SIGN; cent
12984 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
12985 % U+00A3 POUND SIGN; sterling
12986 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
12987 % U+00A4 CURRENCY SIGN; currency
12988 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
12989 % U+00A5 YEN SIGN; yen
12990 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
12991 % U+00A6 BROKEN BAR; brokenbar
12992 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
12993 % U+00A7 SECTION SIGN; section
12994 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
12995 % U+00A8 DIAERESIS; dieresis
12996 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
12997 % U+00A9 COPYRIGHT SIGN; copyright
12998 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
12999 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
13000 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
13001 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
13002 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
13003 % U+00AC NOT SIGN; logicalnot
13004 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
13005 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

13006 % U+00AE REGISTERED SIGN; registered
13007 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
13008 % U+00AF MACRON; *macron, overscore
13009 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
13010 % U+00B0 DEGREE SIGN; degree
13011 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
13012 % U+00B1 PLUS-MINUS SIGN; plusminus
13013 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
13014 % U+00B2 SUPERSCRIP T TWO; twosuperior
13015 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
13016 % U+00B3 SUPERSCRIP T THREE; threesuperior
13017 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
13018 % U+00B4 ACUTE ACCENT; acute
13019 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
13020 % U+00B5 MICRO SIGN; mu, mu1
13021 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
13022 % U+00B6 PILCROW SIGN; paragraph
13023 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
13024 % U+00B7 MIDDLE DOT; middot, *periodcentered
13025 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
13026 % U+00B8 CEDILLA; cedilla
13027 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
13028 % U+00B9 SUPERSCRIP T ONE; onesuperior
13029 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
13030 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine

13031 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
13032 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
13033 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
13034 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
13035 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
13036 % U+00BD VULGAR FRACTION ONE HALF; onehalf
13037 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
13038 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
13039 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
13040 % U+00BF INVERTED QUESTION MARK; questiondown
13041 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
13042 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
13043 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
13044 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
13045 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
13046 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
13047 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
13048 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
13049 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
13050 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
13051 \DeclareTextCompositeCommand{\\"}{PD1}{A}{\304}% U+00C4
13052 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
13053 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
13054 % U+00C6 LATIN CAPITAL LETTER AE; AE
13055 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
13056 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
13057 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
13058 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
13059 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
13060 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13061 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
13062 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13063 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
13064 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13065 \DeclareTextCompositeCommand{\\"}{PD1}{E}{\313}% U+00CB
13066 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13067 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
13068 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13069 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
13070 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13071 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
13072 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13073 \DeclareTextCompositeCommand{\\"}{PD1}{I}{\317}% U+00CF
13074 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13075 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
13076 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
13077 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13078 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
13079 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13080 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
13081 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13082 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
13083 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13084 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
13085 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13086 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5

13087 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13088 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
13089 % U+00D7 MULTIPLICATION SIGN; multiply
13090 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
13091 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13092 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
13093 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13094 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
13095 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13096 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
13097 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13098 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
13099 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13100 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
13101 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13102 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
13103 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13104 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
13105 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13106 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
13107 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13108 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
13109 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13110 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
13111 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13112 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
13113 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13114 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
13115 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13116 \DeclareTextCompositeCommand{"}{PD1}{a}{\344}% U+00E4
13117 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13118 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
13119 % U+00E6 LATIN SMALL LETTER AE; ae
13120 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
13121 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13122 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
13123 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13124 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
13125 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13126 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
13127 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13128 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
13129 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13130 \DeclareTextCompositeCommand{"}{PD1}{e}{\353}% U+00EB
13131 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13132 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
13133 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
13134 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13135 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
13136 \DeclareTextCompositeCommand{\`}{PD1}{i}{\355}% U+00ED
13137 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13138 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13139 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
13140 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13141 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
13142 \DeclareTextCompositeCommand{"}{PD1}{i}{\357}% U+00EF
13143 % U+00F0 LATIN SMALL LETTER ETH; eth

13144 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
13145 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13146 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
13147 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13148 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
13149 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13150 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
13151 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13152 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
13153 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13154 \DeclareTextCompositeCommand{\-}{PD1}{o}{\365}% U+00F5
13155 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13156 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
13157 % U+00F7 DIVISION SIGN; divide
13158 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
13159 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
13160 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
13161 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
13162 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
13163 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
13164 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
13165 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
13166 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
13167 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
13168 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
13169 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
13170 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
13171 % U+00FE LATIN SMALL LETTER THORN; thorn
13172 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
13173 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
13174 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
13175 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

13176 \DeclareTextCommand{\SS}{PD1}{SS}
13177 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

13178 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
13179 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
13180 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
13181 \DeclareTextCommand{\textgrq}{PD1}{\textquotelleft}
13182 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
13183 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
13184 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
13185 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

13186 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
13187 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
13188 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
13189 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
13190 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
13191 \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).

13192 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
13193 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute

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13194 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
13195 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
13196 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
13197 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
13198 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
13199 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
13200 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
13201 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
13202 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
13203 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
13204 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
13205 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
13206 (/pd1enc)

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50.2 PU encoding

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13207 (*puenc)
13208 \DeclareFontEncoding{PU}{-}{-}

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50.2.1 NFSS2 accents

```

13209 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
13210 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
13211 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
13212 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
13213 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
13214 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
13215 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
13216 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
13217 % U+0304 COMBINING MACRON; macroncmb
13218 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
13219 % U+0306 COMBINING BREVE; brevecmb
13220 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
13221 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
13222 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
13223 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
13224 % U+0308 COMBINING DIAERESIS; dieresiscmb
13225 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
13226 % U+030A COMBINING RING ABOVE; ringcmb
13227 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
13228 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
13229 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
13230 % U+030C COMBINING CARON; caroncmb
13231 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
13232 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
13233 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
13234 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
13235 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
13236 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
13237 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
13238 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
13239 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
13240 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
13241 % U+0327 COMBINING CEDILLA; cedillacmb
13242 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
13243 % U+0328 COMBINING OGONEK; ogonekcmb
13244 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
13245 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb

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```

13246 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
13247 % U+20DD COMBINING ENCLOSING CIRCLE
13248 \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.

```

13249 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}
13250 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
13251 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
13252 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
13253 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
13254 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
13255 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
13256 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
13257 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
13258 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
13259 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
13260 \DeclareTextCompositeCommand{\=} {PU}{\@empty}{\textasciimacron}
13261 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
13262 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
13263 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
13264 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
13265 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
13266 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
13267 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

13268 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}
13269 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
13270 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}
13271 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
13272 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
13273 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
13274 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
13275 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
13276 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
13277 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
13278 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
13279 \DeclareTextCompositeCommand{\=} {PU}{\ }{\textasciimacron}
13280 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
13281 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
13282 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
13283 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
13284 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
13285 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
13286 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

13287 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
13288 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
13289 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
13290 \DeclareTextCommand{\capitalacute}{PU}[1]{\\'{#1}}
13291 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
13292 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
13293 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"}{#1}}
13294 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
13295 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
13296 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
13297 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
13298 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}

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13299 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.#1}
 13300 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
 13301 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

13302 % U+0009 (CHARACTER TABULATION)
 13303 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
 13304 % U+000A (LINE FEED)
 13305 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
 13306 % U+000D (CARRIAGE RETURN)
 13307 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D
 \80\040: U+0020 SPACE; space, spacehackarabic
 \80\041: U+0021 EXCLAMATION MARK; exclam
 13308 % U+0022 QUOTATION MARK; quotedbl
 13309 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
 13310 % U+0023 NUMBER SIGN; numbersign
 13311 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
 13312 % U+0024 DOLLAR SIGN; dollar
 13313 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
 13314 % U+0025 PERCENT SIGN; percent
 13315 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
 13316 % U+0026 AMPERSAND; ampersand
 13317 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 13318 % U+0027 APOSTROPHE; quotesingle
 13319 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 13320 % U+0028 LEFT PARENTHESIS; parenleft
 13321 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 13322 % U+0029 RIGHT PARENTHESIS; parenright
 13323 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 13324 % U+002A ASTERISK; asterisk
 13325 \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
 13326 % U+003C LESS-THAN SIGN; less
 13327 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 13328 % U+003E GREATER-THAN SIGN; greater
 13329 \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

13330 % U+005C REVERSE SOLIDUS; backslash
13331 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
\80\135: U+005D RIGHT SQUARE BRACKET; bracketright
13332 % U+005E CIRCUMFLEX ACCENT; asciicircum
13333 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
13334 % U+005F LOW LINE; underscore
13335 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
13336 % U+0060 GRAVE ACCENT; grave
13337 \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
13338 % U+0069 LATIN SMALL LETTER I; i
13339 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
13340 \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
13341 % U+007B LEFT CURLY BRACKET; braceleft
13342 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
13343 % U+007C VERTICAL LINE; *bar, verticalbar
13344 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
13345 % U+007D RIGHT CURLY BRACKET; braceright
13346 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
13347 % U+007E TILDE; asciitilde
13348 \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
13349 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
13350 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
13351 % U+00A2 CENT SIGN; cent
13352 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
13353 % U+00A3 POUND SIGN; sterling
13354 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
13355 % U+00A4 CURRENCY SIGN; currency
13356 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
13357 % U+00A5 YEN SIGN; yen
13358 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
13359 % U+00A6 BROKEN BAR; brokenbar
13360 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
13361 % U+00A7 SECTION SIGN; section
13362 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
13363 % U+00A8 DIAERESIS; diaeresis
13364 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
13365 % U+00A9 COPYRIGHT SIGN; copyright
13366 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
13367 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
13368 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
13369 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
13370 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
13371 % U+00AC NOT SIGN; logicalnot
13372 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC

13373 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen

13374 % U+00AE REGISTERED SIGN; registered

13375 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE

13376 % U+00AF MACRON; *macron, overscore

13377 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF

13378 % U+00B0 DEGREE SIGN; degree

13379 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0

13380 % U+00B1 PLUS-MINUS SIGN; plusminus

13381 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1

13382 % U+00B2 SUPERSCRIPT TWO; twosuperior

13383 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2

13384 % U+00B3 SUPERSCRIPT THREE; threesuperior

13385 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3

13386 % U+00B4 ACUTE ACCENT; acute

13387 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4

13388 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4

13389 % U+00B5 MICRO SIGN; mu, mu1

13390 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5

13391 % U+00B6 PILCROW SIGN; paragraph

13392 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6

13393 % U+00B7 MIDDLE DOT; middot, *periodcentered

13394 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7

13395 % U+00B8 CEDILLA; cedilla

13396 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8

13397 % U+00B9 SUPERSCRIPT ONE; onesuperior

13398 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9

13399 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine

13400 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA

13401 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright

13402 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB

13403 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter

13404 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC

13405 % U+00BD VULGAR FRACTION ONE HALF; onehalf

13406 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD

13407 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters

13408 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE

13409 % U+00BF INVERTED QUESTION MARK; questiondown

13410 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF

13411 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave

13412 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0

13413 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute

13414 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1

13415 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex

13416 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2

13417 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde

13418 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3

13419 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis

13420 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4

13421 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring

13422 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5

13423 % U+00C6 LATIN CAPITAL LETTER AE; AE

13424 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6

13425 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla

13426 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7

13427 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave

13428 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}% U+00C8
13429 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
13430 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
13431 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
13432 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
13433 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
13434 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
13435 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
13436 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}% U+00CC
13437 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
13438 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
13439 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
13440 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
13441 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
13442 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
13443 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
13444 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
13445 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
13446 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
13447 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
13448 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}% U+00D2
13449 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
13450 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
13451 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
13452 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
13453 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
13454 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
13455 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
13456 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
13457 % U+00D7 MULTIPLICATION SIGN; multiply
13458 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
13459 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
13460 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
13461 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
13462 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}% U+00D9
13463 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
13464 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
13465 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
13466 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
13467 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
13468 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
13469 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
13470 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
13471 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
13472 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
13473 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
13474 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
13475 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
13476 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}% U+00E0
13477 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
13478 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
13479 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
13480 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
13481 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
13482 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
13483 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
13484 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4

13485 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
13486 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
13487 % U+00E6 LATIN SMALL LETTER AE; ae
13488 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
13489 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
13490 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
13491 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
13492 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
13493 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
13494 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
13495 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
13496 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
13497 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
13498 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
13499 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
13500 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
13501 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
13502 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
13503 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\355}% U+00ED
13504 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
13505 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
13506 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
13507 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
13508 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
13509 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
13510 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
13511 % U+00F0 LATIN SMALL LETTER ETH; eth
13512 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
13513 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
13514 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
13515 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
13516 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
13517 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
13518 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
13519 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
13520 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
13521 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
13522 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
13523 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
13524 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
13525 % U+00F7 DIVISION SIGN; divide
13526 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
13527 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
13528 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
13529 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
13530 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
13531 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
13532 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
13533 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
13534 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
13535 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
13536 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
13537 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
13538 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
13539 % U+00FE LATIN SMALL LETTER THORN; thorn
13540 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
13541 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis

13542 \DeclareTextCompositeCommand{"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

13543 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
13544 \DeclareTextCompositeCommand{\=} {PU}{A}{\81\000}% U+0100
13545 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
13546 \DeclareTextCompositeCommand{\=} {PU}{a}{\81\001}% U+0101
13547 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
13548 \DeclareTextCompositeCommand{\u} {PU}{A}{\81\002}% U+0102
13549 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
13550 \DeclareTextCompositeCommand{\u} {PU}{a}{\81\003}% U+0103
13551 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
13552 \DeclareTextCompositeCommand{\k} {PU}{A}{\81\004}% U+0104
13553 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
13554 \DeclareTextCompositeCommand{\k} {PU}{a}{\81\005}% U+0105
13555 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
13556 \DeclareTextCompositeCommand{\'} {PU}{C}{\81\006}% U+0106
13557 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
13558 \DeclareTextCompositeCommand{\'} {PU}{c}{\81\007}% U+0107
13559 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
13560 \DeclareTextCompositeCommand{\^} {PU}{C}{\81\010}% U+0108
13561 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
13562 \DeclareTextCompositeCommand{\^} {PU}{c}{\81\011}% U+0109
13563 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
13564 \DeclareTextCompositeCommand{\.} {PU}{C}{\81\012}% U+010A
13565 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
13566 \DeclareTextCompositeCommand{\.} {PU}{c}{\81\013}% U+010B
13567 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
13568 \DeclareTextCompositeCommand{\v} {PU}{C}{\81\014}% U+010C
13569 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
13570 \DeclareTextCompositeCommand{\v} {PU}{c}{\81\015}% U+010D
13571 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
13572 \DeclareTextCompositeCommand{\v} {PU}{D}{\81\016}% U+010E
13573 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
13574 \DeclareTextCompositeCommand{\v} {PU}{d}{\81\017}% U+010F
13575 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
13576 \DeclareTextCommand{\DJ} {PU}{\81\020}% U+0110
13577 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
13578 \DeclareTextCommand{\dj} {PU}{\81\021}% U+0111
13579 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
13580 \DeclareTextCompositeCommand{\=} {PU}{E}{\81\022}% U+0112
13581 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
13582 \DeclareTextCompositeCommand{\=} {PU}{e}{\81\023}% U+0113
13583 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
13584 \DeclareTextCompositeCommand{\u} {PU}{E}{\81\024}% U+0114
13585 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
13586 \DeclareTextCompositeCommand{\u} {PU}{e}{\81\025}% U+0115
13587 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
13588 \DeclareTextCompositeCommand{\.} {PU}{E}{\81\026}% U+0116
13589 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
13590 \DeclareTextCompositeCommand{\.} {PU}{e}{\81\027}% U+0117
13591 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
13592 \DeclareTextCompositeCommand{\k} {PU}{E}{\81\030}% U+0118
13593 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
13594 \DeclareTextCompositeCommand{\k} {PU}{e}{\81\031}% U+0119
13595 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron

13596 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
13597 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
13598 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
13599 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
13600 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
13601 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
13602 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
13603 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
13604 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
13605 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
13606 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
13607 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
13608 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
13609 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
13610 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
13611 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaac-
cent
13612 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
13613 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
13614 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
13615 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
13616 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
13617 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
13618 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
13619 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
13620 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
13621 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
13622 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
13623 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
13624 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
13625 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
13626 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
13627 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
13628 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
13629 \DeclareTextCompositeCommand{\=} {PU}{I}{\81\052}% U+012A
13630 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
13631 \DeclareTextCompositeCommand{\=} {PU}{i}{\81\053}% U+012B
13632 \DeclareTextCompositeCommand{\=} {PU}{i}{\81\053}% U+012B
13633 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
13634 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
13635 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
13636 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
13637 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
13638 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
13639 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
13640 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
13641 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
13642 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
13643 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
13644 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
13645 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
13646 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
13647 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
13648 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
13649 % U+0133 LATIN SMALL LIGATURE IJ; ij
13650 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
13651 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex

13652 \DeclareTextCompositeCommand{\~}{PU}{J}{\81\064}% U+0134
 13653 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 13654 \DeclareTextCompositeCommand{\~}{PU}{j}{\81\065}% U+0135
 13655 \DeclareTextCompositeCommand{\~}{PU}{\j}{\81\065}% U+0135
 13656 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 13657 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 13658 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 13659 \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.

13660 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 13661 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 13662 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 13663 \DeclareTextCompositeCommand{\`}{PU}{L}{\81\071}% U+0139
 13664 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 13665 \DeclareTextCompositeCommand{\`}{PU}{l}{\81\072}% U+013A
 13666 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 13667 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 13668 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 13669 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 13670 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 13671 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 13672 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 13673 \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.

13674 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 13675 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 13676 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 13677 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 13678 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 13679 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 13680 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 13681 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 13682 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 13683 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\103}% U+0143
 13684 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 13685 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\104}% U+0144
 13686 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
 13687 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 13688 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 13689 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
 13690 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 13691 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 13692 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 13693 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 13694 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
 13695 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 13696 % U+014A LATIN CAPITAL LETTER ENG; Eng
 13697 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 13698 % U+014B LATIN SMALL LETTER ENG; eng

13699 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
13700 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
13701 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
13702 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
13703 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
13704 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
13705 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
13706 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
13707 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
13708 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblac
acute, Ohungarumlaut
13709 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
13710 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblac
acute, ohungarumlaut
13711 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
13712 % U+0152 LATIN CAPITAL LIGATURE OE; OE
13713 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
13714 % U+0153 LATIN SMALL LIGATURE OE; oe
13715 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
13716 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
13717 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
13718 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
13719 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
13720 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac
cent
13721 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
13722 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
13723 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
13724 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
13725 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
13726 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
13727 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
13728 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
13729 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
13730 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
13731 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
13732 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
13733 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
13734 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
13735 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
13736 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
13737 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
13738 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
13739 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
13740 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
13741 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
13742 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
13743 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
13744 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaac
cent
13745 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
13746 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
13747 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
13748 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
13749 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
13750 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
13751 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165

13752 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
 13753 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 13754 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 13755 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 13756 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 13757 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 13758 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 13759 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 13760 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 13761 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 13762 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 13763 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 13764 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 13765 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 13766 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 13767 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 13768 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 13769 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 13770 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 13771 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 13772 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblac
 acute, Uhungarumlaut
 13773 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 13774 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblac
 acute, uhungarumlaut
 13775 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 13776 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 13777 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 13778 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 13779 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 13780 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 13781 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 13782 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 13783 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 13784 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 13785 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 13786 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 13787 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 13788 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 13789 \DeclareTextCompositeCommand{"}{PU}{Y}{\81\170}% U+0178
 13790 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 13791 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 13792 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 13793 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 13794 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 13795 \DeclareTextCompositeCommand{.}{PU}{Z}{\81\173}% U+017B
 13796 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 13797 \DeclareTextCompositeCommand{.}{PU}{z}{\81\174}% U+017C
 13798 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 13799 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 13800 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13801 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 13802 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 13803 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

13804 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin

13805 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
13806 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
13807 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
13808 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
13809 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
13810 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
13811 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
13812 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
13813 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
13814 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
13815 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
13816 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
13817 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
13818 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
13819 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
13820 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
13821 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
13822 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
13823 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
13824 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
13825 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
13826 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
13827 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
13828 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
13829 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
13830 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
13831 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
13832 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
13833 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
13834 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
13835 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
13836 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
13837 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
13838 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
13839 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
13840 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
13841 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
13842 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
13843 \DeclareTextCompositeCommand{\`}{PU}{G}{\81\364}% U+01F4
13844 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
13845 \DeclareTextCompositeCommand{\`}{PU}{g}{\81\365}% U+01F5
13846 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
13847 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
13848 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
13849 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
13850 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
13851 \DeclareTextCompositeCommand{\`}{PU}{\AE}{\81\374}% U+01FC
13852 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
13853 \DeclareTextCompositeCommand{\`}{PU}{\ae}{\81\375}% U+01FD
13854 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslasha-
acute, Ostrokeacut
13855 \DeclareTextCompositeCommand{\`}{PU}{\O}{\81\376}% U+01FE
13856 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslasha-
acute, ostrokeacute
13857 \DeclareTextCompositeCommand{\`}{PU}{\o}{\81\377}% U+01FF
13858 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
13859 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200

13860 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
13861 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
13862 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
13863 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
13864 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
13865 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
13866 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
13867 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
13868 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
13869 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13870 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13871 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
13872 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
13873 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
13874 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
13875 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
13876 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
13877 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
13878 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
13879 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
13880 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
13881 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
13882 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
13883 % U+021E LATIN CAPITAL LETTER H WITH CARON
13884 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
13885 % U+021F LATIN SMALL LETTER H WITH CARON
13886 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
13887 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
13888 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
13889 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
13890 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
13891 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
13892 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
13893 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
13894 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
13895 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
13896 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
13897 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
13898 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
13899 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
13900 \DeclareTextCompositeCommand{\=} {PU}{Y}{\82\062}% U+0232
13901 % U+0233 LATIN SMALL LETTER Y WITH MACRON
13902 \DeclareTextCompositeCommand{\=} {PU}{y}{\82\063}% U+0233
13903 % U+0237 LATIN SMALL LETTER DOTLESS J
13904 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

13905 % U+02C7 CARON; caron
13906 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
13907 % U+02D8 BREVE; breve
13908 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
13909 % U+02D9 DOT ABOVE; dotaccent
13910 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
13911 % U+02DA RING ABOVE; ring
13912 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
13913 % U+02DB OGONEK; ogonek
13914 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB

13915 % U+02DC SMALL TILDE; ilde, *tilde
13916 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
13917 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
13918 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
13919 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
13920 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
13921 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
13922 % U+02F7 MODIFIER LETTER LOW TILDE
13923 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

13924 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
13925 \DeclareTextCommand{\textdoublegrave}{PU}{ \83\017}% U+030F
13926 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
13927 \DeclareTextCommand{\textnewtie}{PU}{ \83\021}% U+0311
13928 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
13929 \DeclareTextCommand{\textdotbelow}{PU}{ \83\043}% U+0323
13930 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
13931 \DeclareTextCommand{\textmacronbelow}{PU}{ \83\061}% U+0331
13932 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
13933 \DeclareTextCommand{\texttie}{PU}{ \83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

13934 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
13935 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
13936 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
13937 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
13938 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
13939 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
13940 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
13941 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
13942 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
13943 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
13944 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
13945 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
13946 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
13947 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
13948 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilononos
13949 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
13950 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
13951 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
13952 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; iotadiesistonos
13953 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesisis}{\83\220}% U+0390
13954 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
13955 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
13956 % U+0392 GREEK CAPITAL LETTER BETA; Beta
13957 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
13958 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
13959 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
13960 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
13961 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
13962 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
13963 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
13964 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
13965 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396

13966 % U+0397 GREEK CAPITAL LETTER ETA; Eta
13967 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
13968 % U+0398 GREEK CAPITAL LETTER THETA; Theta
13969 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
13970 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
13971 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
13972 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
13973 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
13974 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
13975 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
13976 % U+039C GREEK CAPITAL LETTER MU; Mu
13977 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
13978 % U+039D GREEK CAPITAL LETTER NU; Nu
13979 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
13980 % U+039E GREEK CAPITAL LETTER XI; Xi
13981 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
13982 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
13983 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
13984 % U+03A0 GREEK CAPITAL LETTER PI; Pi
13985 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
13986 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
13987 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
13988 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
13989 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
13990 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
13991 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
13992 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
13993 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
13994 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
13995 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
13996 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
13997 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
13998 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
13999 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
14000 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
14001 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
14002 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
14003 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
14004 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
14005 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilondieresis
14006 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
14007 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
14008 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
14009 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
14010 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
14011 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
14012 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
14013 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
14014 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
14015 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilondieresis
14016 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
14017 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
14018 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
14019 % U+03B2 GREEK SMALL LETTER BETA; beta
14020 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2

14021 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
14022 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
14023 % U+03B4 GREEK SMALL LETTER DELTA; delta
14024 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
14025 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
14026 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
14027 % U+03B6 GREEK SMALL LETTER ZETA; zeta
14028 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
14029 % U+03B7 GREEK SMALL LETTER ETA; eta
14030 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
14031 % U+03B8 GREEK SMALL LETTER THETA; theta
14032 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
14033 % U+03B9 GREEK SMALL LETTER IOTA; iota
14034 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
14035 % U+03BA GREEK SMALL LETTER KAPPA; kappa
14036 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
14037 % U+03BB GREEK SMALL LETTER LAMDA; lambda
14038 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
14039 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
14040 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
14041 % U+03BD GREEK SMALL LETTER NU; nu
14042 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
14043 % U+03BE GREEK SMALL LETTER XI; xi
14044 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
14045 % U+03BF GREEK SMALL LETTER OMICRON; omicron
14046 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
14047 % U+03C0 GREEK SMALL LETTER PI; pi
14048 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
14049 % U+03C1 GREEK SMALL LETTER RHO; rho
14050 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
14051 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
14052 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
14053 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
14054 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
14055 % U+03C4 GREEK SMALL LETTER TAU; tau
14056 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
14057 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
14058 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
14059 % U+03C6 GREEK SMALL LETTER PHI; phi
14060 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
14061 % U+03C7 GREEK SMALL LETTER CHI; chi
14062 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
14063 % U+03C8 GREEK SMALL LETTER PSI; psi
14064 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
14065 % U+03C9 GREEK SMALL LETTER OMEGA; omega
14066 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
14067 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
14068 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
14069 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
silonudieresis
14070 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
14071 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
14072 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
14073 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
14074 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
14075 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
14076 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos

14077 \DeclareTextCompositeCommand{\'}{PU}{\textomega}{\83\316}% U+03CE
14078 % U+03DA GREEK LETTER STIGMA; Stigmatreek
14079 \DeclareTextCommand{\textStigmatreek}{PU}{\83\332}% U+03DA
14080 % U+03DB GREEK SMALL LETTER STIGMA
14081 \DeclareTextCommand{\textstigmatreek}{PU}{\83\333}% U+03DB
14082 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
14083 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
14084 % U+03DD GREEK SMALL LETTER DIGAMMA
14085 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
14086 % U+03DE GREEK LETTER KOPPA; Koppagreek
14087 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
14088 % U+03DF GREEK SMALL LETTER KOPPA
14089 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
14090 % U+03E0 GREEK LETTER SAMPI; Sampigreek
14091 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
14092 % U+03E1 GREEK SMALL LETTER SAMPI
14093 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

50.2.9 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

14094 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
14095 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
14096 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
14097 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
14098 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
14099 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
14100 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
14101 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
14102 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
14103 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
14104 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
14105 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
14106 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
14107 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrillic, *afii10055
14108 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
14109 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
14110 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
14111 \DeclareTextCompositeCommand{\'}{PU}{\CYRII}{\84\007}% U+0407
14112 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
14113 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
14114 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
14115 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
14116 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
14117 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
14118 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
14119 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
14120 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
14121 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
14122 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
14123 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
14124 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
14125 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
14126 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
14127 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
14128 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F

14129 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
14130 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
14131 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
14132 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
14133 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
14134 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
14135 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
14136 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
14137 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
14138 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
14139 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
14140 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
14141 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
14142 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
14143 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
14144 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
14145 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
14146 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
14147 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
14148 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
14149 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
14150 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
14151 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
14152 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
14153 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
14154 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
14155 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
14156 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
14157 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
14158 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
14159 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
14160 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
14161 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
14162 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
14163 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
14164 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
14165 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
14166 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
14167 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
14168 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
14169 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
14170 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
14171 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
14172 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
14173 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
14174 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
14175 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
14176 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
14177 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
14178 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
14179 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
14180 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
14181 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
14182 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
14183 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
14184 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
14185 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B

14186 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
14187 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
14188 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
14189 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
14190 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
14191 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
14192 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
14193 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
14194 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
14195 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
14196 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
14197 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
14198 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
14199 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
14200 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
14201 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
14202 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
14203 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
14204 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
14205 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
14206 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
14207 \DeclareTextCommand{\cyrzh}{PU}{\84\066}% U+0436
14208 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
14209 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
14210 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
14211 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
14212 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
14213 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
14214 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
14215 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
14216 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
14217 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
14218 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B
14219 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
14220 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
14221 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
14222 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
14223 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
14224 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
14225 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
14226 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
14227 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
14228 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
14229 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
14230 \DeclareTextCommand{\cyr}{PU}{\84\101}% U+0441
14231 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
14232 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
14233 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
14234 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
14235 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
14236 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
14237 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
14238 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
14239 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
14240 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
14241 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
14242 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447

14243 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
14244 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
14245 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
14246 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
14247 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
14248 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
14249 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
14250 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
14251 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
14252 \DeclareTextCommand{\cyrsoftsn}{PU}{\84\114}% U+044C
14253 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
14254 \DeclareTextCommand{\cyre}{PU}{\84\115}% U+044D
14255 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
14256 \DeclareTextCommand{\cyrju}{PU}{\84\116}% U+044E
14257 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
14258 \DeclareTextCommand{\cyrja}{PU}{\84\117}% U+044F
14259 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
14260 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
14261 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
14262 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
14263 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
14264 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
14265 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
14266 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
14267 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
14268 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
14269 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
14270 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
14271 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
14272 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
14273 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
14274 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
14275 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
14276 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
14277 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
14278 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
14279 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
14280 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
14281 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
14282 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
14283 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
14284 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
14285 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
14286 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
14287 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
14288 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
14289 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
14290 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
14291 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
14292 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
14293 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
14294 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
14295 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
14296 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
14297 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
14298 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146

14299 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
14300 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
14301 \DeclareTextCommand{\cyr yat}{PU}{\84\143}% U+0463
14302 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
14303 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
14304 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
14305 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
14306 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittleyrillic
14307 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
14308 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittleyrillic
14309 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
14310 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitleio-
tifiedcyrillic
14311 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
14312 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitleio-
tifiedcyrillic
14313 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
14314 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
14315 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
14316 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
14317 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
14318 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
cyrillic
14319 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
14320 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyril-
lic
14321 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
14322 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
14323 \DeclareTextCommand{\CYR KSI}{PU}{\84\156}% U+046E
14324 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
14325 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
14326 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
14327 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
14328 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
14329 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
14330 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
14331 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
14332 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
14333 \DeclareTextCommand{\cyrfit a}{PU}{\84\163}% U+0473
14334 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
14335 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
14336 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
14337 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
14338 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE AC-
CENT; Izhitsadblgravecyrillic
14339 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
14340 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE AC-
CENT; izhitsadblgravecyrillic
14341 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
14342 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
14343 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
14344 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
14345 \DeclareTextCommand{\cyr uk}{PU}{\84\171}% U+0479
14346 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
lic
14347 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
14348 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic

14349 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
14350 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
14351 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
14352 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
14353 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
14354 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
14355 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
14356 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
14357 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
14358 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
14359 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
14360 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
14361 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
14362 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
14363 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
\84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
\84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
\84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
\84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
\84\207: U+0487 COMBINING CYRILLIC POKRYTIE
\84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
\84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
14364 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
14365 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
14366 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
14367 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
14368 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
14369 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
14370 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
14371 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
14372 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
14373 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
14374 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
14375 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
14376 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
14377 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
14378 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
14379 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
14380 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
14381 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
14382 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
14383 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
14384 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
14385 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
14386 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
14387 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495

14388 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
14389 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
14390 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
14391 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
14392 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
14393 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
14394 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
14395 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
14396 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
14397 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
14398 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
14399 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
14400 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
14401 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
14402 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic
14403 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
14404 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-ticalstrokecyrillic
14405 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
14406 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
14407 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
14408 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
14409 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
14410 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
14411 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
14412 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
14413 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
14414 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
14415 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
14416 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
14417 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
14418 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
14419 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
14420 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
14421 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
14422 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
14423 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
14424 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
14425 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
14426 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
14427 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
14428 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
14429 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
14430 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Edescendercyrillic

14431 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
14432 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
14433 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescender-cyrillic
14434 \DeclareTextCommand{\cyrdsdc}{PU}{\84\253}% U+04AB
14435 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
14436 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
14437 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
14438 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescender-cyrillic
14439 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
14440 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
14441 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
14442 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; usstraightcyrillic
14443 \DeclareTextCommand{\cyr}{PU}{\84\257}% U+04AF
14444 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
14445 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
14446 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
14447 \DeclareTextCommand{\cyryhcrs}{PU}{\84\261}% U+04B1
14448 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
14449 \DeclareTextCommand{\CYRHDS}{PU}{\84\262}% U+04B2
14450 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescender-cyrillic
14451 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
14452 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tsetsecyrillic
14453 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
14454 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tsetsecyrillic
14455 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
14456 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
14457 \DeclareTextCommand{\CYRHRDSC}{PU}{\84\266}% U+04B6
14458 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
14459 \DeclareTextCommand{\cyrhrdsc}{PU}{\84\267}% U+04B7
14460 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
verticalstrokecyrillic
14461 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
14462 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
verticalstrokecyrillic
14463 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
14464 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
14465 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
14466 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
14467 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
14468 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-cyrillic
14469 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
14470 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
14471 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
14472 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCEN-
DER; Chedescenderabkhasiancyrillic
14473 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE

14474 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
14475 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCEN-
DER; chedescenderabkhasiancyrillic
14476 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
14477 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
14478 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
14479 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
14480 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
14481 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
14482 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
14483 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
14484 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
14485 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
14486 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
14487 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
14488 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
14489 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
14490 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
14491 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
14492 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
14493 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
14494 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
14495 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
14496 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-
cyrillic
14497 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
14498 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-
cyrillic
14499 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
14500 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
14501 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
14502 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
14503 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
14504 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
14505 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
14506 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
14507 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
14508 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyri-
lic
14509 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
14510 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
14511 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
14512 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
14513 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
14514 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
14515 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
14516 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevcyrillic
14517 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
14518 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevcyrillic
14519 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
14520 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
14521 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
14522 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
14523 \DeclareTextCommand{\cyrschwaw}{PU}{\84\331}% U+04D9
14524 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-
siscyrillic

14525 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
14526 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-
siscyrillic
14527 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
14528 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
siscyrillic
14529 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
14530 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresis-
cyrillic
14531 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\335}% U+04DD
14532 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresis-
cyrillic
14533 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
14534 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
14535 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
14536 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
cyrillic
14537 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
14538 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
14539 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
14540 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
14541 \DeclareTextCompositeCommand{=} {PU}{\CYRI}{\84\342}% U+04E2
14542 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
14543 \DeclareTextCompositeCommand{=} {PU}{\cyri}{\84\343}% U+04E3
14544 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
14545 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
14546 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
14547 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
14548 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyril-
lic
14549 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
14550 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
14551 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
14552 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
14553 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
14554 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
14555 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
14556 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERE-
SIS; Obarreddieresiscyrillic
14557 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
14558 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarred-
dieresiscyrillic
14559 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
14560 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
14561 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
14562 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
14563 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
14564 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
14565 \DeclareTextCompositeCommand{=} {PU}{\CYRU}{\84\356}% U+04EE
14566 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
14567 \DeclareTextCompositeCommand{=} {PU}{\cyru}{\84\357}% U+04EF
14568 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
14569 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
14570 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
14571 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
14572 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
garumlautcyrillic

14573 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 14574 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
 garumlautcyrillic
 14575 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 14576 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
 siscyrillic
 14577 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 14578 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieres-
 cyrillic
 14579 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 14580 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 14581 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 14582 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 14583 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 14584 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 14585 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 14586 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 14587 \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
 14588 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 14589 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 14590 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 14591 \DeclareTextCommand{\cyrhkh}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

14592 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 14593 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

14594 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 14595 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 14596 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 14597 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 14598 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 14599 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 14600 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 14601 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 14602 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 14603 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
 14604 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 14605 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
 14606 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 14607 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 14608 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 14609 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 14610 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 14611 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 14612 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 14613 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 14614 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent

14615 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
14616 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
14617 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
14618 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
14619 \DeclareTextCompositeCommand{\=} {PU}{G}{\9036\040}% U+1E20
14620 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
14621 \DeclareTextCompositeCommand{\=} {PU}{g}{\9036\041}% U+1E21
14622 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
14623 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
14624 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
14625 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
14626 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
14627 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
14628 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
14629 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
14630 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
14631 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
14632 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
14633 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
14634 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
14635 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
14636 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
14637 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
14638 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
14639 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
14640 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
14641 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
14642 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
14643 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
14644 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
14645 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
14646 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
14647 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
14648 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
14649 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
14650 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
14651 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
14652 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
14653 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
14654 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
14655 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
14656 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
14657 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
14658 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
14659 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
14660 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
14661 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
14662 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
14663 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
14664 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
14665 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
14666 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
14667 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
14668 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
14669 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
14670 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
14671 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58

14672 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
14673 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
14674 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
14675 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
14676 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
14677 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
14678 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
14679 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
14680 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
14681 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
14682 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
14683 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
14684 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
14685 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
14686 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
14687 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
14688 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
14689 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
14690 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
14691 \DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
14692 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
14693 \DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
14694 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
14695 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
14696 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
14697 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
14698 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
14699 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
14700 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
14701 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
14702 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
14703 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
14704 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
14705 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
14706 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
14707 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
14708 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
14709 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
14710 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
14711 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
14712 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
14713 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
14714 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
14715 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
14716 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
14717 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
14718 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
14719 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
14720 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
14721 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
14722 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
14723 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
14724 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
14725 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
14726 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
14727 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
14728 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis

14729 \DeclareTextCompositeCommand{"}{PU}{t}{\9036\227}% U+1E97
14730 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
14731 \DeclareTextCompositeCommand{r}{PU}{w}{\9036\230}% U+1E98
14732 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
14733 \DeclareTextCompositeCommand{r}{PU}{y}{\9036\231}% U+1E99
14734 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
cent
14735 \DeclareTextCompositeCommand{.}{PU}{\textlongs}{\9036\233}% U+1E9B
14736 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
14737 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
14738 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
14739 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
14740 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
14741 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
14742 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
14743 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
14744 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
14745 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
14746 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
14747 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

14748 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
14749 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
14750 % U+2013 EN DASH; endash
14751 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
14752 % U+2014 EM DASH; emdash
14753 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
14754 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
14755 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
14756 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
14757 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
14758 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
14759 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
14760 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
14761 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
14762 % U+201C LEFT DOUBLE QUOTATION MARK; quotedbleft
14763 \DeclareTextCommand{\textquotedbleft}{PU}{\9040\034}% U+201C
14764 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedbtright
14765 \DeclareTextCommand{\textquotedbtright}{PU}{\9040\035}% U+201D
14766 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
14767 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
14768 % U+2020 DAGGER; dagger
14769 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
14770 % U+2021 DOUBLE DAGGER; daggerdbl
14771 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
14772 % U+2022 BULLET; bullet
14773 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
14774 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
14775 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
14776 % U+2030 PER MILLE SIGN; perthousand
14777 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
14778 % U+2031 PER TEN THOUSAND SIGN
14779 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
14780 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
lingleft
14781 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039

14782 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
14783 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
14784 % U+203B REFERENCE MARK; referencemark
14785 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
14786 % U+203D INTERROBANG
14787 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
14788 % U+2044 FRACTION SLASH; fraction
14789 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
14790 % U+2045 LEFT SQUARE BRACKET WITH QUILL
14791 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
14792 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
14793 \DeclareTextCommand{\extrquill}{PU}{\9040\106}% U+2046
14794 % U+2052 COMMERCIAL MINUS SIGN
14795 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

14796 % U+2070 SUPERSCRIPT ZERO; zerosuperior
14797 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
14798 % U+2074 SUPERSCRIPT FOUR; foursuperior
14799 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
14800 % U+2075 SUPERSCRIPT FIVE; fivesuperior
14801 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
14802 % U+2076 SUPERSCRIPT SIX; sixsuperior
14803 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
14804 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
14805 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
14806 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
14807 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
14808 % U+2079 SUPERSCRIPT NINE; ninesuperior
14809 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
14810 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
14811 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
14812 % U+207B SUPERSCRIPT MINUS
14813 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
14814 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
14815 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
14816 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
14817 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
14818 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
14819 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
14820 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
14821 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
14822 % U+2080 SUBSCRIPT ZERO; zeroinferior
14823 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
14824 % U+2081 SUBSCRIPT ONE; oneinferior
14825 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
14826 % U+2082 SUBSCRIPT TWO; twoinferior
14827 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
14828 % U+2083 SUBSCRIPT THREE; threeminferior
14829 \DeclareTextCommand{\textthreeminferior}{PU}{\9040\203}% U+2083
14830 % U+2084 SUBSCRIPT FOUR; fourinferior
14831 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
14832 % U+2085 SUBSCRIPT FIVE; fiveinferior
14833 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
14834 % U+2086 SUBSCRIPT SIX; sixinferior
14835 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086

14836 % U+2087 SUBSCRIPT SEVEN; seveninferior
14837 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
14838 % U+2088 SUBSCRIPT EIGHT; eightinferior
14839 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
14840 % U+2089 SUBSCRIPT NINE; nineinferior
14841 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
14842 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
14843 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
14844 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
14845 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

14846 % U+20A1 COLON SIGN; *colonmonetary, colonsign
14847 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
14848 % U+20A4 LIRA SIGN; afii08941, *lira
14849 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
14850 % U+20A6 NAIRA SIGN
14851 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
14852 % U+20A7 PESETA SIGN; peseta
14853 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
14854 % U+20A9 WON SIGN; won
14855 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
14856 % U+20AB DONG SIGN; dong
14857 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
14858 % U+20AC EURO SIGN; *Euro, euro
14859 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
14860 % U+20B1 PESO SIGN
14861 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
14862 % U+20B2 GUARANI SIGN
14863 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

14864 % U+2103 DEGREE CELSIUS; centigrade
14865 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
14866 % U+2116 NUMERO SIGN; *afii61352, numero
14867 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
14868 % U+2117 SOUND RECORDING COPYRIGHT
14869 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
14870 % U+211E PRESCRIPTION TAKE; prescription
14871 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
14872 % U+2120 SERVICE MARK
14873 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
14874 % U+2122 TRADE MARK SIGN; trademark
14875 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
14876 % U+2126 OHM SIGN; Ohm, Omega
14877 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
14878 % U+2127 INVERTED OHM SIGN
14879 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
14880 % U+212B ANGSTROM SIGN; angstrom
14881 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
14882 % U+212E ESTIMATED SYMBOL; estimated
14883 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
14884 % U+2135 ALEF SYMBOL; aleph
14885 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

14886 % U+2190 LEFTWARDS ARROW; arrowleft

14887 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 14888 % U+2191 UPWARDS ARROW; arrowup
 14889 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 14890 % U+2192 RIGHTWARDS ARROW; arrowright
 14891 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 14892 % U+2193 DOWNWARDS ARROW; arrowdown
 14893 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

14894 % U+2212 MINUS SIGN; minus
 14895 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 14896 % U+221A SQUARE ROOT; radical
 14897 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

14898 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 14899 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 14900 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 14901 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

14902 % U+2422 BLANK SYMBOL
 14903 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 14904 % U+2423 OPEN BOX; blank
 14905 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

14906 % U+2460 CIRCLED DIGIT ONE; onecircle
 14907 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 14908 % U+2461 CIRCLED DIGIT TWO; twocircle
 14909 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 14910 % U+2462 CIRCLED DIGIT THREE; threecircle
 14911 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 14912 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 14913 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 14914 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 14915 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 14916 % U+2465 CIRCLED DIGIT SIX; sixcircle
 14917 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 14918 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
 14919 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 14920 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 14921 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 14922 % U+2468 CIRCLED DIGIT NINE; ninecircle
 14923 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 14924 % U+2469 CIRCLED NUMBER TEN; tencircle
 14925 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
 14926 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
 14927 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
 14928 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
 14929 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
 14930 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
 14931 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 14932 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 14933 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 14934 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 14935 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E

14936 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
14937 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
14938 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
14939 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
14940 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
14941 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
14942 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
14943 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
14944 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
14945 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
14946 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
14947 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
14948 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
14949 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
14950 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
14951 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
14952 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
14953 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
14954 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
14955 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
14956 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
14957 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
14958 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
14959 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
14960 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
14961 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
14962 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
14963 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
14964 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
14965 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
14966 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
14967 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
14968 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
14969 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
14970 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
14971 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
14972 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
14973 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
14974 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
14975 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
14976 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
14977 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
14978 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
14979 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
14980 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
14981 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
14982 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
14983 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
14984 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
14985 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
14986 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
14987 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
14988 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
14989 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
14990 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
14991 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
14992 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle

14993 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
14994 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
14995 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
14996 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
14997 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
14998 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
14999 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
15000 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
15001 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
15002 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
15003 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
15004 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
15005 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
15006 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
15007 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
15008 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
15009 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
15010 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
15011 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
15012 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
15013 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
15014 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
15015 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
15016 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
15017 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
15018 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
15019 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
15020 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
15021 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
15022 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
15023 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
15024 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
15025 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
15026 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
15027 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
15028 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
15029 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
15030 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
15031 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
15032 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
15033 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
15034 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
15035 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
15036 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
15037 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
15038 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
15039 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
15040 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
15041 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
15042 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
15043 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
15044 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
15045 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
15046 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
15047 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
15048 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
15049 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9

15050 % U+24EA CIRCLED DIGIT ZERO
15051 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

15052 % U+25E6 WHITE BULLET; *openbullet, whitebullet
15053 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
15054 % U+25EF LARGE CIRCLE; largecircle
15055 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

15056 % U+266A EIGHTH NOTE; musicalnote
15057 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
15058 % U+26AD MARRIAGE SYMBOL
15059 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
15060 % U+26AE DIVORCE SYMBOL
15061 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

15062 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
15063 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
15064 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
15065 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

15066 % U+FB01 LATIN SMALL LIGATURE FI; fi
15067 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
15068 % U+FB02 LATIN SMALL LIGATURE FL; fl
15069 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

15070 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

15071 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
15072 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
15073 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
15074 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
15075 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
15076 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
15077 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
15078 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

15079 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
15080 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
15081 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
15082 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
15083 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}

15084 </puenc>

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

15085 <*puvnenc>

15086 \DeclareTextCommand{\abreve}{PU}{\81\003}
15087 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
15088 \DeclareTextCommand{\dj}{PU}{\81\021}
15089 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
15090 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
15091 \DeclareTextCommand{\ohorn}{PU}{\81\241}
15092 \DeclareTextCommand{\uhorn}{PU}{\81\260}
15093 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
15094 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
15095 \DeclareTextCommand{\DJ}{PU}{\81\020}
15096 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
15097 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
15098 \DeclareTextCommand{\OHORN}{PU}{\81\240}
15099 \DeclareTextCommand{\UHORN}{PU}{\81\257}

15100 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
15101 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
15102 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
15103 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
15104 \DeclareTextCompositeCommand{\-}{PU}{a}{\80\343}
15105 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
15106 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
15107 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
15108 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
15109 \DeclareTextCompositeCommand{\-}{PU}{\abreve}{\9036\265}
15110 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
15111 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
15112 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
15113 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
15114 \DeclareTextCompositeCommand{\-}{PU}{\acircumflex}{\9036\253}
15115 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
15116 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
15117 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
15118 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
15119 \DeclareTextCompositeCommand{\-}{PU}{e}{\9036\275}
15120 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
15121 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
15122 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
15123 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
15124 \DeclareTextCompositeCommand{\-}{PU}{\ecircumflex}{\9036\305}
15125 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
15126 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
15127 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
15128 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
15129 \DeclareTextCompositeCommand{\-}{PU}{i}{\81\051}
15130 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
15131 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
15132 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
15133 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
15134 \DeclareTextCompositeCommand{\-}{PU}{o}{\80\365}
15135 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
15136 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
15137 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
15138 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
15139 \DeclareTextCompositeCommand{\-}{PU}{\ocircumflex}{\9036\327}
15140 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
15141 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
15142 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}

15143 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
15144 \DeclareTextCompositeCommand{\-}{PU}{\ohorn}{\9036\341}
15145 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
15146 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
15147 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
15148 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
15149 \DeclareTextCompositeCommand{\-}{PU}{u}{\81\151}
15150 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
15151 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
15152 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
15153 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
15154 \DeclareTextCompositeCommand{\-}{PU}{\uhorn}{\9036\357}
15155 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
15156 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
15157 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
15158 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
15159 \DeclareTextCompositeCommand{\-}{PU}{y}{\9036\371}
15160 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
15161 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
15162 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
15163 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
15164 \DeclareTextCompositeCommand{\-}{PU}{A}{\80\303}
15165 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}
15166 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
15167 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
15168 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
15169 \DeclareTextCompositeCommand{\-}{PU}{\ABREVE}{\9036\264}
15170 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
15171 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
15172 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
15173 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
15174 \DeclareTextCompositeCommand{\-}{PU}{\ACIRCUMFLEX}{\9036\252}
15175 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
15176 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
15177 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
15178 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
15179 \DeclareTextCompositeCommand{\-}{PU}{E}{\9036\274}
15180 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
15181 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
15182 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
15183 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
15184 \DeclareTextCompositeCommand{\-}{PU}{\ECIRCUMFLEX}{\9036\304}
15185 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
15186 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
15187 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
15188 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
15189 \DeclareTextCompositeCommand{\-}{PU}{I}{\81\050}
15190 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
15191 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
15192 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
15193 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
15194 \DeclareTextCompositeCommand{\-}{PU}{O}{\80\325}
15195 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}
15196 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
15197 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
15198 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
15199 \DeclareTextCompositeCommand{\-}{PU}{\OCIRCUMFLEX}{\9036\326}

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15200 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
15201 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
15202 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
15203 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
15204 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
15205 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
15206 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
15207 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
15208 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}
15209 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
15210 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
15211 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
15212 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
15213 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
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15215 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
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15217 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
15218 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
15219 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
15220 </puvnenc>

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50.4 PU encoding, additions for Arabi

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15221 <*puarenc>
15222 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LET-
TER HAMZA
15223 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
15224 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
15225 \DeclareTextCommand{\wawhamza}{PU}{\86\044} % 0624;afii57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
15226 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
15227 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
15228 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
15229 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
15230 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
15231 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
15232 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LET-
TER THEH
15233 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LET-
TER JEEM
15234 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
15235 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
15236 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
15237 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
15238 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
15239 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
15240 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
15241 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LET-
TER SHEEN
15242 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD

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15243 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
15244 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
15245 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
15246 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
15247 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LET-
TER GHAIN
15248 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
15249 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
15250 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
15251 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
15252 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
15253 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LET-
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15254 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
15255 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
15256 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afii57448;ARABIC LETTER WAW
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15258 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afii57450;ARABIC LETTER YEH
15259 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
15260 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN
15261 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
15262 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
15263 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afii57455;ARABIC DAMMA
15264 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afii57456;ARABIC KASRA
15265 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afii57457;ARABIC SHADDA
15266 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afii57458;ARABIC SUKUN

Farsi
15267 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afii57506;ARABIC LETTER PEH
15268 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afii57507;ARABIC LET-
TER TCHEH
15269 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afii57508;ARABIC LETTER JEH
15270 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afii?????;FARSI LET-
TER KAF
15271 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afii57509;ARABIC LETTER GAF
15272 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afii?????;FARSI LET-
TER YEH

15273 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
15274 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ
15275 </puarenc>

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51 End of file hycheck.tex

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15276 <*check>
15277 \typeout{}
15278 \begin{document}
15279 \end{document}
15280 </check>

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