

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 hycheck.tex

Many commands of L^AT_EX 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 L^AT_EX'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 L^AT_EX.

```
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{hycheck}{%
62       Unknown command '\expandafter\strip@prefix\meaning\HyC@cmd'%
63     }\@ehd
64     \expandafter\endinput
65   \fi
66   \@ifstar{%
67     \def\HyC@star{*}%
68     \HyC@check
69   }{%
70     \let\HyC@star\@empty
71     \HyC@check
72   }%
73 }
```

`\HyC@check` The macro `\HyC@check` reads the definition command.

```

74 \def\HyC@check#1{%
75   \def\HyC@cmd{#1}%
76   \let\HyC@org@cmd#1%
77   \let#1\relax
78   \let\HyC@param\@empty
79   \HyC@Toks{}%
80   \let\HyC@org@optcmd\HyC@noValue
81   \let\HyC@org@robustcmd\HyC@noValue
82   \let\HyC@org@robustoptcmd\HyC@noValue
83   \HyC@next
84 }
```

`\HyC@noValue`

```

85 \def\HyC@noValue{NoValue}
```

`\HyC@newcommand` The code for `\newcommand`.


```

86 \def\HyC@newcommand{%
87   \let\HyC@@cmd\HyC@cmd
88   \@ifnextchar[\HyC@nc@opt\HyC@nc@noopt
89 }

```

`\HyC@Toks` A register for storing the default value of an optional argument.

```

90 \newtoks\HyC@Toks

```

`\HyC@nc@noopt` This macro `\HyC@nc@noopt` is called, if the parser has reached the definition text.

```

91 \long\def\HyC@nc@noopt#1{%
92   \edef\x{%
93     \expandafter\noexpand\HyC@defcmd
94     \HyC@star
95     \expandafter\noexpand\HyC@cmd
96     \HyC@param\the\HyC@Toks
97   }%
98   \x{#1}%
99   \HyC@doCheck
100 }

```

`\HyC@nc@opt` This macro scans the first optional argument of a L^AT_EX definition (number of arguments).

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

`\HyC@meaning`

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

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

```

```

216 \x\)%
217 \x\[%
218 \x\]%
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{ifpdf}[2006/02/20]
234 \RequirePackage{ifvtex}
235 \RequirePackage{ifxetex}[2006/08/21]
236 \RequirePackage{hycolor}
237 \def\Hy@Warning#1{\PackageWarning{hyperref}{#1}}
238 \def\Hy@WarningNoLine#1{\PackageWarningNoLine{hyperref}{#1}}
239 \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`.

```

240 \@ifundefined{AfterBeginDocument}{%
241   \def\AfterBeginDocument{\AtBeginDocument}%
242 }{}%

```

4.3 Switches

```

243 \newif\ifHy@typexml
244 \newif\ifHy@activeanchor
245 \newif\ifHy@backref
246 \newif\ifHy@bookmarks
247 \newif\ifHy@bookmarksnumbered
248 \newif\ifHy@bookmarksopen
249 \newif\ifHy@breaklinks
250 \newif\ifHy@centerwindow
251 \newif\ifHy@CJKbookmarks
252 \newif\ifHy@colorlinks
253 \newif\ifHy@draft
254 \let\Hy@finaltrue\Hy@draftfalse
255 \let\Hy@finalfalse\Hy@drafttrue

```

```

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

```

Defaults for the switches are now set.

```

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

```

```

312 \Hy@plainpagesfalse
313 \Hy@raiselinksfalse
314 \Hy@setpagesizetrue
315 \Hy@texhtfalse
316 \Hy@toolbartrue
317 \Hy@typexmlfalse
318 \Hy@unicodetrue
319 \Hy@usetitlefalse
320 \Hy@verbosefalse
321 \Hy@windowuitrue
322 \Hy@displaydoctitlefalse
323 \Hy@pdfafalse

```

5 Common help macros

`\Hy@StepCount`

```

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

```

`\Hy@GlobalStepCount`

```

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

326 \newdimen\@linkdim
327 \let\Hy@driver\@empty
328 \let\MaybeStopEarly\relax
329 \newcount\Hy@linkcounter
330 \newcount\Hy@pagecounter
331 \Hy@linkcounter0
332 \Hy@pagecounter0

```

5.1 Macros for recursions

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

```

333 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
334 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

335 \let\Hy@ReturnEnd\@empty
336 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
337 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

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

```

338 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
339 \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).

`\hypercalcbp` The user macro `\hypercalcbp` can be used, for example, inside option values:
`pdfstartview={FitBH \hypercalcbp{\paperheight-\topmargin-1in}}`

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

Example (T_EX):

```

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

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

```

```

374 }%
375 \else
376 \def\hypercalcbp#1{%
377 \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
378 }%
379 \def\hypercalcbpdef{\def}%
380 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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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 \TeX , because the tokens have only catcodes 10 until 12.

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

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

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

```
382 \begingroup
```

6.2.1 Preprocessing

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

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

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

```
383 \escapechar'\%
```

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

```
384 \edef\0{\string\0}%
```

```
385 \edef\1{\string\1}%
```

```
386 \edef\2{\string\2}%
```

```
387 \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.

```
388 \ifHy@unicode
```

```
389 \edef\8{\string\8}%
```

```
390 \edef\9{\string\9}%
```

```
391 \fontencoding{PU}%
```

```
392 \HyPsd@UTFviii
```

```
393 \def\ifpdfstringunicode##1##2{##1}%
```

```
394 \else
```

```
395 \fontencoding{PD1}%
```

```
396 \def\ifpdfstringunicode##1##2{##2}%
```

```
397 \fi
```

```
398 \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).

```
399 \@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).

```
400 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
401 \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.

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

```
414 \def\{\pdfstringdefWarn\\}%
415 \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.

```
416 \def\TeX{\TeX}%
417 \def\LaTeX{La\TeX}%
418 \def\LaTeXe{LaTeX2e}%
419 \def\eTeX{e-\TeX}%
420 \def\SliTeX{Sli\TeX}%
421 \def\MF{Metafont}%
422 \def\MP{Metapost}%
```

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

```

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

```

Package color.

```

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

```

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

```

458 \let\textlatin\@firstofone
459 \@ifundefined{language@group}{\}%
460 \csname HyPsd@babel@language@group\endcsname
461 }%
462 \HyPsd@GreekPatch
463 \let\@safe@activetrue\relax
464 \let\@safe@activesfalse\relax

```

Disable \cyr, used in russianb.ldf.

```

465 \let\cyr\relax

```

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

```

466 \let\es@roman\@Roman

```

Package german.

```

467 \let\glqq\textglqq
468 \let\grqq\textgrqq
469 \let\glq\textglq
470 \let\grq\textgrq
471 \let\flqq\textflqq
472 \let\frqq\textfrqq
473 \let\flq\textflq
474 \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}

475 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

476 \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.

```

477 \let\hspace\HyPsd@hspace

```

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

```

478 \let\label\@gobble
479 \let\index\@gobble
480 \let\glossary\@gobble
481 \let\href\@secondoftwo
482 \let\@mkboth\@gobbletwo

```

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

```

483 \let\ref\HyPsd@ref
484 \let\pageref\HyPsd@pageref
485 \let\nameref\HyPsd@nameref
486 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```

487 \let\leavevmode\@empty
488 \let\mbox\@empty

```

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

```

489 \def\halign{\pdfstringdefWarn\halign\@gobble}%

```

Patch for cjk bookmarks.

```

490 \ifHy@CJKbookmarks
491 \HyPsd@CJKhook
492 \fi

```

User hook. The switch `\Hy@pdfstring` is turned on. So user commands can detect that they are processed not to be typeset 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`).

```
493 \Hy@pdfstringtrue
494 \pdfstringdefPreHook
```

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

```
495 \HyPsd@LetUnexpandableSpace\space
496 \HyPsd@LetUnexpandableSpace\ %
497 \HyPsd@LetUnexpandableSpace~%
498 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package `xspace`.

```
499 \@ifundefined{@xspace}{%
500   \let\xspace\HyPsd@ITALCORR
501 }{%
502   \let\xspace\HyPsd@XSPACE
503 }%
504 \let\/\HyPsd@ITALCORR
505 \let\bgroup\/%
506 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
507 \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:

```
508 \let\@ifnextchar\HyPsd@ifnextchar
509 \let\@ifnextchar\HyPsd@new@ifnextchar
510 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
511 \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).

```

512   \begingroup
513   \let\GenericError\@gobblefour
514   \let\GenericWarning\@gobbletwo
515   \let\GenericInfo\@gobbletwo

```

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

```

516   \ifx\nofrenchguillemets\@undefined
517   \else
518   \nofrenchguillemets
519   \fi

```

Definition commands and expansion. Redefining the defining commands (see sec. 6.5.9). The original meaning of `\xdef` is saved in `\Hy@temp`.

```

520   \let\Hy@temp\xdef
521   \let\def\HyPsd@DefCommand
522   \let\gdef\HyPsd@DefCommand
523   \let\edef\HyPsd@DefCommand
524   \let\xdef\HyPsd@DefCommand
525   \let\futurelet\HyPsd@LetCommand
526   \let\let\HyPsd@LetCommand
527   \Hy@temp#1{#2}%
528   \endgroup

```

6.2.3 Postprocessing

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

```
529 \ifx#1\@empty
530 \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 little 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.

```
531 \HyPsd@ProtectSpaces#1%
532 \let\HyPsd@String\@empty
533 \expandafter\HyPsd@RemoveBraces\expandafter{#1}%
534 \global\let#1\HyPsd@String
```

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

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

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

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

```
535 \let\HyPsd@SPACEOPTI\relax
536 {%
537 \let\HyPsd@String\@empty
538 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
539 \global\let#1\HyPsd@String
540}%
541 \expandafter\HyPsd@RemoveMask\expandafter
542 |\expandafter\@empty#1\HyPsd@End#1%
```

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

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

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

```
543 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
544 \let\HyPsd@String\@empty
545 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
546 \global\let#1\HyPsd@String
```

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

```
547 \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.

```
548 \ifHy@unicode
549 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
550 \HyPsd@SPACEOPTI#1%
551 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
552 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
553 {\HyPsd@SPACEOPTI\80\273}#1%
554 \else
555 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
556 \expandafter\HyPsd@Subst\expandafter{%
557 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
558 \string\273}\HyPsd@SPACEOPTI\273}#1%
559 \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.

```
560 \ifHy@unicode
561 \HyPsd@StringSubst{\)}{\80\051}#1%
562 \HyPsd@Subst){\80\051}#1%
563 \let\HyPsd@empty\relax
564 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
565 {\HyPsd@empty\80\051}#1%
566 \else
567 \HyPsd@StringSubst{\)}{\051}#1%
568 \HyPsd@Subst){\051}#1%
569 \let\HyPsd@empty\relax
```



```

570      \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
571      \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`.

```

572      \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
573      \@ifundefined{xspace}{%
574      }{%
575      \let\HyPsd@xspace\relax
576      \expandafter\HyPsd@Subst\expandafter
577      {\HyPsd@XSPACE}\HyPsd@xspace#1%
578      \let\HyPsd@xspace\HyPsd@doxspace
579      }%
580      \xdef#1{#1\HyPsd@empty}%

```

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

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

```

581      \HyPsd@Subst{---}\textemdash#1%
582      \HyPsd@Subst{--}\textendash#1%
583 %      \HyPsd@Subst{fi}\textfi#1%
584 %      \HyPsd@Subst{fl}\textfl#1%
585      \HyPsd@Subst{!'}\textexclamdown#1%
586      \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

587      \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.

```

588      \ifHy@unicode
589      \HyPsd@StringSubst{\( \textparenleft#1%
590      \HyPsd@Subst(\textparenleft#1%
591      \else

```

```

592     \HyPsd@StringSubst\({\050}#1%
593     \HyPsd@Subst({\050}#1%
594     \HyPsd@StringSubst{\050}{\string\()}#1%
595     \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.

```

596     \ifHy@unicode
597     \edef\HyPsd@SPACEOPTI{\80\040}%
598     \else
599     \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
600     \fi
601     \xdef#1{#1\@empty}%
602     \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.

```

603 \endgroup
604 \begingroup
605     \ifHy@unicode
606     \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

607     \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
608     \@ifundefined{StringEncodingConvertTest}{%
609     }{%
610         \EdefUnescapeString\HyPsd@temp#1%
611         \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
612             {utf16be}{pdfdoc}{%
613             \EdefEscapeString\HyPsd@temp\HyPsd@temp
614             \global\let#1\HyPsd@temp
615             \Hy@unicodedefalse
616             }{%}%
617     }%
618     \fi
619     \fi

```

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

```

620     \pdfstringdefPostHook#1%
621 \endgroup
622 }

```

\Hy@pdfstringdef

```

623 \def\Hy@pdfstringdef#1#2{%
624     \pdfstringdef\Hy@gtemp{#2}%
625     \let#1\Hy@gtemp
626 }

```

6.3 Encodings

6.3.1 Workaround for package linguex

```

627 \@ifpackageloaded{linguex}{%
628   \let\HyLinguex@OrgB\b
629   \let\HyLinguex@OrgC\c
630   \let\HyLinguex@OrgD\d
631   \def\HyLinguex@Restore{%
632     \let\b\HyLinguex@OrgB
633     \let\c\HyLinguex@OrgC
634     \let\d\HyLinguex@OrgD
635   }%
636   \AtEndOfPackage{%
637     \pdfstringdefDisableCommands{%
638       \@ifundefined{oldb}{-}{\let\b\oldb}%
639       \@ifundefined{oldc}{-}{\let\c\oldc}%
640       \@ifundefined{oldd}{-}{\let\d\oldd}%
641     }%
642   }%
643 }{%
644   \let\HyLinguex@Restore\relax
645 }%
```

6.3.2 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.

```

646 \@ifundefined{T@PD1}{%
647   \input{pd1enc.def}%
648   \HyLinguex@Restore
649 }{}
650 \DeclareFontFamily{PD1}{pdf}{}
651 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
652 \DeclareFontSubstitution{PD1}{pdf}{m}{n}
```

6.3.3 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.

```

653 \def\HyPsd@InitUnicode{%
654   \@ifundefined{T@PU}{%
655     \input{puenc.def}%
656     \HyLinguex@Restore
657   }{}%
658   \DeclareFontFamily{PU}{pdf}{}%
659   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
660   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
661   \let\HyPsd@InitUnicode\relax
```

662 }

6.4 Additional user commands

6.4.1 `\texorpdfstring`

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

```
663 \def\texorpdfstring{%
664   \ifHy@pdfstring
665     \expandafter\@secondoftwo
666   \else
667     \expandafter\@firstoftwo
668   \fi
669 }
```

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`.

```
670 \@ifundefined{pdfstringdefPreHook}{%
671   \let\pdfstringdefPreHook\@empty
672 }{}
673 \@ifundefined{pdfstringdefPostHook}{%
674   \let\pdfstringdefPostHook\@gobble
675 }{}
```

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

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

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

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

```
676 \def\pdfstringdefDisableCommands{%
677   \begingroup
678     \makeatletter
679     \HyPsd@DisableCommands
680 }
```

`\HyPsd@DisableCommands`

```
681 \long\def\HyPsd@DisableCommands#1{%
682   \toks0=\expandafter{\pdfstringdefPreHook}%
683   \toks1={#1}%
684   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
```

```

685 \endgroup
686 }

```

`\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`.

```

687 \def\pdfstringdefWarn#1{%
688   \expandafter\noexpand\csname\<>-string#1\endcsname
689 }

```

6.5 Help macros for expansion

6.5.1 Babel languages

```

690 \newif\ifHy@next

  Nothing to do for english.
691 \@ifundefined{danish@sh@"@sel}{-}{%
692   \def\HyPsd@babel@danish{%
693     \declare@shorthand{danish}{-}{-}%
694     \declare@shorthand{danish}{-}{-}%
695   }%
696 }
697 \@ifundefined{dutch@sh@"@sel}{-}{%
698   \def\HyPsd@babel@dutch{%
699     \declare@shorthand{dutch}{-}{-}%
700     \declare@shorthand{dutch}{-}{-}%
701   }%
702 }
703 \@ifundefined{finnish@sh@"@sel}{-}{%
704   \def\HyPsd@babel@finnish{%
705     \declare@shorthand{finnish}{-}{-}%
706   }%
707 }
708 \@ifundefined{french@sh@:@sel}{-}{%
709   \def\HyPsd@babel@frenchb{%
710     \def\guill@spacing{ }%
711   }%
712 }
713 \@ifundefined{german@sh@"@sel}{-}{%
714   \def\HyPsd@babel@german{%
715     \declare@shorthand{german}{f}{f}%
716     \declare@shorthand{german}{-}{-}%
717     \declare@shorthand{german}{-}{-}%
718   }%
719 }
720 \@ifundefined{macedonian@sh@"@sel}{-}{%
721   \def\HyPsd@babel@macedonian{%
722     \declare@shorthand{macedonian}{-}{-}%
723     \declare@shorthand{macedonian}{-}{-}%
724   }%
725 }{}

```

```

726 \@ifundefined{ngerman@sh@"@sel}{-}{%
727   \def\HyPsd@babel@ngerman{%
728     \declare@shorthand{ngerman}{"}{|}{}%
729     \declare@shorthand{ngerman}{"}{~}{-}%
730   }%
731 }
732 \@ifundefined{portuges@sh@"@sel}{-}{%
733   \def\HyPsd@babel@portuges{%
734     \declare@shorthand{portuges}{"}{|}{}%
735   }%
736 }
737 \@ifundefined{russian@sh@"@sel}{-}{%
738   \def\HyPsd@babel@russian{%
739     \declare@shorthand{russian}{"}{|}{}%
740     \declare@shorthand{russian}{"}{~}{-}%
741   }%
742 }
743 \@ifundefined{slovene@sh@"@sel}{-}{%
744   \def\HyPsd@babel@slovene{%
745     \declare@shorthand{slovene}{"}{|}{}%
746   }%
747 }

```

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

```

748 \@ifundefined{spanish@sh@>@sel}{-}{%
749   \def\HyPsd@babel@spanish{%
750     \declare@shorthand{spanish}{<<}{\guillemotleft}%
751     \declare@shorthand{spanish}{>>}{\guillemotright}%
752     \declare@shorthand{spanish}{"}{=}{-}%
753     \declare@shorthand{spanish}{"}{~}{-}%
754     \declare@shorthand{spanish}{"}{!}{\textexclamdown}%
755     \declare@shorthand{spanish}{"}{?}{\textquestiondown}%
756   }%
757 }
758 \@ifundefined{swedish@sh@"@sel}{-}{%
759   \def\HyPsd@babel@swedish{%
760     \declare@shorthand{swedish}{"}{|}{}%
761     \declare@shorthand{swedish}{"}{~}{-}%
762   }%
763 }
764 \@ifundefined{ukrainian@sh@"@sel}{-}{%
765   \def\HyPsd@babel@ukrainian{%
766     \declare@shorthand{ukrainian}{"}{|}{}%
767     \declare@shorthand{ukrainian}{"}{~}{-}%
768   }%
769 }
770 \@ifundefined{usorbian@sh@"@sel}{-}{%
771   \def\HyPsd@babel@usorbian{%
772     \declare@shorthand{usorbian}{"}{f}{f}%
773     \declare@shorthand{usorbian}{"}{|}{}%
774   }%
775 }
776 \@ifundefined{greek@sh@\string~@sel}{-}{%
777   \let\HyPsd@GreekPatch\empty
778 }{%
779   \def\HyPsd@GreekPatch{%
780     \let\greeknumeral\HyPsd@greeknumeral
781     \let\Greeknnumeral\HyPsd@greeknumeral

```

```

782 }%
783 }
784 \def\HyPsd@greeknumeral#1{%
785   \HyPsd@GreekNum\@firstoftwo{#1}%
786 }
787 \def\HyPsd@Greeknatural#1{%
788   \HyPsd@GreekNum\@secondoftwo{#1}%
789 }
790 \def\HyPsd@GreekNum#1#2{%
791   \ifHy@unicode
792     \ifnum#2<\@ne
793       \@arabic{#2}%
794     \else
795       \ifnum#2<1000000 %
796         \HyPsd@@GreekNum#1{#2}%
797       \else
798         \@arabic{#2}%
799       \fi
800     \fi
801   \else
802     \@arabic{#2}%
803   \fi
804 }
805 \def\HyPsd@@GreekNum#1#2{%
806   \ifnum#2<\@m
807     \ifnum#2<10 %
808       \expandafter\HyPsd@GreekNumI
809       \expandafter\@gobble\expandafter#1\number#2%
810     \else
811       \ifnum#2<100 %
812         \expandafter\HyPsd@GreekNumII
813         \expandafter\@gobble\expandafter#1\number#2%
814       \else
815         \expandafter\HyPsd@GreekNumIII
816         \expandafter\@gobble\expandafter#1\number#2%
817       \fi
818     \fi
819     \ifnum#2>\z@
820       \textnumeralsigngreek
821     \fi
822   \else
823     \ifnum#2<\@M
824       \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
825     \else
826       \ifnum#2<100000 %
827         \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
828       \else
829         \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
830       \fi
831     \fi
832   \fi
833 }
834 \def\HyPsd@GreekNumI#1#2#3{%
835   #1{%
836     \ifnum#3>\z@
837       \textnumeralsignlowergreek
838     \fi

```

```

839 }%
840 \expandafter#2%
841 \ifcase#3 %
842   {}{}%
843 \or\textalpha\textAlpha
844 \or\textbeta\textBeta
845 \or\textgamma\textGamma
846 \or\textdelta\textDelta
847 \or\textepsilon\textEpsilon
848 \or\textstigmagreek\textStigmagreek
849 \or\textzeta\textZeta
850 \or\texteta\textEta
851 \or\texttheta\textTheta
852 \else
853   {}{}%
854 \fi
855 }
856 \def\HyPsd@GreekNumII#1#2#3#4{%
857   #1{%
858     \ifnum#3>\z@
859       \textnumeralsignlowergreek
860       \fi
861   }%
862   \expandafter#2%
863   \ifcase#3 %
864     {}{}%
865 \or\textiota\textIota
866 \or\textkappa\textKappa
867 \or\textlambda\textLambda
868 \or\textmu\textMu
869 \or\textnu\textNu
870 \or\textxi\textXi
871 \or\textomicron\textOmicron
872 \or\textpi\textPi
873 \or\textkoppagreek\textKoppagreek
874 \else
875   {}{}%
876 \fi
877 \HyPsd@GreekNumI#1#2#4%
878 }
879 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
880   #1{%
881     \ifnum#3>\z@
882       \textnumeralsignlowergreek
883       \fi
884   }%
885   \expandafter#2%
886   \ifcase#3 %
887     {}{}%
888 \or\textrho\textRho
889 \or\textsigma\textSigma
890 \or\texttau\textTau
891 \or\textupsilon\textUpsilon
892 \or\textphi\textPhi
893 \or\textchi\textChi
894 \or\textpsi\textPsi
895 \or\textomega\textOmega

```



```

896 \or\textsampigreek\textSampigreek
897 \else
898   {}{}%
899 \fi
900 \HyPsd@GreekNumII#1#2#4#5%
901 }
902 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
903   \HyPsd@GreekNumI\@firstofone#1#2%
904   \HyPsd@@GreekNum#1{#3#4#5}%
905 }
906 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
907   \HyPsd@GreekNumII\@firstofone#1#2#3%
908   \HyPsd@@GreekNum#1{#4#5#6}%
909 }
910 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
911   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
912   \HyPsd@@GreekNum#1{#5#6#7}%
913 }

```

6.5.2 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 ($\geq 0x40$).

```

914 \begingroup
915   \catcode"7F=\active
916   \toks@{%
917     \let\CJK@ignorespaces\empty
918     \def\CJK@char#1{\@gobbletwo}%
919     \let\CJK@charx\@gobblefour
920     \let\CJK@punctchar\@gobblefour
921     \def\CJK@punctcharx#1{\@gobblefour}%
922     \catcode"7F=\active
923     \def^^7f#1^^7f#2^^7f{%
924       \string #1\HyPsd@DecimalToOctal{#2}%
925     }%
926     % ... ?
927     \ifHy@unicode
928       \def\Hy@cjkpu{\80}%
929     \else
930       \let\Hy@cjkpu\@empty
931     \fi
932     \HyPsd@CJKActiveChars
933   }%
934   \count@=127 %
935   \@whilenum\count@<255 \do{%
936     \advance\count@ by 1 %
937     \lccode'\~= \count@
938     \lowercase{%
939       \toks@\expandafter{\the\toks@ ~}%
940     }%

```

```

941 }%
942 \toks@\expandafter{\the\toks@ !}%
943 \xdef\HyPsd@CJKhook{\the\toks@}%
944 \endgroup

```

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

```

945 \def\HyPsd@CJKActiveChars#1{%
946   \ifx#1!%
947     \let\HyPsd@CJKActiveChars\relax
948   \else
949     \edef#1{\noexpand\Hy@cjku\string#1}%
950   \fi
951 \HyPsd@CJKActiveChars
952 }

```

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

```

953 \def\HyPsd@DecimalToOctal#1{%
954   \ifcase #1 %
955     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
956     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
957     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
958     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
959     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
960     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
961     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
962     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
963     \or @\or A\or B\or C\or D\or E\or F\or G%
964     \or H\or I\or J\or K\or L\or M\or N\or O%
965     \or P\or Q\or R\or S\or T\or U\or V\or W%
966     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
967     \or \140\or a\or b\or c\or d\or e\or f\or g%
968     \or h\or i\or j\or k\or l\or m\or n\or o%
969     \or p\or q\or r\or s\or t\or u\or v\or w%
970     \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
971     \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
972     \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
973     \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
974     \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
975     \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
976     \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
977     \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
978     \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
979     \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
980     \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
981     \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
982     \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
983     \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
984     \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
985     \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
986     \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
987   \fi
988 }

```

6.5.3 \@inmathwarn-Patch

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

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

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

989 \def\HyPsd@inmathwarn#1#2{%
990   \ifx#2\expandafter
991     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
992       \HyPsd@GLYPHERR
993       \expandafter\@gobble\string#1%
994       >%
995       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
996     \else
997       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
998     \fi
999   \else
1000     \expandafter#2%
1001   \fi
1002 }
1003 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
```

```
1004 \def\HyPsd@EndWithElse#1\else{\else}
```

\HyPsd@add@accent

```
1005 \def\HyPsd@add@accent#1#2{%
1006   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1007   #2%
1008 }%
```

6.5.4 Unexpandable spaces

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

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

These properties are used in \HyPsd@CheckCatcodes.

```
1009 \def\HyPsd@LetUnexpandableSpace#1{%
1010   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1011 }
```

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

```
1012 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace
```

6.5.5 Marker for commands

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

```
1013 \edef\HyPsd@XSPACE{\string#\string X}
1014 \edef\HyPsd@ITALCORR{\string#\string I}
1015 \edef\HyPsd@GLYPHERR{\string#\string G}
```

6.5.6 \hspace fix

\HyPsd@hspace

```
1016 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1017 \def\HyPsd@@hspace#1*#2\END{%
1018   \ifx\#2\%
1019     \HyPsd@hspacetest{#1}%
1020   \else
1021     \expandafter\HyPsd@hspacetest
1022   \fi
1023 }
```

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

```
1024 \def\HyPsd@hspacetest#1{\ifdim#1>z@\space\fi}
```

6.5.7 Fix for AMS classes

```

1025 \@ifundefined{tocsection}{%
1026   \let\HyPsd@AMSclassfix\relax
1027 }{%
1028   \def\HyPsd@AMSclassfix{%
1029     \let\tocpart\HyPsd@tocsection
1030     \let\tocchapter\HyPsd@tocsection
1031     \let\tocappendix\HyPsd@tocsection
1032     \let\tocsection\HyPsd@tocsection
1033     \let\tocsubsection\HyPsd@tocsection
1034     \let\tocsubsubsection\HyPsd@tocsection
1035     \let\tocparagraph\HyPsd@tocsection
1036   }%
1037   \def\HyPsd@tocsection#1#2#3{%
1038     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1039     #3%
1040   }%
1041 }

```

6.5.8 Reference commands

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

```

1042 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1043 \def\HyPsd@@ref#1*#2\END{%
1044   \ifx\#2\%
1045     \HyPsd@@@ref{#1}%
1046   \else
1047     \expandafter\HyPsd@@@ref
1048   \fi
1049 }%

```

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

```

1050 \def\HyPsd@@@ref#1{%
1051   \expandafter\ifx\csname r@#1\endcsname\relax
1052     ??%
1053   \else
1054     \expandafter\expandafter\expandafter
1055     \@car\csname r@#1\endcsname\@nil
1056   \fi
1057 }

```

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

```

1058 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1059 \def\HyPsd@@pageref#1*#2\END{%
1060   \ifx\#2\%
1061     \HyPsd@@@pageref{#1}%
1062   \else
1063     \expandafter\HyPsd@@@pageref
1064   \fi
1065 }

```

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

```

1066 \def\HyPsd@@pageref#1{%
1067   \expandafter\ifx\csname r@#1\endcsname\relax
1068     ??%
1069   \else
1070     \expandafter\expandafter\expandafter\expandafter
1071     \expandafter\expandafter\expandafter\@car
1072     \expandafter\expandafter\expandafter\@gobble
1073     \csname r@#1\endcsname{}\@nil
1074   \fi
1075 }

```

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

```

1076 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1077 \def\HyPsd@@nameref#1*#2\END{%
1078   \ifx\#2\%
1079     \HyPsd@@nameref{#1}%
1080   \else
1081     \expandafter\HyPsd@@nameref
1082   \fi
1083 }

```

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

```

1084 \def\HyPsd@@@nameref#1{%
1085   \expandafter\ifx\csname r@#1\endcsname\relax
1086     ??%
1087   \else
1088     \expandafter\expandafter\expandafter\expandafter
1089     \expandafter\expandafter\expandafter\@car
1090     \expandafter\expandafter\expandafter\@gobbletwo
1091     \csname r@#1\endcsname{}\@nil
1092   \fi
1093 }

```

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

```

1094 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1095 \def\HyPsd@@autoref#1*#2\END{%
1096   \ifx\#2\%
1097     \HyPsd@@autoref{#1}%
1098   \else
1099     \expandafter\HyPsd@@autoref
1100   \fi
1101 }

```

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

```

1102 \def\HyPsd@@@autoref#1{%
1103   \expandafter\ifx\csname r@#1\endcsname\relax
1104     ??%
1105   \else
1106     \expandafter\expandafter\expandafter\HyPsd@autorefname

```

```

1107      \csname r@#1\endcsname{}{}{}{} \@nil
1108      \expandafter\expandafter\expandafter
1109      \@car\csname r@#1\endcsname \@nil
1110      \fi
1111 }

```

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

```

1112 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1113   \ifx\#4\%
1114   \else
1115     \HyPsd@autorefname#4.\@nil
1116   \fi
1117 }

```

`\HyPsd@@autorefname`

```

1118 \def\HyPsd@@autorefname#1.#2\@nil{%
1119   \@ifundefined{#1autorefname}{%
1120     \@ifundefined{#1name}{%
1121       }{%
1122         \csname#1name\endcsname\space
1123       }%
1124     }{%
1125       \csname#1autorefname\endcsname\space
1126     }%
1127 }

```

6.5.9 Redefining the defining commands

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

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

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

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

The difference between `\HyPsd@DefCommand` and `\HyPsd@LetCommand` is that the first one also cancels this 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 unbalanced `\if...tokens`, the cases `\let\if...\iftrue` and `\let\if...\iffalse` are checked and ignored.

```

\HyPsd@DefCommand
\HyPsd@LetCommand
1128 \begingroup
1129 \def\x#1#2{%
1130 \endgroup
1131 \let#1\def
1132 \def\HyPsd@DefCommand##1##2##3{%
1133 #1%
1134 \expandafter\noexpand
1135 \csname\expandafter\@gobble\string##1\@empty\endcsname
1136 \@gobble
1137 }%
1138 \let#2\let
1139 \def\HyPsd@@LetCommand##1{%
1140 \expandafter\ifx\csname##1\expandafter\endcsname
1141 \csname iftrue\endcsname
1142 \pdfstringdefWarn\let
1143 \expandafter\@gobble
1144 \else
1145 \expandafter\ifx\csname##1\expandafter\endcsname
1146 \csname iffalse\endcsname
1147 \pdfstringdefWarn\let
1148 \expandafter\expandafter\expandafter\@gobble
1149 \else
1150 #2%
1151 \expandafter\noexpand
1152 \csname##1\expandafter\expandafter\expandafter\endcsname
1153 \fi
1154 \fi
1155 }%
1156 }%
1157 \expandafter\x\csname <def>-command\expandafter\endcsname
1158 \csname <let>-command\endcsname
1159 \def\HyPsd@LetCommand#1{%
1160 \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1161 \expandafter\expandafter\expandafter{%
1162 \expandafter\@gobble\string#1\@empty
1163 }%
1164 }

```

6.5.10 \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.

```

1165 \def\HyPsd@ifnextchar{%
1166 \pdfstringdefWarn\@ifnextchar
1167 \expandafter\@gobbletwo\@gobble
1168 }

```

`\HyPsd@new@ifnextchar` Package `amsgen.sty` redefines `\@ifstar` using `\new@ifnextchar` instead of `\@ifnextchar`. See bug report latex/3662.

```

1169 \def\HyPsd@new@ifnextchar{%
1170 \pdfstringdefWarn\new@ifnextchar
1171 \expandafter\@gobbletwo\@gobble
1172 }

```


6.5.11 \@protected@testopt@ifnextchar

`\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`.

```
1173 \def\HyPsd@protected@testopt#1{%
1174   \pdfstringdefWarn#1%
1175   \@gobbletwo
1176 }
```

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:

```
1177 \def\HyPsd@Warning#1{%
1178   \begingroup
1179     \def\space{ }%
1180     \Hy@Warning{#1}%
1181   \endgroup
1182 }
```

6.6.2 Protecting spaces

```
1183 \RequirePackage{etexcmds}[2007/09/09]
1184 \ifetex@unexpanded
1185   \expandafter\@secondoftwo
1186 \else
1187   \expandafter\@firstoftwo
1188 \fi
1189 {%
```

`\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`.

```
1190   \def\HyPsd@ProtectSpaces#1{%
1191     \iftrue
1192       \expandafter\HyPsd@@ProtectSpacesFi
1193       \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1194     \fi
1195   }%
```

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

```
1196   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1197     \fi
1198     \ifx\scrollmode#2\scrollmode
1199       \HyPsd@RemoveMask#1\HyPsd@End#3%
1200     \else
1201       \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1202       \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1203     \fi
1204   }%
```

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.

```
1205 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1206   \toks@{\expandafter{#1}}%
1207   \xdef#2{\the\toks@}%
1208 }%

1209 }{%
1210   \let\HyPsd@fi\fi
1211   \def\HyPsd@ProtectSpaces#1{%
1212     \xdef#1{%
1213       \iftrue
1214         \expandafter\HyPsd@@ProtectSpacesFi
1215         \expandafter|\expandafter\@empty#1| %
1216       \HyPsd@fi
1217     }%
1218     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1219   }%
1220   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1221     \fi
1222     \etex@unexpanded{#1}%
1223     \ifx\scrollmode#2\scrollmode
1224     \else
1225       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1226     \HyPsd@fi
1227   }%
1228   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1229     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1230   }%
1231 }
```

6.6.3 Remove grouping braces

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

```
1232 \def\HyPsd@RemoveBraces#1{%
1233   \ifx\scrollmode#1\scrollmode
1234   \else
1235     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1236   \fi
1237 }
```

`\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`.

```
1238 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1239   \fi
1240   \def\Hy@temp@A{#1#2}%
1241   \def\Hy@temp@B{#3}%
```

```

1242 \ifx\Hy@temp@A\Hy@temp@B
1243 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1244 \HyPsd@String#1%
1245 }%
1246 \ifx\scrollmode#2\scrollmode
1247 \else
1248 \Hy@ReturnAfterFiFiEnd{%
1249 \HyPsd@RemoveBraces{#2}%
1250 }%
1251 \fi
1252 \else
1253 \def\Hy@temp@A{#1}%
1254 \HyPsd@AppendItalcorr\HyPsd@String
1255 \ifx\Hy@temp@A\@empty
1256 \Hy@ReturnAfterElseFiFiEnd{%
1257 \HyPsd@RemoveBraces{#2}%
1258 }%
1259 \else
1260 \HyPsd@ProtectSpaces\Hy@temp@A
1261 \HyPsd@AppendItalcorr\Hy@temp@A
1262 \Hy@ReturnAfterFiFiEnd{%
1263 \expandafter\HyPsd@RemoveBraces\expandafter
1264 {\Hy@temp@A#2}%
1265 }%
1266 \fi
1267 \fi
1268 \Hy@ReturnEnd
1269 }

```

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

```

1270 \def\HyPsd@AppendItalcorr#1{%
1271 \expandafter\HyPsd@@AppendItalcorr\expandafter{/}#1%
1272 }
1273 \def\HyPsd@@AppendItalcorr#1#2{%
1274 \expandafter\def\expandafter#2\expandafter{#2#1}%
1275 }

```

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).

```

1276 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1277 \global\let\HyPsd@Rest\relax
1278 \ifcat\relax\noexpand#1\relax
1279 \ifx#1\protect
1280 \else

```

```

1281 \ifx#1\penalty
1282 \setbox\z@=\hbox{%
1283 \afterassignment\HyPsd@AfterCountRemove
1284 \count@=#2\HyPsd@End
1285 }%
1286 \else
1287 \ifx#1\kern
1288 \setbox\z@=\hbox{%
1289 \afterassignment\HyPsd@AfterDimenRemove
1290 \dimen@=#2\HyPsd@End
1291 }%
1292 \else
1293 \ifx#1\hskip
1294 \setbox\z@=\hbox{%
1295 \afterassignment\HyPsd@AfterSkipRemove
1296 \skip@=#2\HyPsd@End
1297 }%
1298 \else
1299 \HyPsd@CatcodeWarning{#1}%
1300 \fi
1301 \fi
1302 \fi
1303 \fi
1304 \else
1305 \ifcat#1A% letter
1306 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1307 \HyPsd@String#1%
1308 }%
1309 \else
1310 \ifcat#1 % SPACE
1311 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1312 \HyPsd@String\HyPsd@SPACEOPTI
1313 }%
1314 \else
1315 \ifcat$#1%
1316 \HyPsd@CatcodeWarning{math shift}%
1317 \else
1318 \ifcat&#1%
1319 \HyPsd@CatcodeWarning{alignment tab}%
1320 \else
1321 \ifcat^#1%
1322 \HyPsd@CatcodeWarning{superscript}%
1323 \else
1324 \ifcat_#1%
1325 \HyPsd@CatcodeWarning{subscript}%
1326 \else
1327 \expandafter\def\expandafter\HyPsd@String\expandafter{%
1328 \HyPsd@String#1%
1329 }%
1330 \fi
1331 \fi
1332 \fi
1333 \fi
1334 \fi
1335 \fi
1336 \fi
1337 \ifx\HyPsd@Rest\relax

```

```

1338     \ifx\scrollmode#2\scrollmode
1339     \else
1340         \Hy@ReturnAfterFiFiEnd{%
1341             \HyPsd@CheckCatcodes#2\HyPsd@End
1342         }%
1343     \fi
1344 \else
1345     \ifx\HyPsd@Rest\@empty
1346     \else
1347         \Hy@ReturnAfterFiFiEnd{%
1348             \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1349         }%
1350     \fi
1351 \fi
1352 \Hy@ReturnEnd
1353 }

```

Remove counts, dimens, skips.

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

```

1354 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1355     \gdef\HyPsd@Rest{#1}%
1356 }

```

`\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.

```

1357 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1358     \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1359         \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1360         \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1361     \else
1362         \ifdim\dimen@=\z@
1363         \else
1364             \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1365         \fi
1366         \gdef\HyPsd@Rest{#1}%
1367     \fi
1368 }

```

`\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).

```

1369 \def\HyPsd@AfterSkipRemove#1\HyPsd@End{%
1370     \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>1ex %
1371         \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1372         \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1373     \else
1374         \ifdim\skip@=\z@
1375         \else
1376             \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1377         \fi
1378         \gdef\HyPsd@Rest{#1}%
1379     \fi
1380 }

```

Catcode warnings.

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

```
1381 \def\HyPsd@CatcodeWarning#1{%
1382   \HyPsd@Warning{%
1383     Token not allowed in a PDF string (%)
1384     \ifHy@unicode
1385       Unicode%
1386     \else
1387       PDFDocEncoding%
1388     \fi
1389   }:%
1390   \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
1391 }%
1392 }
1393 \begingroup
1394 \catcode'\|=0 %
1395 \catcode'\|=12 %
1396 |gdef|HyPsd@RemoveCmdPrefix#1{%
1397   |expandafter|HyPsd@@RemoveCmdPrefix
1398   |string#1|@empty\<>-|@empty|@empty
1399 }%
1400 |gdef|HyPsd@@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1401 |endgroup
```

\HyPsd@RemoveSpaceWarning

```
1402 \def\HyPsd@RemoveSpaceWarning#1{%
1403   \HyPsd@Warning{%
1404     Token not allowed in a PDF string (%)
1405     \ifHy@unicode
1406       Unicode%
1407     \else
1408       PDFDocEncoding%
1409     \fi
1410   }:%
1411   \MessageBreak #1\MessageBreak
1412   removed%
1413 }%
1414 }
```

\HyPsd@ReplaceSpaceWarning

```
1415 \def\HyPsd@ReplaceSpaceWarning#1{%
1416   \HyPsd@Warning{%
1417     Token not allowed in a PDF string (%)
1418     \ifHy@unicode
1419       Unicode%
1420     \else
1421       PDFDocEncoding%
1422     \fi
1423   }:%
1424   \MessageBreak #1\MessageBreak
1425   replaced by space%
1426 }%
1427 }
```

6.6.5 Check for wrong glyphs

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

```
1428 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1429   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1430     \HyPsd@String#1%
1431   }%
1432   \ifx\#2\%
1433   \else
1434     \Hy@ReturnAfterFi{%
1435       \HyPsd@GlyphProcessWarning#2\@empty
1436     }%
1437   \fi
1438 }
1439 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1440   \HyPsd@@GlyphProcessWarning#1++>%
1441   \HyPsd@GlyphProcess#2\@empty
1442 }
1443 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1444   \ifx\#2\%
1445     \HyPsd@Warning{%
1446       Glyph not defined in %
1447       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1448       removing '@backslashchar#1'%
1449     }%
1450   \else
1451     \HyPsd@Warning{%
1452       Composite letter '@backslashchar#1+#2'\MessageBreak
1453       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1454       \MessageBreak
1455       removing '@backslashchar#1'%
1456     }%
1457   \fi
1458 }
```

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`.

```
1459 \def\HyPsd@spaceopti#1{ % first space
1460   \ifx\HyPsd@spaceopti#1%
1461     \040%
1462   \else
1463     #1%
1464   \fi
1465 }
```

6.6.6 Replacing tokens

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

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

```

1466 \def\HyPsd@Subst#1#2#3{%
1467   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1468     \fi
1469     ##1%
1470     \ifx\scrollmode##2\scrollmode
1471     \else
1472       #2%
1473       \HyPsd@@ReplaceFi##2\END
1474     \fi
1475   }%
1476   \xdef#3{%
1477     \iftrue
1478       \expandafter\HyPsd@@ReplaceFi#3#1\END
1479     \fi
1480   }%
1481 }

```

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

```

1482 \def\HyPsd@StringSubst#1{%
1483   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1484 }

```

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.

```

1485 \def\HyPsd@doxspace#1{%
1486   \ifx#1\relax\else
1487     \ifx#1.\else
1488       \ifx#1:\else
1489         \ifx#1,\else
1490         \ifx#1;\else
1491         \ifx#1!\else
1492         \ifx#1?\else
1493         \ifx#1/\else
1494         \ifx#1-\else
1495         \ifx#1'\else
1496           \HyPsd@SPACEOPTI
1497         \fi
1498       \fi
1499     \fi
1500   \fi
1501   \fi
1502   \fi
1503   \fi
1504   \fi
1505   \fi
1506   \fi
1507   #1%
1508 }%

```

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.

```
1509 \begingroup
1510 \catcode'\|=0 %
1511 \catcode'\|=12 %
```

\HyPsd@ConvertToUnicode

```
1512 |gdef|HyPsd@ConvertToUnicode#1{%
1513   |xdef#1{%
1514     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1515   }%
1516   |ifx#1|@empty
1517   |else
1518     |xdef#1{%
1519       \376\377%
1520     #1%
1521   }%
1522   |fi
1523 }%
```

\HyPsd@DoConvert

```
1524 |gdef|HyPsd@DoConvert#1{%
1525   |ifx#1|@empty
1526   |else
1527     |Hy@ReturnAfterFi{%
1528       |ifx#1\%%
1529       \%%
1530     |expandafter|HyPsd@DoEscape
1531   |else
1532     \000#1%
1533     |expandafter|HyPsd@DoConvert
1534   |fi
1535 }%
1536 |fi
1537 }%
```

\HyPsd@DoEscape

```
1538 |gdef|HyPsd@DoEscape#1{%
1539   |ifx#19%
1540   |expandafter|HyPsd@GetTwoBytes
1541   |else
1542     |Hy@ReturnAfterFi{%
1543       |ifx#18%
1544       00%
1545     |expandafter|HyPsd@GetTwoBytes
1546   |else
1547     #1%
1548     |expandafter|HyPsd@GetOneByte
1549   |fi
1550 }%
1551 |fi
1552 }%
```

\HyPsd@GetTwoBytes

```
1553 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1554   #1\#2#3#4%
1555   |HyPsd@DoConvert
1556 }%
```

`\HyPsd@GetOneByte`

```

1557 |gdef|HyPsd@GetOneByte#1#2{%
1558   #1#2%
1559   |HyPsd@DoConvert
1560   }%
1561 |endgroup

```

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

```

1562 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1563   \xdef#4{#4#1#2}%
1564   \HyPsd@@ConvertToUnicode#3\END#4%
1565 }

```

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 `e \TeX 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`

```

1566 \begingroup\expandafter\expandafter\expandafter\endgroup
1567 \expandafter\ifx\csname numexpr\endcsname\relax
1568   \let\HyPsd@UTFviii\relax
1569 \else
1570   \begingroup
1571     \lccode'\~='^f4\relax
1572     \lowercase{\endgroup
1573       \def\HyPsd@UTFviii{%
1574         \let\UTFviii@two@octets\HyPsd@UTFviii@two
1575         \let\UTFviii@three@octets\HyPsd@UTFviii@three
1576         \let\UTFviii@four@octets\HyPsd@UTFviii@four
1577         \ifx~\HyPsd@UTFviii@ccxliv@undef
1578           \let~\HyPsd@UTFviii@ccxliv@def
1579         \fi
1580         \let\unichar\HyPsd@unichar
1581       }%
1582     }%
1583     \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1584     \edef\HyPsd@UTFviii@ccxliv@def{%
1585       \noexpand\UTFviii@four@octets\string ^f4%
1586     }%

```

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

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

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

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

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

$$(5)$$

```

1587 \def\HyPsd@UTFviii@two#1#2{%
1588   \expandafter\HyPsd@UTFviii@two
1589   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1590   \number'#1\expandafter|
1591   \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter|
1592   \number'#2 \@nil
1593 }%
1594 \def\HyPsd@UTFviii@three#1#2#3#4\@nil{%
1595   \expandafter\8
1596   \number\numexpr #1-48\expandafter\relax
1597   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1598   \number\numexpr #3-8*%
1599   \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1600   \number\numexpr #4-8*#3\relax
1601 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

1602 \def\HyPsd@UTFviii@three#1#2#3{%
1603   \expandafter\HyPsd@UTFviii@three
1604   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1605   \number'#1\expandafter|
1606   \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter|
1607   \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter|
1608   \number'#2\expandafter|
1609   \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter|
1610   \number'#3 \@nil
1611 }%
1612 \def\HyPsd@UTFviii@four#1#2#3#4#5#6#7\@nil{%
1613   \expandafter\9
1614   \number\numexpr #1-56\expandafter\relax
1615   \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1616   \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
1617   \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1618   \number\numexpr #6-16\expandafter\relax
1619   \number\numexpr #7-8*#6\relax
1620 }%

```

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

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

```

1621 \def\HyPsd@UTFviii@four#1#2{%
1622   \expandafter\HyPsd@UTFviii@four\number

```

```

1623 \numexpr-1+(' #1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
1624 \expandafter|\number
1625 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp|%
1626 }%
1627 \def\HyPsd@@UTFviii@four#1|#2|#3{%
1628 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1629 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1630 \ifodd#2 %
1631 \number\numexpr(#2-1)/2\relax
1632 \else
1633 \number\numexpr#2/2\relax
1634 \fi
1635 \number\numexpr\ifodd#2 4+\fi
1636 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
1637 \933%
1638 \expandafter\HyPsd@@UTFviii@four\number
1639 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp|%
1640 }%
1641 \def\HyPsd@@UTFviii@four#1|#2{%
1642 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1643 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1644 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
1645 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
1646 }%

```

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

```

1647 \def\HyPsd@unichar#1{%
1648 \ifHy@unicode
1649 \ifnum#1>"10FFFF %
1650 \HyPsd@UnicodeReplacementCharacter % illegal
1651 \else
1652 \ifnum#1>"FFFF %

```

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

```

1653 \expandafter\HyPsd@unichar\expandafter{%
1654 \number\numexpr 55296+%
1655 \dimexpr.0009765625\dimexpr\number#1sp-\p@
1656 \relax\relax\relax
1657 }%

```

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

```

1658 \expandafter\HyPsd@unichar\expandafter{%
1659 \number\numexpr#1-9216%
1660 -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1661 \relax\relax\relax
1662 }%
1663 \else
1664 \ifnum#1>"7FF %
1665 \9%
1666 \expandafter\HyPsd@unichar@first@byte\expandafter{%
1667 \number
1668 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
1669 }%
1670 \else
1671 \8%
1672 \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
1673 \fi

```

```

1674         \expandafter\HyPsd@unichar@second@byte\expandafter{%
1675         \number
1676         \numexpr#1-256*\number
1677         \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
1678     }%
1679     \fi
1680 \fi
1681 \else
1682     .% unsupported (Unicode -> PDF Doc Encoding)
1683 \fi
1684 }%
1685 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
1686 \def\HyPsd@unichar@first@byte#1{%
1687     \number\dimexpr.015625\dimexpr#1sp\relax\relax
1688     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1689     \number
1690     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1691     \relax\relax\relax
1692 }%
1693 }%
1694 \def\HyPsd@unichar@second@byte#1{%
1695     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
1696     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1697     \number
1698     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1699     \relax\relax\relax
1700 }%
1701 }%
1702 \def\HyPsd@unichar@octtwo#1{%
1703     \number\dimexpr.125\dimexpr#1sp\relax\relax
1704     \number\dimexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
1705     \relax\relax\relax
1706 }%
1707 \fi

```

7 Support of other packages

7.1 Class memoir

```

1708 \@ifclassloaded{memoir}{%
1709     \AtEndOfPackage{\RequirePackage{memhfixc}}%
1710 }{}

```

7.2 Package subfigure

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

```

1711 \@ifpackageloaded{subfigure}{%
1712     \@ifundefined{sub@label}{%
1713         \Hy@hypertextnamesfalse
1714     }{%
1715         \renewcommand*{\sub@label}[1]{%
1716             \@bsphack
1717             \subfig@oldlabel{#1}%
1718             \if@filesw
1719                 \begingroup
1720                 \edef\@currentlabstr{%
1721                     \expandafter\strip@prefix\meaning\@currentlabelname

```

```

1722      }%
1723      \protected@write\@auxout{}\{
1724      \string\newlabel{sub@#1}\{
1725      {\@nameuse{\@thesub\@capttype}}\{
1726      {\thepage}\{
1727      {\{
1728      \expandafter\strip@period\@currentlabstr
1729      \relax.\relax\@@@%
1730      }%
1731      {\@currentHref}%
1732      {\}%
1733      }%
1734      }%
1735      \endgroup
1736      \fi
1737      \@esphack
1738      }%
1739      \@ifpackagelater{subfigure}{2002/03/26}\{
1740      \providecommand*\toclevel@subfigure{1}%
1741      \providecommand*\toclevel@subtable{1}%
1742      }%
1743      }%
1744      }{}

```

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:

```

1745 \ifundefined{XR@addURL}\{
1746 \{

```

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.

```

1747 \def\XR@addURL#1{\XR@dURL#1\{\}\{\}\{\}\}%
1748 \def\XR@dURL#1#2#3#4#5\{\{
1749   {\#1}\{\#2}\{
1750   \if!\#4!\{
1751     \else
1752       {\#3}\{\#4}\{\XR@URL}%
1753     \fi
1754   }\{
1755 }

```

```

1756 \def\Hy@true{true}
1757 \def\Hy@false{false}

```

Providing dummy definitions.

```

1758 \let\literalps@out\@gobble
1759 \newcommand\pdfbookmark[3]{}{}
1760 \def\Acrobatmenu#1#2{\leavevmode#2}
1761 \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

```
1762 \let\HyperRaiseLinkHook\@empty
```

```
1763 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
1764 \def\Hy@raisedlink#1{%
```

```
1765   \ifvmode
```

```
1766     #1%
```

```
1767   \else
```

```
1768     \penalty\@M
```

```
1769     \smash{%
```

```
1770       \begingroup
```

```
1771         \let\HyperRaiseLinkLength\@tempdima
```

```
1772         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
```

```
1773         \HyperRaiseLinkHook
```

```
1774         \expandafter\endgroup
```

```
1775         \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
```

```
1776     }%
```

```
1777   \fi
```

```
1778 }
```

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

`\Hy@RestoreLastskip`

```
1779 \def\Hy@SaveLastskip{%
```

```
1780   \let\Hy@RestoreLastskip\relax
```

```
1781   \ifvmode
```

```
1782     \ifdim\lastskip=\z@
```

```
1783       \let\Hy@RestoreLastskip\nobreak
```

```
1784     \else
```

```
1785       \begingroup
```

```
1786         \skip@=-\lastskip
```

```
1787         \edef\x{%
```

```
1788           \endgroup
```

```
1789           \def\noexpand\Hy@RestoreLastskip{%
```

```
1790             \noexpand\ifvmode
```

```
1791               \noexpand\nobreak
```

```
1792               \vskip\the\skip@
```

```
1793               \vskip\the\lastskip\relax
```

```
1794             \noexpand\fi
```

```
1795           }%
```

```
1796       }%
```

```
1797     \x
```

```
1798   \fi
```

```
1799   \else
```

```
1800     \ifhmode
```

```
1801       \ifdim\lastskip=\z@
```

```
1802         \let\Hy@RestoreLastskip\nobreak
```

```
1803       \else
```

```
1804         \begingroup
```

```
1805           \skip@=-\lastskip
```

```
1806           \edef\x{%
```

```

1807         \endgroup
1808         \def\noexpand\Hy@RestoreLastskip{%
1809             \noexpand\ifhmode
1810                 \noexpand\nobreak
1811                 \hskip\the\skip@
1812                 \hskip\the\lastskip\relax
1813             \noexpand\fi
1814         }%
1815     }%
1816     \x
1817     \fi
1818     \fi
1819     \fi
1820 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

1821 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
1822 \def\Hy@@boolkey[#1]#2#3{%
1823     \lowercase{\def\Hy@tempa{#3}}%
1824     \ifx\Hy@tempa\@empty
1825         \let\Hy@tempa\Hy@true
1826     \fi
1827     \ifx\Hy@tempa\Hy@true
1828     \else
1829         \ifx\Hy@tempa\Hy@false
1830         \else
1831             \let\Hy@tempa\relax
1832         \fi
1833     \fi
1834     \ifx\Hy@tempa\relax
1835         \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
1836     \else
1837         \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
1838         \csname Hy@#2\Hy@tempa\endcsname
1839     \fi
1840 }

```

\Hy@WarnOptionValue

```

1841 \def\Hy@WarnOptionValue#1#2#3{%
1842     \Hy@Warning{%
1843         Unexpected value ‘#1’\MessageBreak
1844         of option ‘#2’ instead of\MessageBreak
1845         #3%
1846     }%
1847 }

```

\Hy@DisableOption

```

1848 \def\Hy@DisableOption#1{%
1849     \@ifundefined{KV@Hyp@#1@default}{%
1850         \define@key{Hyp}{#1}%
1851     }{%
1852         \define@key{Hyp}{#1}[]%

```



```

1853 }%
1854 {\Hy@WarnOptionDisabled{#1}}%
1855 }

```

\Hy@WarnOptionDisabled

```

1856 \def\Hy@WarnOptionDisabled#1{%
1857   \Hy@Warning{%
1858     Option ‘#1’ has already been used,\MessageBreak
1859     setting the option has no effect%
1860   }%
1861 }

```

\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.

```

1862 \def\Hy@CheckOptionValue#1#2#3{%
1863   \begingroup
1864   \edef\x{#1}%
1865   \@onelevel@sanitize\x
1866   \let\y=y%
1867   \def\do##1##2{%
1868     \def\z{##1}%
1869     \@onelevel@sanitize\z
1870     \ifx\x\z
1871       \let\y=n%
1872       \let\do\gobbletwo
1873     \fi
1874   }%
1875   #3%
1876   \ifx\y y%
1877     \def\do##1##2{%
1878       * ‘##1’%
1879       \ifx\\##2\\else\space(##2)\fi
1880       \MessageBreak
1881     }%
1882     \Hy@Warning{%
1883       Values of option ‘#2’:\MessageBreak
1884       #3%
1885       * An empty value disables the option.\MessageBreak
1886       Unknown value ‘\x’%
1887     }%
1888   \fi
1889 \endgroup
1890 }

```

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

```

1891 \def\Hy@DefNameKey#1{%
1892   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
1893 }

```

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

```

1894 \def\Hy@@DefNameKey#1#2#3{%
1895   \define@key{Hyp}{#2}{%

```

```

1896 \edef#1{##1}%
1897 \ifx#1\@empty
1898 \else
1899 \Hy@CheckOptionValue{##1}{#2}{#3}%
1900 \fi
1901 }%
1902 \let#1\@empty
1903 }

```

\Hy@UseNameKey

```

1904 \def\Hy@UseNameKey#1#2{%
1905 \ifx#2\@empty
1906 \else
1907 /#1/#2%
1908 \fi
1909 }

```

9.2 Defining the options

```

1910 \define@key{Hyp}{implicit}[true]{%
1911 \Hy@boolkey{implicit}{#1}%
1912 }
1913 \define@key{Hyp}{draft}[true]{%
1914 \Hy@boolkey{draft}{#1}%
1915 }
1916 \define@key{Hyp}{final}[true]{%
1917 \Hy@boolkey{final}{#1}%
1918 }
1919 \let\KV@Hyp@nolinks\KV@Hyp@draft
1920 \define@key{Hyp}{a4paper}[true]{%
1921 \def\special@paper{210mm,297mm}%
1922 \def\Hy@pageheight{842}%
1923 }
1924 \define@key{Hyp}{a5paper}[true]{%
1925 \def\special@paper{148mm,210mm}%
1926 \def\Hy@pageheight{595}%
1927 }
1928 \define@key{Hyp}{b5paper}[true]{%
1929 \def\special@paper{176mm,250mm}%
1930 \def\Hy@pageheight{709}%
1931 }
1932 \define@key{Hyp}{letterpaper}[true]{%
1933 \def\special@paper{8.5in,11in}%
1934 \def\Hy@pageheight{792}%
1935 }
1936 \define@key{Hyp}{legalpaper}[true]{%
1937 \def\special@paper{8.5in,14in}%
1938 \def\Hy@pageheight{1008}%
1939 }
1940 \define@key{Hyp}{executivepaper}[true]{%
1941 \def\special@paper{7.25in,10.5in}%
1942 \def\Hy@pageheight{720}%
1943 }
1944 \define@key{Hyp}{setpagesize}[true]{%
1945 \Hy@boolkey{setpagesize}{#1}%
1946 }
1947 \define@key{Hyp}{debug}[true]{%

```

```

1948 \Hy@boolkey{debug}{verbose}{#1}%
1949 }
1950 \define@key{Hyp}{linktocpage}[true]{%
1951 \Hy@boolkey{linktocpage}{#1}%
1952 \ifHy@linktocpage
1953 \let\Hy@linktoc\Hy@linktoc@page
1954 \else
1955 \let\Hy@linktoc\Hy@linktoc@section
1956 \fi
1957 }
1958 \chardef\Hy@linktoc@none=0 %
1959 \chardef\Hy@linktoc@section=1 %
1960 \chardef\Hy@linktoc@page=2 %
1961 \chardef\Hy@linktoc@all=3 %
1962 \ifHy@linktocpage
1963 \let\Hy@linktoc\Hy@linktoc@page
1964 \else
1965 \let\Hy@linktoc\Hy@linktoc@section
1966 \fi
1967 \define@key{Hyp}{linktoc}{%
1968 \@ifundefined{Hy@linktoc@#1}{%
1969 \Hy@Warning{%
1970 Unexpected value ‘#1’ of\MessageBreak
1971 option ‘linktoc’ instead of ‘none’,\MessageBreak
1972 ‘section’, ‘page’ or ‘all’%
1973 }%
1974 }{%
1975 \expandafter\let\expandafter\Hy@linktoc
1976 \csname Hy@linktoc@#1\endcsname
1977 }%
1978 }
1979 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
1980 \let\XR@ext\relax
1981 \define@key{Hyp}{verbose}[true]{%
1982 \Hy@boolkey{verbose}{#1}%
1983 }
1984 \define@key{Hyp}{typexml}[true]{%
1985 \Hy@boolkey{typexml}{#1}%
1986 }

```

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.

```

1987 \define@key{Hyp}{raiselinks}[true]{%
1988 \Hy@boolkey{raiselinks}{#1}%
1989 }

```

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

```

1990 \def\Hy@setbreaklinks#1{%
1991 \csname breaklinks#1\endcsname
1992 }
1993 \def\Hy@breaklinks@unsupported{%
1994 \ifx\Hy@setbreaklinks\@gobble
1995 \ifHy@breaklinks
1996 \Hy@WarningNoLine{%
1997 You have enabled option ‘breaklinks’.\MessageBreak
1998 But driver ‘\Hy@driver.def’ does not support this.\MessageBreak

```

```

1999      Expect trouble with the link areas of broken links%
2000      }%
2001      \fi
2002 \fi
2003 }

2004 \define@key{Hyp}{breaklinks}[true]{%
2005   \Hy@boolkey{breaklinks}{#1}%
2006   \let\Hy@setbreaklinks\@gobble
2007 }

```

Determines whether an automatic anchor is put on each page

```

2008 \define@key{Hyp}{pageanchor}[true]{%
2009   \Hy@boolkey{pageanchor}{#1}%
2010 }

```

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.

```

2011 \define@key{Hyp}{plainpages}[true]{%
2012   \Hy@boolkey{plainpages}{#1}%
2013 }

```

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

```

2014 \define@key{Hyp}{naturalnames}[true]{%
2015   \Hy@boolkey{naturalnames}{#1}%
2016 }

```

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

```

2017 \define@key{Hyp}{hypertexnames}[true]{%
2018   \Hy@boolkey{hypertexnames}{#1}%
2019 }

```

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

```

2020 \define@key{Hyp}{nesting}[true]{%
2021   \Hy@boolkey{nesting}{#1}%
2022 }

2023 \define@key{Hyp}{unicode}[true]{%
2024   \Hy@boolkey{unicode}{#1}%
2025   \ifHy@unicode
2026     \def\HyPsd@pdfencoding{unicode}%
2027   \else
2028     \def\HyPsd@pdfencoding{pdfdoc}%
2029   \fi
2030   \HyPsd@LoadUnicode
2031 }

2032 \def\HyPsd@LoadUnicode{%
2033   \@ifundefined{T@PU}{%
2034     \input{puenc.def}%
2035     \HyLinguex@Restore
2036   }{}%
2037   \DeclareFontFamily{PU}{pdf}{}%
2038   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
2039   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2040   \global\let\HyPsd@LoadUnicode\relax
2041 }

2042 \AtBeginDocument{%
2043   \ifx\HyPsd@LoadUnicode\relax
2044     \else
2045       \def\HyPsd@LoadUnicode{%

```

```

2046 \PackageError{hyperref}{%
2047   Unicode support for bookmarks is not available.\MessageBreak
2048   Activate unicode support by using one of the options\MessageBreak
2049   'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2050   in the preamble%
2051 } \@ehc
2052 \global\let\HyPsd@LoadUnicode\relax
2053 \global\Hy@unicodedefalse
2054 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2055 }%
2056 \fi
2057 }

2058 \define@key{Hyp}{pdfencoding}{%
2059 \edef\HyPsd@temp{#1}%
2060 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2061 \let\HyPsd@pdfencoding\HyPsd@temp
2062 \Hy@unicodedefalse
2063 \else
2064 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2065 \z@
2066 \else
2067 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2068 \z@
2069 \else
2070 \@ne
2071 \fi
2072 \fi
2073 \let\HyPsd@pdfencoding\HyPsd@temp
2074 \hypersetup{unicode}%
2075 \ifHy@unicode
2076 \def\HyPsd@pdfencoding{#1}%
2077 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2078 \HyPsd@LoadStringEncoding
2079 \fi
2080 \else
2081 \Hy@Warning{Cannot switch to unicode bookmarks}%
2082 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2083 \fi
2084 \else
2085 \@onelevel@sanitize\HyPsd@temp
2086 \Hy@Warning{%
2087   Values of option 'pdfencoding':\MessageBreak
2088   'pdfdoc', 'unicode', 'auto'.\MessageBreak
2089   Ignoring unknown value '\HyPsd@temp'%
2090 }%
2091 \fi
2092 \fi
2093 }

2094 \def\HyPsd@pdfencoding@auto{auto}
2095 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2096 \def\HyPsd@pdfencoding@unicode{unicode}
2097 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2098 \def\HyPsd@LoadStringEncoding{%
2099 \RequirePackage{stringenc}[2007/06/14]%
2100 \let\HyPsd@LoadStringEncoding\relax
2101 }
2102 \AtBeginDocument{%

```

```

2103 \@ifpackageloaded{stringenc}{%
2104   \let\HyPsd@LoadStringEnc\relax
2105 }{%
2106   \def\HyPsd@LoadStringEnc{%
2107     \Hy@WarningNoLine{%
2108       Missing package ‘stringenc’. Use ‘pdfencoding=auto’\MessageBreak
2109       in the preamble or load the package there%
2110     }%
2111   }%
2112 }%
2113 }

2114 \newif\ifHy@setpdfversion
2115 \define@key{Hyp}{pdfversion}{%
2116   \@ifundefined{Hy@pdfversion@#1}{%
2117     \PackageWarning{hyperref}{%
2118       Unsupported PDF version ‘#1’.\MessageBreak
2119       Valid values: 1.2 until 1.9%
2120     }%
2121   }{%
2122     \Hy@setpdfversiontrue
2123     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2124   }%
2125 }

2126 \@namedef{Hy@pdfversion@1.2}{2}%
2127 \@namedef{Hy@pdfversion@1.3}{3}%
2128 \@namedef{Hy@pdfversion@1.4}{4}%
2129 \@namedef{Hy@pdfversion@1.5}{5}%
2130 \@namedef{Hy@pdfversion@1.6}{6}%
2131 \@namedef{Hy@pdfversion@1.7}{7}%
2132 \@namedef{Hy@pdfversion@1.8}{8}%
2133 \@namedef{Hy@pdfversion@1.9}{9}%
2134 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2135 \define@key{Hyp}{hyperref}[true]{%
2136 \define@key{Hyp}{tex4ht}[true]{%
2137   \Hy@texhttrue
2138   \setkeys{Hyp}{colorlinks=true}%
2139   \def\BeforeTeXIVht{\usepackage{color}}%
2140   \def\Hy@driver{htex4ht}%
2141   \def\MaybeStopEarly{%
2142     \typeout{Hyperref stopped early}%
2143     \AfterBeginDocument{%
2144       \PDF@FinishDoc
2145       \gdef\PDF@FinishDoc{}%
2146     }%
2147   \endinput
2148 }%
2149 }

2150 \define@key{Hyp}{pdftex}[true]{%
2151   \def\Hy@driver{hpdftex}%
2152 }

2153 \define@key{Hyp}{nativepdf}[true]{%
2154   \def\Hy@driver{hdvips}%
2155 }

2156 \define@key{Hyp}{dvipdfm}[true]{%

```

```

2157 \def\Hy@driver{hdvipdfm}%
2158 }
2159 \define@key{Hyp}{dvipdfmx}[true]{%
2160 \def\Hy@driver{hdvipdfm}%
2161 }
2162 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2163 \expandafter\ifx\csname if#1\expandafter\endcsname
2164 \csname iftrue\endcsname
2165 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2166 \else
2167 \chardef\SpecialDvipdfmxOutlineOpen\z@
2168 \fi
2169 }
2170 \define@key{Hyp}{xetex}[true]{%
2171 \def\Hy@driver{hdvipdfm}%
2172 }
2173 \define@key{Hyp}{pdfmark}[true]{%
2174 \def\Hy@driver{hdvips}%
2175 }
2176 \define@key{Hyp}{dvips}[true]{%
2177 \def\Hy@driver{hdvips}%
2178 }
2179 \define@key{Hyp}{hypertex}[true]{%
2180 \def\Hy@driver{hypertex}%
2181 }
2182 \let\Hy@MaybeStopNow\relax
2183 \define@key{Hyp}{vtex}[true]{%
2184 \begingroup\expandafter\expandafter\expandafter\endgroup
2185 \expandafter\ifx\csname OpMode\endcsname\relax
2186 \@latex@error{Non-VTeX processor}{}%
2187 \global\let\Hy@MaybeStopNow\endinput
2188 \endinput
2189 \else
2190 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2191 \def\Hy@driver{hvtex}%
2192 \else
2193 \ifnum\OpMode=10\relax
2194 \def\Hy@driver{hvtexhtm}%
2195 \def\MaybeStopEarly{%
2196 \typeout{Hyperref stopped early}%
2197 \AfterBeginDocument{%
2198 \PDF@FinishDoc
2199 \gdef\PDF@FinishDoc{}}%
2200 }%
2201 \endinput
2202 }%
2203 \else
2204 \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2205 \global\let\Hy@MaybeStopNow\endinput
2206 \endinput
2207 \fi
2208 \fi
2209 \fi
2210 }
2211 \define@key{Hyp}{vtexpdfmark}[true]{%
2212 \begingroup\expandafter\expandafter\expandafter\endgroup
2213 \expandafter\ifx\csname OpMode\endcsname\relax

```

```

2214 \latex@error{Non-VTeX processor}{}%
2215 \let\Hy@MaybeStopNow\endinput
2216 \endinput
2217 \else
2218 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2219 \def\Hy@driver{hvtexmrk}%
2220 \else
2221 \latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2222 \let\Hy@MaybeStopNow\endinput
2223 \endinput
2224 \fi
2225 \fi
2226 }
2227 \define@key{Hyp}{dviwindo}[true]{%
2228 \def\Hy@driver{hdviwind}%
2229 \setkeys{Hyp}{colorlinks}%
2230 \PassOptionsToPackage{dviwindo}{color}%
2231 }
2232 \define@key{Hyp}{dvipsone}[true]{%
2233 \def\Hy@driver{hdvipson}%
2234 }
2235 \define@key{Hyp}{textures}[true]{%
2236 \def\Hy@driver{htexture}%
2237 }
2238 \define@key{Hyp}{latex2html}[true]{%
2239 \AtBeginDocument{\@latextohtmlX}%
2240 }

```

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

```

2241 \define@key{Hyp}{ps2pdf}[true]{%
2242 \def\Hy@driver{hdvips}%
2243 \providecommand*\@pdfborder{0 0 1}%
2244 }

```

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.

```

2245 \define@key{Hyp}{hyperfigures}[true]{%
2246 \Hy@boolkey[hyperfigures]{figures}{#1}%
2247 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2248 \define@key{Hyp}{hyperfootnotes}[true]{%
2249 \Hy@boolkey[hyperfootnotes]{#1}%
2250 }

```

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

```

2251 \def\back@none{none}
2252 \def\back@section{section}
2253 \def\back@page{page}
2254 \def\back@slide{slide}
2255 \define@key{Hyp}{backref}[section]{%
2256 \lowercase{\def\Hy@tempa{#1}}%
2257 \ifx\Hy@tempa\@empty
2258 \let\Hy@tempa\back@section
2259 \fi
2260 \ifx\Hy@tempa\Hy>false

```



```

2261 \let\Hy@tempa\back@none
2262 \fi
2263 \ifx\Hy@tempa\back@slide
2264 \let\Hy@tempa\back@section
2265 \fi
2266 \ifx\Hy@tempa\back@page
2267 \PassOptionsToPackage{hyperpageref}{backref}%
2268 \Hy@backreftrue
2269 \else
2270 \ifx\Hy@tempa\back@section
2271 \PassOptionsToPackage{hyperref}{backref}%
2272 \Hy@backreftrue
2273 \else
2274 \ifx\Hy@tempa\back@none
2275 \Hy@backreffalse
2276 \else
2277 \Hy@WarnOptionValue{#1}{backref}{%
2278 'section', 'slide', 'page', 'none', \MessageBreak
2279 or 'false'}%
2280 \fi
2281 \fi
2282 \fi
2283 }
2284 \define@key{Hyp}{pagebackref}[true]{%
2285 \lowercase{\def\Hy@tempa{#1}}%
2286 \ifx\Hy@tempa\@empty
2287 \let\Hy@tempa\Hy@true
2288 \fi
2289 \ifx\Hy@tempa\Hy@true
2290 \PassOptionsToPackage{hyperpageref}{backref}%
2291 \Hy@backreftrue
2292 \else
2293 \ifx\Hy@tempa\Hy@false
2294 \Hy@backreffalse
2295 \else
2296 \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2297 \fi
2298 \fi
2299 }

```

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

```

2300 \define@key{Hyp}{hyperindex}[true]{%
2301 \Hy@boolkey{hyperindex}{#1}%
2302 }

```

Configuration of encap char.

```

2303 \define@key{Hyp}{encap}[\|]{%
2304 \def\HyInd@EncapChar{#1}%
2305 }

```

12 Language options

The \autoref feature depends on the language.

```

2306 \def\HyLang@afrikaans{%
2307 \def\equationautorefname{Vergelyking}%
2308 \def\footnoteautorefname{Voetnota}%

```

```

2309 \def\itemautorefname{Item}%
2310 \def\figureautorefname{Figuur}%
2311 \def\tableautorefname{Tabel}%
2312 \def\partautorefname{Deel}%
2313 \def\appendixautorefname{Bylae}%
2314 \def\chapterautorefname{Hoofstuk}%
2315 \def\sectionautorefname{Afdeling}%
2316 \def\subsectionautorefname{Subafdeling}%
2317 \def\subsubsectionautorefname{Subsubafdeling}%
2318 \def\paragraphautorefname{Paragraaf}%
2319 \def\subparagraphautorefname{Subparagraaf}%
2320 \def\FancyVerbLineautorefname{Lyn}%
2321 \def\theoremautorefname{Teorema}%
2322 \def\pageautorefname{Bladsy}%
2323 }
2324 \def\HyLang@english{%
2325 \def\equationautorefname{Equation}%
2326 \def\footnoteautorefname{footnote}%
2327 \def\itemautorefname{item}%
2328 \def\figureautorefname{Figure}%
2329 \def\tableautorefname{Table}%
2330 \def\partautorefname{Part}%
2331 \def\appendixautorefname{Appendix}%
2332 \def\chapterautorefname{chapter}%
2333 \def\sectionautorefname{section}%
2334 \def\subsectionautorefname{subsection}%
2335 \def\subsubsectionautorefname{subsubsection}%
2336 \def\paragraphautorefname{paragraph}%
2337 \def\subparagraphautorefname{subparagraph}%
2338 \def\FancyVerbLineautorefname{line}%
2339 \def\theoremautorefname{Theorem}%
2340 \def\pageautorefname{page}%
2341 }
2342 \def\HyLang@french{%
2343 \def\equationautorefname{\`Equation}%
2344 \def\footnoteautorefname{note}%
2345 \def\itemautorefname{item}%
2346 \def\figureautorefname{Figure}%
2347 \def\tableautorefname{Tableau}%
2348 \def\partautorefname{Partie}%
2349 \def\appendixautorefname{Appendice}%
2350 \def\chapterautorefname{chapitre}%
2351 \def\sectionautorefname{section}%
2352 \def\subsectionautorefname{sous-section}%
2353 \def\subsubsectionautorefname{sous-sous-section}%
2354 \def\paragraphautorefname{paragraphe}%
2355 \def\subparagraphautorefname{sous-paragraphe}%
2356 \def\FancyVerbLineautorefname{ligne}%
2357 \def\theoremautorefname{Th\'eor\`eme}%
2358 \def\pageautorefname{page}%
2359 }
2360 \def\HyLang@german{%
2361 \def\equationautorefname{Gleichung}%
2362 \def\footnoteautorefname{Fu\ss note}%
2363 \def\itemautorefname{Punkt}%
2364 \def\figureautorefname{Abbildung}%
2365 \def\tableautorefname{Tabelle}%

```

```

2366 \def\partautorefname{Teil}%
2367 \def\appendixautorefname{Anhang}%
2368 \def\chapterautorefname{Kapitel}%
2369 \def\sectionautorefname{Abschnitt}%
2370 \def\subsectionautorefname{Unterabschnitt}%
2371 \def\subsubsectionautorefname{Unterunterabschnitt}%
2372 \def\paragraphautorefname{Absatz}%
2373 \def\subparagraphautorefname{Unterabsatz}%
2374 \def\FancyVerbLineautorefname{Zeile}%
2375 \def\theoremautorefname{Theorem}%
2376 \def\pageautorefname{Seite}%
2377 }
2378 \def\HyLang@italian{%
2379 \def\equationautorefname{Equazione}%
2380 \def\footnoteautorefname{nota}%
2381 \def\itemautorefname{punto}%
2382 \def\figureautorefname{Figura}%
2383 \def\tableautorefname{Tabella}%
2384 \def\partautorefname{Parte}%
2385 \def\appendixautorefname{Appendice}%
2386 \def\chapterautorefname{Capitolo}%
2387 \def\sectionautorefname{sezione}%
2388 \def\subsectionautorefname{sottosezione}%
2389 \def\subsubsectionautorefname{sottosottosezione}%
2390 \def\paragraphautorefname{paragrafo}%
2391 \def\subparagraphautorefname{sottoparagrafo}%
2392 \def\FancyVerbLineautorefname{linea}%
2393 \def\theoremautorefname{Teorema}%
2394 \def\pageautorefname{Pag.\@}%
2395 }
2396 \def\HyLang@magyar{%
2397 \def\equationautorefname{Egyenlet}%
2398 \def\footnoteautorefname{l\'abjegyzet}%
2399 \def\itemautorefname{Elem}%
2400 \def\figureautorefname{'Abra}%
2401 \def\tableautorefname{T\'abl\'azat}%
2402 \def\partautorefname{R\'esz}%
2403 \def\appendixautorefname{F\'uggel\'ek}%
2404 \def\chapterautorefname{fejezet}%
2405 \def\sectionautorefname{szakasz}%
2406 \def\subsectionautorefname{alszakasz}%
2407 \def\subsubsectionautorefname{alalszakasz}%
2408 \def\paragraphautorefname{bekezd\'es}%
2409 \def\subparagraphautorefname{albekezd\'es}%
2410 \def\FancyVerbLineautorefname{sor}%
2411 \def\theoremautorefname{T\'étel}%
2412 \def\pageautorefname{oldal}%
2413 }
2414 \def\HyLang@portuges{%
2415 \def\equationautorefname{Equa\c c\~ao}%
2416 \def\footnoteautorefname{Nota de rodap\'e}%
2417 \def\itemautorefname{Item}%
2418 \def\figureautorefname{Figura}%
2419 \def\tableautorefname{Tabela}%
2420 \def\partautorefname{Parte}%
2421 \def\appendixautorefname{Ap\~endice}%
2422 \def\chapterautorefname{Cap\'itulo}%

```


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

```
2450 \def\partautorefname{\cyr\cyrch.}%
2451 \def\chapterautorefname{\cyr\cyrg\cyr1.}%
2452 \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.

```
2453 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyr1.}%
2454 % \def\appendixautorefname{%
2455 % \cyr\cyrp\cyrr\cyri\cyr1\cyro\cyrrzh\cyre\cyrn\cyri\cyre
2456 % }%
```

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.

```
2457 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2458 \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.

```
2459 \def\paragraphautorefname{\cyr\cyrp.}%
2460 \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.

```
2461 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2462 % \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.

```
2463 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
2464 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
2465 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2466 % \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 ...

```
2467 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2468 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
2469 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
2470 \def\pageautorefname{\cyr\cyrs.}%
2471 }
```

```

2472 \def\HyLang@spanish{%
2473   \def\equationautorefname{Ecuaci\'}on}%
2474   \def\footnoteautorefname{Nota a pie de p\'}agina}%
2475   \def\itemautorefname{Elemento}%
2476   \def\figureautorefname{Figura}%
2477   \def\tableautorefname{Tabla}%
2478   \def\partautorefname{Parte}%
2479   \def\appendixautorefname{Ap\'}endice}%
2480   \def\chapterautorefname{Cap\'}itulo}%
2481   \def\sectionautorefname{Secci\'}on}%
2482   \def\subsectionautorefname{Subsecci\'}on}%
2483   \def\subsubsectionautorefname{Subsubsecci\'}on}%
2484   \def\paragraphautorefname{P\'}arrafo}%
2485   \def\subparagraphautorefname{Subp\'}arrafo}%
2486   \def\FancyVerbLineautorefname{L\'}inea}%
2487   \def\theoremautorefname{Teorema}%
2488   \def\pageautorefname{P\'}agina}%
2489 }
2490 \def\HyLang@vietnamese{%
2491   \def\equationautorefname{Ph\'}uhorn{\'}\ohorn{\'}ng tr\'}inh}%
2492   \def\footnoteautorefname{Ch\'}u th\'}ich}%
2493   \def\itemautorefname{m\'}d{u}{c}%
2494   \def\figureautorefname{H\'}inh}%
2495   \def\tableautorefname{B\'}h{a}{ng}%
2496   \def\partautorefname{Ph\'}\acircumflex{n}%
2497   \def\appendixautorefname{Ph\'}d{u} l\'}d{u}{c}%
2498   \def\chapterautorefname{ch\'}uhorn{\'}\ohorn{\'}ng}%
2499   \def\sectionautorefname{m\'}d{u}{c}%
2500   \def\subsectionautorefname{m\'}d{u}{c}%
2501   \def\subsubsectionautorefname{m\'}d{u}{c}%
2502   \def\paragraphautorefname{d\'}j{\'}o{d}{a}{n}%
2503   \def\subparagraphautorefname{d\'}j{\'}o{d}{a}{n}%
2504   \def\FancyVerbLineautorefname{d\'}ong}%
2505   \def\theoremautorefname{D\'}J{\'}d{i}{nh l\'}y}%
2506   \def\pageautorefname{Trang}%
2507 }

```

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

```

2508 \def\HyLang@addto#1#2{%
2509   #2%
2510   \@temptokena{#2}%
2511   \ifx#1\relax
2512     \let#1\@empty
2513   \fi
2514   \ifx#1\undefined
2515     \edef#1{\the\@temptokena}%
2516   \else
2517     \toks@\expandafter{#1}%
2518     \edef#1{\the\toks@\the\@temptokena}%
2519   \fi
2520   \@temptokena{}\toks@\@temptokena
2521 }
2522 \def\HyLang@DeclareLang#1#2#3{%
2523   \begingroup
2524     \edef\x##1##2{%
2525       \noexpand\ifx##2\relax

```

```

2526 \errmessage{No definitions for language #2' found!}%
2527 \noexpand\fi
2528 \endgroup
2529 \noexpand\define@key{Hyp}{#1}[]{}%
2530 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
2531 #3%
2532 }%
2533 }%
2534 \expandafter\x\csname extras#1\expandafter\endcsname
2535 \csname HyLang@#2\endcsname
2536 }
2537 \HyLang@DeclareLang{english}{english}{}
2538 \HyLang@DeclareLang{UKenglish}{english}{}
2539 \HyLang@DeclareLang{british}{english}{}
2540 \HyLang@DeclareLang{USenglish}{english}{}
2541 \HyLang@DeclareLang{american}{english}{}
2542 \HyLang@DeclareLang{german}{german}{}
2543 \HyLang@DeclareLang{austrian}{german}{}
2544 \HyLang@DeclareLang{ngerman}{german}{}
2545 \HyLang@DeclareLang{naustrian}{german}{}
2546 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
2547 \HyLang@DeclareLang{brazil}{portuges}{}
2548 \HyLang@DeclareLang{brazilian}{portuges}{}
2549 \HyLang@DeclareLang{portuguese}{portuges}{}
2550 \HyLang@DeclareLang{spanish}{spanish}{}
2551 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
2552 \HyLang@DeclareLang{french}{french}{}
2553 \HyLang@DeclareLang{frenchb}{french}{}
2554 \HyLang@DeclareLang{francais}{french}{}
2555 \HyLang@DeclareLang{acadian}{french}{}
2556 \HyLang@DeclareLang{canadien}{french}{}
2557 \HyLang@DeclareLang{italian}{italian}{}
2558 \HyLang@DeclareLang{magyar}{magyar}{}
2559 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

2560 \define@key{Hyp}{vietnamese}[]{}%
2561 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
2562 \AtEndOfPackage{%
2563 \ifundefined{T@PU}{}{}%
2564 \input{puvnenc.def}%
2565 }%
2566 }%
2567 }
2568 \define@key{Hyp}{vietnam}[]{}%
2569 \HyLang@addto\extravietnam\HyLang@vietnamese
2570 \AtEndOfPackage{%
2571 \ifundefined{T@PU}{}{}%
2572 \input{puvnenc.def}%
2573 }%
2574 }%
2575 }

```

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

```

2576 \define@key{Hyp}{arabic}[]{}%
2577 \AtEndOfPackage{%
2578 \ifundefined{T@PU}{}{}%
2579 \input{puarenc.def}%

```

```

2580 }%
2581 }%
2582 }

```

13 Options to change appearance of links

Colouring links at the \LaTeX level is useful for debugging, perhaps.

```

2583 \define@key{Hyp}{colorlinks}[true]{%
2584   \Hy@boolkey{colorlinks}{#1}%
2585 }
2586 \define@key{Hyp}{ocgcolorlinks}[true]{%
2587   \Hy@boolkey{ocgcolorlinks}{#1}%
2588 }
2589 \AtBeginDocument{%
2590   \begingroup
2591     \ifundefined{OBJ@OCG@view}{%
2592       \ifHy@ocgcolorlinks
2593         \Hy@Warning{%
2594           Driver does not support ‘ocgcolorlinks’,\MessageBreak
2595           using ‘colorlinks’ instead%
2596         }%
2597       \fi
2598     }{}%
2599   \endgroup
2600 }
2601 \define@key{Hyp}{frenchlinks}[true]{%
2602   \Hy@boolkey{frenchlinks}{#1}%
2603 }

```

14 Bookmarking

```

2604 \define@key{Hyp}{bookmarks}[true]{%
2605   \Hy@boolkey{bookmarks}{#1}%
2606 }
2607 \define@key{Hyp}{bookmarksopen}[true]{%
2608   \Hy@boolkey{bookmarksopen}{#1}%
2609 }

```

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.

```

2610 \let\Hy@bookmarksdepth\c@tocdepth
2611 \define@key{Hyp}{bookmarksdepth}[]{%
2612   \begingroup
2613     \edef\x{#1}%
2614     \ifx\x\empty
2615       \global\let\Hy@bookmarksdepth\c@tocdepth

```



```

2616 \else
2617 \ifundefined{toclevel@x}{%
2618 \onelevel@sanitize\x
2619 \edef\y{\expandafter\@car\x\@nil}%
2620 \ifcase 0\expandafter\ifx\y-1\fi
2621 \expandafter\ifnum\expandafter'\y>47 %
2622 \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
2623 \Hy@Warning{Unknown document division name (\x)}%
2624 \else
2625 \setbox\z@=\hbox{%
2626 \count@=\x
2627 \xdef\Hy@bookmarksdepth{\the\count@}%
2628 }%
2629 \fi
2630 }{%
2631 \setbox\z@=\hbox{%
2632 \count@=\csname toclevel@x\endcsname
2633 \xdef\Hy@bookmarksdepth{\the\count@}%
2634 }%
2635 }%
2636 \fi
2637 \endgroup
2638 }

```

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

```

2639 \define@key{Hyp}{bookmarksopenlevel}{%
2640 \def\@bookmarksopenlevel{#1}%
2641 }
2642 \def\@bookmarksopenlevel{\maxdimen}
2643 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
2644 \define@key{Hyp}{bookmarkstype}{%
2645 \def\Hy@bookmarkstype{#1}%
2646 }
2647 \def\Hy@bookmarkstype{toc}

```

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

```

2648 \define@key{Hyp}{bookmarksnumbered}[true]{%
2649 \Hy@boolkey{bookmarksnumbered}{#1}%
2650 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

2651 \define@key{Hyp}{CJKbookmarks}[true]{%
2652 \Hy@boolkey{CJKbookmarks}{#1}%
2653 }

2654 \def\Hy@temp#1{%
2655 \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
2656 }
2657 \def\Hy@@temp#1#2#3{%
2658 \define@key{Hyp}{#2color}{%
2659 \HyColor@HyperrefColor{##1}#1%
2660 }%
2661 \def#1{#3}%
2662 }
2663 \Hy@temp{link}{red}
2664 \Hy@temp{anchor}{black}
2665 \Hy@temp{cite}{green}
2666 \Hy@temp{file}{cyan}

```

```

2667 \Hy@temp{url}{magenta}
2668 \Hy@temp{menu}{red}
2669 \Hy@temp{run}{\@filecolor}
2670 \define@key{Hyp}{pagecolor}{%
2671   \Hy@WarningPageColor
2672 }
2673 \def\Hy@WarningPageColor{%
2674   \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
2675   \global\let\Hy@WarningPageColor\relax
2676 }

2677 \def\hyperbaseurl#1{\def\@baseurl{#1}}
2678 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
2679 \let\@baseurl\empty
2680 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
2681 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
2682 \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.

```

2683 \let\@pdfpagetransition\relax
2684 \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.

```

2685 \let\@pdfpageduration\relax
2686 \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.

```

2687 \newif\ifHy@useHidKey
2688 \Hy@useHidKeyfalse
2689 \define@key{Hyp}{pdfpagehidden}[true]{%
2690   \Hy@boolkey{pdfpagehidden}{#1}%
2691   \ifHy@pdfpagehidden
2692     \global\Hy@useHidKeytrue
2693   \fi
2694 }

```

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).

```

2695 \def\Hy@ColorList{cite,file,link,menu,run,url}
2696 \@for\Hy@temp:=\Hy@ColorList\do{%
2697   \edef\Hy@temp{%
2698     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
2699       \noexpand\Hy@Color@HyperrefBorderColor

```

```

2700      {##1}%
2701      \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
2702      {hyperref}%
2703      {\Hy@temp bordercolor}%
2704  }%
2705 }%
2706 \Hy@temp
2707 }
2708 \define@key{Hyp}{pagebordercolor}{%
2709   \Hy@WarningPageBorderColor
2710 }
2711 \def\Hy@WarningPageBorderColor{%
2712   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
2713   \global\let\Hy@WarningPageBorderColor\relax
2714 }

2715 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
2716 \Hy@DefNameKey{pdfhighlight}{%
2717   \do{/I}{Invert}%
2718   \do{/N}{None}%
2719   \do{/O}{Outline}%
2720   \do{/P}{Push}%
2721 }
2722 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
2723 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
2724 \def\Hy@setpdfborder{%
2725   \ifx\@pdfborder\@empty
2726   \else
2727     /Border[\@pdfborder]%
2728   \fi
2729   \ifx\@pdfborderstyle\@empty
2730   \else
2731     /BS<<\@pdfborderstyle>>%
2732   \fi
2733 }
2734 \Hy@DefNameKey{pdfpagemode}{%
2735   \do{UseNone}{}%
2736   \do{UseOutlines}{}%
2737   \do{UseThumbs}{}%
2738   \do{FullScreen}{}%
2739   \do{UseOC}{PDF 1.5}%
2740   \do{UseAttachments}{PDF 1.6}%
2741 }
2742 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
2743   \do{UseNone}{}%
2744   \do{UseOutlines}{}%
2745   \do{UseThumbs}{}%
2746   \do{FullScreen}{}%
2747   \do{UseOC}{PDF 1.5}%
2748   \do{UseAttachments}{PDF 1.6}%
2749 }
2750 \Hy@DefNameKey{pdfdirection}{%
2751   \do{L2R}{Left to right}%
2752   \do{R2L}{Right to left}%
2753 }
2754 \Hy@DefNameKey{pdfviewarea}{%
2755   \do{MediaBox}{}%
2756   \do{CropBox}{}%

```

```

2757 \do{BleedBox}{}%
2758 \do{TrimBox}{}%
2759 \do{ArtBox}{}%
2760 }
2761 \Hy@DefNameKey{pdfviewclip}{%
2762 \do{MediaBox}{}%
2763 \do{CropBox}{}%
2764 \do{BleedBox}{}%
2765 \do{TrimBox}{}%
2766 \do{ArtBox}{}%
2767 }
2768 \Hy@DefNameKey{pdfprintarea}{%
2769 \do{MediaBox}{}%
2770 \do{CropBox}{}%
2771 \do{BleedBox}{}%
2772 \do{TrimBox}{}%
2773 \do{ArtBox}{}%
2774 }
2775 \Hy@DefNameKey{pdfprintclip}{%
2776 \do{MediaBox}{}%
2777 \do{CropBox}{}%
2778 \do{BleedBox}{}%
2779 \do{TrimBox}{}%
2780 \do{ArtBox}{}%
2781 }
2782 \Hy@DefNameKey{pdfprintscaling}{%
2783 \do{AppDefault}{}%
2784 \do{None}{}%
2785 }
2786 \Hy@DefNameKey{pdfduplex}{%
2787 \do{Simplex}{}%
2788 \do{DuplexFlipShortEdge}{}%
2789 \do{DuplexFlipLongEdge}{}%
2790 }
2791 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
2792 \do{true}{}%
2793 \do{false}{}%
2794 }
2795 \define@key{Hyp}{pdfprintpagerange}{%
2796 \def\@pdfprintpagerange{#1}%
2797 }
2798 \Hy@DefNameKey{pdfnumcopies}{%
2799 \do{2}{two copies}%
2800 \do{3}{three copies}%
2801 \do{4}{four copies}%
2802 \do{5}{five copies}%
2803 }
2804 \define@key{Hyp}{pdfusetitle}[true]{%
2805 \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
2806 }
2807 \define@key{Hyp}{pdftitle}{\pdfstringdef\@pdftitle{#1}}
2808 \define@key{Hyp}{pdfauthor}{\pdfstringdef\@pdfauthor{#1}}
2809 \define@key{Hyp}{pdfproducer}{\pdfstringdef\@pdfproducer{#1}}
2810 \define@key{Hyp}{pdfcreator}{\pdfstringdef\@pdfcreator{#1}}
2811 \define@key{Hyp}{pdfcreationdate}{%
2812 \begingroup
2813 \Hy@unicodedefalse

```

```

2814 \pdfstringdef\@pdfcreationdate{#1}%
2815 \endgroup
2816 }
2817 \define@key{Hyp}{pdfmoddate}{%
2818 \begingroup
2819 \Hy@unicodedefalse
2820 \pdfstringdef\@pdfmoddate{#1}%
2821 \endgroup
2822 }
2823 \define@key{Hyp}{pdfsubject}{\pdfstringdef\@pdfsubject{#1}}
2824 \define@key{Hyp}{pdfkeywords}{\pdfstringdef\@pdfkeywords{#1}}
2825 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
2826 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
2827 \let\setpdflinkmargin\@gobble
2828 \def\calculate@pdfview#1 #2\{%
2829 \def\@pdfview{#1}%
2830 \ifx\#2\%
2831 \def\@pdfviewparams{ -32768}%
2832 \else
2833 \def\@pdfviewparams{ #2}%
2834 \fi
2835 }
2836 \begingroup\expandafter\expandafter\expandafter\endgroup
2837 \expandafter\ifx\csname numexpr\endcsname\relax
2838 \def\Hy@number#1{%
2839 \expandafter\@firstofone\expandafter{\number#1}%
2840 }%
2841 \else
2842 \def\Hy@number#1{%
2843 \the\numexpr#1\relax
2844 }%
2845 \fi
2846 \define@key{Hyp}{pdfstartpage}{%
2847 \ifx\#1\%
2848 \def\@pdfstartpage{%
2849 \else
2850 \edef\@pdfstartpage{\Hy@number{#1}}%
2851 \fi
2852 }%
2853 \define@key{Hyp}{pdfstartview}{%
2854 \ifx\#1\%
2855 \def\@pdfstartview{%
2856 \else
2857 \hypercalcbpdef\@pdfstartview{ /#1 }%
2858 \fi
2859 }
2860 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
2861 \define@key{Hyp}{pdftoolbar}[true]{%
2862 \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
2863 }
2864 \define@key{Hyp}{pdfmenubar}[true]{%
2865 \Hy@boolkey[pdfmenubar]{menubar}{#1}%
2866 }
2867 \define@key{Hyp}{pdfwindowui}[true]{%
2868 \Hy@boolkey[pdfwindowui]{windowui}{#1}%
2869 }
2870 \define@key{Hyp}{pdffitwindow}[true]{%

```

```

2871 \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
2872 }
2873 \define@key{Hyp}{pdfcenterwindow}[true]{%
2874 \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
2875 }
2876 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
2877 \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
2878 }
2879 \define@key{Hyp}{pdffa}[true]{%
2880 \Hy@boolkey[pdfa]{#1}%
2881 }
2882 \define@key{Hyp}{pdfnewwindow}[true]{%
2883 \def\Hy@temp{#1}%
2884 \ifx\Hy@temp\@empty
2885 \Hy@newwindowsetfalse
2886 \else
2887 \Hy@newwindowsettrue
2888 \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
2889 \fi
2890 }
2891 \def\Hy@SetNewWindow{%
2892 \ifHy@newwindowset
2893 /NewWindow %
2894 \ifHy@newwindow true\else false\fi
2895 \fi
2896 }
2897 \Hy@DefNameKey{pdfpagelayout}{%
2898 \do{SinglePage}{}%
2899 \do{OneColumn}{}%
2900 \do{TwoColumnLeft}{}%
2901 \do{TwoColumnRight}{}%
2902 \do{TwoPageLeft}{PDF 1.5}%
2903 \do{TwoPageRight}{PDF 1.5}%
2904 }
2905 \define@key{Hyp}{pdflang}{%
2906 \def\@pdflang{#1}%
2907 }
2908 \define@key{Hyp}{pdfpagelabels}[true]{%
2909 \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
2910 }
2911 \define@key{Hyp}{pdfescapeform}[true]{%
2912 \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
2913 }

```

Default values:

```

2914 \def\@linkbordercolor{1 0 0}
2915 \def\@urlbordercolor{0 1 1}
2916 \def\@menubordercolor{1 0 0}
2917 \def\@filebordercolor{0 .5 .5}
2918 \def\@runbordercolor{0 .7 .7}
2919 \def\@citebordercolor{0 1 0}
2920 \def\@pdfhighlight{/I}
2921 \def\@pdftitle{}
2922 \def\@pdfauthor{}
2923 \let\@pdfproducer\relax
2924 \def\@pdfcreator{LaTeX with hyperref package}
2925 \def\@pdfcreationdate{}
2926 \def\@pdfmoddate{}

```

```

2927 \def\@pdfsubject{}
2928 \def\@pdfkeywords{}
2929 \def\@pdfpagescrop{}
2930 \def\@pdfstartview{ /Fit }
2931 \def\@pdfstartpage{1}
2932 \def\@pdfprintpagerange{}
2933 \def\@pdflang{}
2934 \let\PDF@SetupDoc\@empty
2935 \let\PDF@FinishDoc\@empty
2936 \let\phantomsection\@empty
2937 \let\special@paper\@empty
2938 \def\HyperDestNameFilter#1{#1}
2939 \@ifundefined{stockwidth}{%
2940   \ifdim\paperwidth>\z@
2941     \ifdim\paperheight>\z@
2942       \edef\special@paper{\the\paperwidth,\the\paperheight}%
2943     \fi
2944   \fi
2945 }{%
2946   \ifdim\stockwidth>\z@
2947     \ifdim\stockheight>\z@
2948       \edef\special@paper{\the\stockwidth,\the\stockheight}%
2949     \fi
2950   \fi
2951 }
2952 \begingroup
2953   \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
2954   \dimen@=\x\relax
2955   \ifdim\dimen@>\z@
2956   \else
2957     \dimen@=11in\relax
2958     \Hy@WarningNoLine{%
2959       Height of page (\expandafter\string\x) %
2960       is invalid (\the\x),\MessageBreak
2961       using 11in%
2962     }%
2963   \fi
2964   \dimen@=0.99626401\dimen@
2965   \xdef\Hy@pageheight{\strip@pt\dimen@}%
2966 \endgroup
2967 \def\HyInd@EncapChar{\\}
2968 \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.

```

2969 \let\hyper@normalise\ExecuteOptions
2970 \let\ExecuteOptions\hypersetup
2971 \Hy@RestoreCatcodes
2972 \InputIfFileExists{hyperref.cfg}{-}{-}
2973 \Hy@SetCatcodes
2974 \let\ExecuteOptions\hyper@normalise
2975 \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.

2976 \RequirePackage{kvoptions}[2006/08/17]

Add option tex4ht if package tex4ht is loaded.

```
2977 \@ifpackageloaded{tex4ht}{%
2978   \@ifpackagewith{hyperref}{tex4ht}{}{}%
2979   \PassOptionsToPackage{tex4ht}{hyperref}%
2980 }%
2981 }{}

2982 \let\ReadBookmarks\relax
2983 \ProcessKeyvalOptions{Hyp}
```

After processing options.

```
2984 \AtBeginDocument{%
2985   \ifHy@draft
2986     \let\hyper@@anchor\@gobble
2987     \gdef\hyper@link#1#2#3{#3}%
2988     \let\hyper@anchorstart\@gobble
2989     \let\hyper@anchorend\@empty
2990     \let\hyper@linkstart\@gobbletwo
2991     \let\hyper@linkend\@empty
2992     \def\hyper@linkurl#1#2{#1}%
2993     \def\hyper@linkfile#1#2#3{#1}%
2994     \def\hyper@link@[#1]#2#3{}%
2995     \def\Acrobatmenu#1#2{\leavevmode#2}%
2996     \let\PDF@SetupDoc\@empty
2997     \let\PDF@FinishDoc\@empty
2998     \let\@fifthoffive\@secondoftwo
2999     \let\@secondoffive\@secondoftwo
3000     \let\ReadBookmarks\relax
3001     \let\WriteBookmarks\relax
3002     \Hy@WarningNoLine{ draft mode on}%
3003   \fi
3004   \Hy@DisableOption{draft}%
3005   \Hy@DisableOption{nolinks}%
3006   \Hy@DisableOption{final}%
3007 }
```

15.1 PDF/A

```
3008 \Hy@DisableOption{pdfa}

3009 \ifHy@pdfa
3010   \setkeys{Hyp}{pdfversion=1.4}%
3011   \def\Hy@Acrobatmenu#1#2{%
3012     \leavevmode
3013     \begingroup
3014       \edef\x{#1}%
3015       \@onelevel@sanitize\x
3016       \ifx\x\Hy@NextPage
3017         \let\y=Y%
3018       \else
3019         \ifx\x\Hy@PrevPage
3020           \let\y=Y%
3021         \else
3022           \ifx\x\Hy@FirstPage
3023             \let\y=Y%
```



```

3024         \else
3025             \ifx\x\Hy@LastPage
3026                 \let\y=Y%
3027             \else
3028                 \let\y=N%
3029             \fi
3030         \fi
3031     \fi
3032 \fi
3033 \expandafter\endgroup
3034 \ifx\y Y%
3035 \else
3036     \PackageError{hyperref}{%
3037         PDF/A: Named action ‘#1’ is not permitted%
3038     }\@ehc
3039     {#2}%
3040     \expandafter\@gobble
3041 \fi
3042 }%
3043 \def\Hy@temp#1{%
3044     \expandafter\def\csname Hy@#1\endcsname{#1}%
3045     \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3046 }%
3047 \Hy@temp{NextPage}%
3048 \Hy@temp{PrevPage}%
3049 \Hy@temp{FirstPage}%
3050 \Hy@temp{LastPage}%
3051 \else
3052     \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3053 \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.

```

3054 \Hy@nextfalse
3055 \@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3056 \@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3057 \@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3058 \ifHy@next
3059     \let\texttilde\~%
3060 \fi

```

15.3 Patch for babel 3.8j

Babel 2008/03/16 v3.8j adds a patch to disable shorthands for bookmarks. That reduces warnings, but the bookmarks are ugly. Therefore the following patch tries to undo this.

```

3061 \@ifpackageloaded{babel}{%
3062     \ifpackagelater{babel}{2008/03/16}{%
3063         \def\Hy@PatchLanguageShorthands#1{%
3064             \begingroup
3065                 \edef\x{#1}%
3066                 \@onelevel@sanitize\x
3067                 \def\y{system}%
3068                 \@onelevel@sanitize\y
3069             \expandafter\endgroup
3070             \ifx\x\y

```

```

3071     \else
3072     \HyOrg@languageshorthands{#1}%
3073     \fi
3074 }%
3075 \AtBeginDocument{%
3076     \begingroup
3077     \toks0=\expandafter{\pdfstringdefPreHook}%
3078     \xdef\pdfstringdefPreHook{%
3079         \let\noexpand\HyOrg@languageshorthands
3080         \noexpand\languageshorthands
3081         \let\noexpand\languageshorthands
3082         \noexpand\Hy@PatchLanguageShorthands
3083         \the\toks0 %
3084         \let\noexpand\languageshorthands
3085         \noexpand\HyOrg@languageshorthands
3086     }%
3087     \endgroup
3088 }%
3089 }{}%
3090 }{}

3091 \ifHy@figures
3092 \Hy@Info{Hyper figures ON}%
3093 \else
3094 \Hy@Info{Hyper figures OFF}%
3095 \fi
3096 \ifHy@nesting
3097 \Hy@Info{Link nesting ON}%
3098 \else
3099 \Hy@Info{Link nesting OFF}%
3100 \fi
3101 \ifHy@hyperindex
3102 \Hy@Info{Hyper index ON}%
3103 \else
3104 \Hy@Info{Hyper index OFF}%
3105 \fi
3106 \ifHy@plainpages
3107 \Hy@Info{Plain pages ON}%
3108 \else
3109 \Hy@Info{Plain pages OFF}%
3110 \fi
3111 \ifHy@backref
3112 \Hy@Info{Backreferencing ON}%
3113 \else
3114 \Hy@Info{Backreferencing OFF}%
3115 \fi
3116 \ifHy@typexml
3117 \AtEndOfPackage{%
3118     \RequirePackage{color}%
3119     \RequirePackage{nameref}%
3120 }%
3121 \fi
3122 \Hy@DisableOption{typexml}
3123 \ifHy@implicit
3124 \typeout{Implicit mode ON; LaTeX internals redefined}%
3125 \else
3126 \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3127 \def\MaybeStopEarly{%

```

```

3128 \typeout{Hyperref stopped early}%
3129 \AfterBeginDocument{%
3130 \PDF@FinishDoc
3131 \gdef\PDF@FinishDoc{}}%
3132 }%
3133 \endinput
3134 }%
3135 \AtBeginDocument{%
3136 \let\autoref\ref
3137 \let\autopageref\pageref
3138 \ifx\@pdfpagemode\@empty
3139 \gdef\@pdfpagemode{UseNone}%
3140 \fi
3141 \global\Hy@backreffalse
3142 }%
3143 \AtEndOfPackage{%
3144 \global\let\ReadBookmarks\relax
3145 \global\let\WriteBookmarks\relax
3146 }%
3147 \fi
3148 \Hy@DisableOption{implicit}

```

15.3.1 Driver loading

```

3149 \AtEndOfPackage{%
3150 \ifpackageloaded{tex4ht}{%
3151 \def\Hy@driver{htex4ht}%
3152 \Hy@texhttrue
3153 }{}%

```

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.

```

3154 \ifx\Hy@driver\@empty
3155 \else
3156 \def\Hy@temp{hpdfTeX}%
3157 \ifpdf
3158 \ifx\Hy@driver\Hy@temp
3159 \else
3160 \Hy@WarningNoLine{%
3161 Wrong driver ‘\Hy@driver.def’;\MessageBreak
3162 pdfTeX is running in PDF mode.\MessageBreak
3163 Forcing driver ‘\Hy@temp.def’%
3164 }%
3165 \let\Hy@driver\Hy@temp
3166 \fi
3167 \else
3168 \ifx\Hy@driver\Hy@temp
3169 \Hy@WarningNoLine{%
3170 Wrong driver ‘\Hy@driver.def’;\MessageBreak
3171 pdfTeX is not running in PDF mode.\MessageBreak
3172 Using default driver%
3173 }%
3174 \let\Hy@driver\@empty
3175 \fi
3176 \fi
3177 \fi
3178 \ifx\Hy@driver\@empty
3179 \else

```

```

3180 \def\Hy@temp{hdvipdfm}%
3181 \ifxetex
3182 \ifx\Hy@driver\Hy@temp
3183 \else
3184 \Hy@WarningNoLine{%
3185   Wrong driver '\Hy@driver.def';\MessageBreak
3186   XeTeX is running.\MessageBreak
3187   Forcing driver '\Hy@temp.def' for XeTeX%
3188 }%
3189 \let\Hy@driver\Hy@temp
3190 \fi
3191 \fi
3192 \fi
3193 \ifx\Hy@driver\@empty
3194 \else
3195 \def\Hy@temp{hvtexhtm}%
3196 \ifvtexhtml
3197 \ifx\Hy@driver\Hy@temp
3198 \else
3199 \Hy@WarningNoLine{%
3200   Wrong driver '\Hy@driver.def';\MessageBreak
3201   VTeX is running in HTML mode.\MessageBreak
3202   Forcing driver '\Hy@temp.def'%
3203 }%
3204 \let\Hy@driver\Hy@temp
3205 \fi
3206 \else
3207 \ifx\Hy@driver\Hy@temp
3208 \Hy@WarningNoLine{%
3209   Wrong driver '\Hy@driver.def';\MessageBreak
3210   VTeX is not running in HTML mode.\MessageBreak
3211   Using default driver%
3212 }%
3213 \let\Hy@driver\@empty
3214 \fi
3215 \fi
3216 \fi

```

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

```

3217 \ifx\Hy@driver\@empty
3218 \providecommand*{\Hy@defaultdriver}{hypertex}%
3219 \ifpdf
3220 \def\Hy@driver{hpdfTeX}%
3221 \else
3222 \ifxetex
3223 \def\Hy@driver{hdvipdfm}%
3224 \else
3225 \ifvtexhtml
3226 \def\Hy@driver{hvtexhtm}%
3227 \def\MaybeStopEarly{%
3228   \typeout{Hyperref stopped early}%
3229   \AfterBeginDocument{%
3230     \PDF@FinishDoc
3231     \gdef\PDF@FinishDoc{}%
3232   }%
3233   \endinput
3234 }%
3235 \else

```

```

3236         \ifvtexpdf
3237         \def\Hy@driver{hvtex}%
3238     \else
3239         \ifvtexps
3240         \def\Hy@driver{hvtex}%
3241     \else
3242         \let\Hy@driver\Hy@defaultdriver
3243     \fi
3244 \fi
3245 \fi
3246 \fi
3247 \fi
3248 \ifx\Hy@driver\Hy@defaultdriver
3249     \def\Hy@temp{hdvwind}%
3250     \ifx\Hy@temp\Hy@driver
3251         \setkeys{Hyp}{colorlinks}%
3252         \PassOptionsToPackage{dviwindo}{color}%
3253     \fi
3254 \fi
3255     \typeout{*hyperref using default driver \Hy@driver*}%
3256 \else
3257     \typeout{*hyperref using driver \Hy@driver*}%
3258 \fi
3259 \input{\Hy@driver.def}%
3260 \let\@unprocessedoptions\relax
3261 \Hy@RestoreCatcodes
3262 }
3263 \newif\ifHy@DvipdfmxOutlineOpen
3264 \begingroup\expandafter\expandafter\expandafter\endgroup
3265 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3266 \else
3267     \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3268         \Hy@DvipdfmxOutlineOpentru
3269     \fi
3270 \fi
3271 \Hy@DisableOption{tex4ht}
3272 \Hy@DisableOption{pdftex}
3273 \Hy@DisableOption{nativepdf}
3274 \Hy@DisableOption{dvi pdfm}
3275 \Hy@DisableOption{dvi pdfmx}
3276 \Hy@DisableOption{dvi pdfmx-outline-open}
3277 \Hy@DisableOption{pdfmark}
3278 \Hy@DisableOption{dvips}
3279 \Hy@DisableOption{hypertex}
3280 \Hy@DisableOption{vtex}
3281 \Hy@DisableOption{vtexpdfmark}
3282 \Hy@DisableOption{dviwindo}
3283 \Hy@DisableOption{dvipsone}
3284 \Hy@DisableOption{textures}
3285 \Hy@DisableOption{latex2html}
3286 \Hy@DisableOption{ps2pdf}
3287 \Hy@DisableOption{xetex}
3288 \AtEndOfPackage{%
3289     \Hy@DisableOption{pdfversion}%
3290 }

```

15.3.2 Bookmarks

```

3291 \def\WriteBookmarks{0}
3292 \def\@bookmarkopenstatus#1{%
3293   \ifHy@bookmarkopen

```

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

```

3294   \ifnum#1<\expandafter\@firstofone\expandafter
3295     {\number\@bookmarkopenlevel} % explicit space
3296   \else
3297     -%
3298   \fi
3299 \else
3300   -%
3301 \fi
3302 }
3303 \ifHy@bookmarks
3304   \Hy@Info{Bookmarks ON}%
3305   \ifx\@pdfpagemode\@empty
3306     \def\@pdfpagemode{UseOutlines}%
3307   \fi
3308 \else
3309   \def\@bookmarkopenstatus#1{%
3310     \Hy@Info{Bookmarks OFF}%
3311     \AtEndOfPackage{%
3312       \global\let\ReadBookmarks\relax
3313       \global\let\WriteBookmarks\relax
3314     }%
3315     \ifx\@pdfpagemode\@empty
3316       \def\@pdfpagemode{UseNone}%
3317     \fi
3318 \fi
3319 \Hy@DisableOption{bookmarks}

```

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

```

3320 \def\Hy@CatcodeWrapper#1{%
3321   \def\Hy@EndWrap{}%
3322   \def\TMP@EnsureCode##1##2{%
3323     \edef\Hy@EndWrap{%
3324       \Hy@EndWrap
3325       \catcode##1 \the\catcode##1\relax
3326     }%
3327     \catcode##1 ##2\relax
3328   }%
3329   \TMP@EnsureCode{10}{12}% ^^J
3330   \TMP@EnsureCode{33}{12}% !
3331   \TMP@EnsureCode{34}{12}% "
3332   \TMP@EnsureCode{36}{3}% $ (math)
3333   \TMP@EnsureCode{38}{4}% & (alignment)
3334   \TMP@EnsureCode{39}{12}% '
3335   \TMP@EnsureCode{40}{12}% (
3336   \TMP@EnsureCode{41}{12}% )
3337   \TMP@EnsureCode{42}{12}% *
3338   \TMP@EnsureCode{43}{12}% +
3339   \TMP@EnsureCode{44}{12}% ,
3340   \TMP@EnsureCode{45}{12}% -
3341   \TMP@EnsureCode{46}{12}% .
3342   \TMP@EnsureCode{47}{12}% /
3343   \TMP@EnsureCode{58}{12}% :
3344   \TMP@EnsureCode{59}{12}% ;

```

```

3345 \TMP@EnsureCode{60}{12}% <
3346 \TMP@EnsureCode{61}{12}% =
3347 \TMP@EnsureCode{62}{12}% >
3348 \TMP@EnsureCode{63}{12}% ?
3349 \TMP@EnsureCode{91}{12}% [
3350 \TMP@EnsureCode{93}{12}% ]
3351 \TMP@EnsureCode{94}{7}% ^ (superscript)
3352 \TMP@EnsureCode{95}{8}% _ (subscript)
3353 \TMP@EnsureCode{96}{12}% '
3354 \TMP@EnsureCode{124}{12}% |
3355 \TMP@EnsureCode{126}{13}% ~ (active)
3356 #1\relax
3357 \Hy@endWrap
3358 }

```

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

```

3359 \AtBeginDocument{%
3360   \ifHy@ocgcolorlinks
3361     \setkeys{Hyp}{colorlinks}%
3362     \ifHy@pdfa
3363       \Hy@Warning{%
3364         PDF/A: Optional Content Groups are prohibited,\MessageBreak
3365         using 'colorlinks' instead of 'ocgcolorlinks'%
3366       }%
3367     \Hy@ocgcolorlinksfalse
3368   \fi
3369 \fi
3370 \ifHy@ocgcolorlinks
3371 \else
3372   \Hy@DisableOption{ocgcolorlinks}%
3373 \fi
3374 \ifHy@colorlinks
3375   \def\@pdfborder{0 0 0}%
3376   \let\@pdfborderstyle\@empty
3377   \ifHy@typexml
3378   \else
3379     \Hy@CatcodeWrapper{%
3380       \RequirePackage{color}%
3381     }%
3382   \fi
3383   \def\Hy@colorlink#1{%
3384     \begingroup
3385     \HyColor@UseColor#1%
3386   }%
3387   \def\Hy@endcolorlink{\endgroup}%
3388   \Hy@Info{Link coloring ON}%
3389 \else
3390   \ifHy@frenchlinks
3391     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
3392     \def\Hy@endcolorlink{\endgroup}%
3393     \Hy@Info{French linking ON}%
3394   \else

```

for grouping consistency:

```

3395   \def\Hy@colorlink#1{\begingroup}%
3396   \def\Hy@endcolorlink{\endgroup}%
3397   \Hy@Info{Link coloring OFF}%
3398 \fi

```

```

3399 \fi
3400 \Hy@DisableOption{colorlinks}%
3401 \Hy@DisableOption{frenchlinks}%
3402 \ifHy@texht
3403   \long\def\@firstoffive#1#2#3#4#5{#1}%
3404   \long\def\@secondoffive#1#2#3#4#5{#2}%
3405   \long\def\@thirdoffive#1#2#3#4#5{#3}%
3406   \long\def\@fourthoffive#1#2#3#4#5{#4}%
3407   \long\def\@fifthoffive#1#2#3#4#5{#5}%
3408   \providecommand*\@safe@activestruet{}%
3409   \providecommand*\@safe@activesfalse{}%
3410   \def\T@ref#1{%
3411     \Hy@safe@activestruet
3412     \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
3413     \Hy@safe@activesfalse
3414   }%
3415   \def\T@pageref#1{%
3416     \Hy@safe@activestruet
3417     \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
3418     \Hy@safe@activesfalse
3419   }%
3420 \else
3421   \ifHy@typexml
3422   \else
3423     \Hy@CatcodeWrapper{%
3424       \RequirePackage{nameref}%
3425     }%
3426   \fi
3427 \fi
3428 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
3429 \DeclareRobustCommand\pageref{%
3430   \@ifstar\@pagerefstar\T@pageref
3431 }%
3432 }
3433 \AfterBeginDocument{%
3434   \ifHy@texht
3435   \else
3436     \Hy@CatcodeWrapper{%
3437       \ReadBookmarks
3438     }%
3439   \fi
3440 }
3441 \ifHy@backref
3442   \RequirePackage{backref}%
3443 \else
3444   \let\Hy@backout\@gobble
3445 \fi
3446 \Hy@DisableOption{backref}
3447 \Hy@DisableOption{pagebackref}
3448 \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.

```

3449 \begingroup
3450 \endlinechar=-1 %
3451 \catcode'\^^A=14 %
3452 \catcode'\^^M\active
3453 \catcode'\%\active
3454 \catcode'\#\active
3455 \catcode'\_\active
3456 \catcode'\$\active
3457 \catcode'\&\active
3458 \gdef\hyper@normalise{^^A
3459   \begingroup
3460   \catcode'\^^M\active
3461   \def^^M{ }^^A
3462   \catcode'\%\active
3463   \let%\@percentchar
3464   \let%\@percentchar
3465   \catcode'\#\active
3466   \def#{\hyper@hash}^^A
3467   \def\#{\hyper@hash}^^A
3468   \@makeother\&^^A
3469   \edef&{\string&}^^A
3470   \edef\&{\string&}^^A
3471   \edef\textunderscore{\string_}^^A
3472   \let_\textunderscore
3473   \catcode'\_\active
3474   \let_\textunderscore
3475   \let~\hyper@tilde
3476   \let~\hyper@tilde
3477   \let\textasciitilde\hyper@tilde
3478   \let\\\@backslashchar
3479   \edef$\string$}^^A
3480   \Hy@safe@activetrue
3481   \hyper@n@rmalise
3482 }^^A
3483 \catcode'\#=6 ^^A
3484 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
3485 \gdef\hyper@n@rmalise#1#2{^^A
3486   \def\Hy@tempa{#2}^^A
3487   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
3488     \Hy@ReturnAfterElseFi{^^A
3489       \hyper@@normalise{#1}^^A
3490     }^^A
3491   \else
3492     \Hy@ReturnAfterFi{^^A
3493       \hyper@@normalise{#1}{#2}^^A
3494     }^^A
3495   \fi
3496 }^^A
3497 \gdef\hyper@@normalise#1#2{^^A
3498   \edef\Hy@tempa{^^A
3499     \endgroup
3500     \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
3501   }^^A
3502   \Hy@tempa

```

```

3503 }^^A
3504 \gdef\Hy@RemovePercentCr#1%^M#2\@nil{^^A
3505   #1^^A
3506   \ifx\limits#2\limits
3507   \else
3508     \Hy@ReturnAfterFi{^^A
3509     \Hy@RemovePercentCr #2\@nil
3510   }^^A
3511   \fi
3512 }^^A
3513 \endgroup
3514 \providecommand*{\hyper@chars{%
3515   \let\#\hyper@hash
3516   \let%\@percentchar
3517   \Hy@safe@activestrue
3518 }

3519 \def\hyperlink#1#2{%
3520   \hyper@@link{#1}{#2}%
3521 }

3522 \DeclareRobustCommand*\href{%
3523   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
3524 }
3525 \def\Hy@href#1{%
3526   \hyper@normalise\href@
3527 }
3528 \begingroup
3529   \catcode'\$=6 %
3530   \catcode'\#=12 %
3531   \gdef\href@#1{\expandafter\href@split$1##\\}%
3532   \gdef\href@split$1#$2#$3\\{%
3533     \hyper@@link{$1}{$2}%
3534   }%
3535 \endgroup

```

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

```

3536 \RequirePackage{url}
3537 \let\HyOrg@url\url
3538 \def\Hurl{\begingroup \Url}
3539 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
3540 \def\nolinkurl@#1{\Hurl{#1}}
3541 \DeclareRobustCommand*\url{\hyper@normalise\url@}
3542 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
3543 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
3544 \providecommand\hyper@image[2]{#2}

3545 \def\hypertarget#1#2{%
3546   \ifHy@nesting
3547     \hyper@@anchor{#1}{#2}%
3548   \else
3549     \hyper@@anchor{#1}{\relax}#2%
3550   \fi
3551 }

```

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

to `\hyperdef`, it is the name of a L^AT_EX label which can be used in a short form of `\hyperref` later, to avoid remembering the name and category.

```

3552 \DeclareRobustCommand*{\hyperref}{%
3553   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
3554 }
3555 \def\Hy@babelnormalise#1[#2]{%
3556   \begingroup
3557     \Hy@safe@activestrue
3558     \edef\Hy@tempa{%
3559       \endgroup
3560       \noexpand#1[#2]}%
3561   }%
3562   \Hy@tempa
3563 }
3564 \def\@hyperref{\hyper@normalise\@hyperref}
3565 \def\@hyperref#1#2#3{%
3566   \edef\ref@one{\ifx\#2\else#2.\fi#3}%
3567   \expandafter\tryhyper@link\ref@one\{#1}%
3568 }
3569 \def\tryhyper@link#1\#2{%
3570   \hyper@@link{#2}{#1}%
3571 }

3572 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef}}
3573 \def\@hyperdef#1#2#3{%, category, name, text
3574   \ifHy@nesting
3575     \hyper@@anchor{#1.#2}{#3}%
3576   \else
3577     \hyper@@anchor{#1.#2}{\relax}#3%
3578   \fi
3579 }

```

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

```

3580 \def\label@hyperref[#1]{%
3581   \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
3582 }%
3583 \def\label@@hyperref#1#2#3{%
3584   \ifx#1\relax
3585     \protect\G@refundefinedtrue
3586     \@latex@warning{%
3587       Hyper reference ‘#2’ on page \thepage \space undefined%
3588     }%
3589     \hyper@@link{}{??}{#3}%
3590   \else
3591     \hyper@@link{\expandafter\@fifthoffive#1}%
3592       {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
3593   \fi
3594 }
3595 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
3596                               % anchor text
3597   \@bsphack
3598   \if@files@w
3599     \protected@write\@auxout{%
3600       {\string\newlabel{#1}{\{#\2.#3\}}%
3601     }%
3602   \@esphack
3603   \ifHy@nesting

```

```

3604 \hyper@@anchor{#2.#3}{#4}%
3605 \else
3606 \hyper@@anchor{#2.#3}{\relax}#4%
3607 \fi
3608 }

```

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, it's an internal link, otherwise we need to open another file or a URL. A link start has a type, and a URL.

```

3609 \def\hyper@link{\let\Hy@reserved@a\relax
3610 \@ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
3611 }
3612 \def\hyper@link@[#1]#2#3#4{%
3613 \begingroup
3614 \protected@edef\Hy@tempa{#2}%
3615 \Hy@safe@activetrue
3616 \edef\x{#3}%
3617 \ifx\Hy@tempa\@empty
3618 \toks0{\hyper@link{#1}}%
3619 \else
3620 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
3621 \fi
3622 \toks2{%
3623 \Hy@safe@activesfalse
3624 #4%
3625 }%
3626 \edef\Hy@tempa{\the\toks2}%
3627 \edef\x{\endgroup
3628 \ifx\Hy@tempa\@empty
3629 \noexpand\Hy@Warning{Suppressing empty link}%
3630 \else
3631 \the\toks0 {\x}{\the\toks2}}%
3632 \fi
3633 }%
3634 \x
3635 }

```

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.

```

3636 \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.

```
3637 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1:.\{#1}%
3638 }
```

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

```
3639 \def\@pdftempwordfile{file}%
3640 \def\@pdftempwordrun{run}%
3641 \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:

```
3642 \ifx\\#6\\%
3643 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
3644 \else
3645 \ifx\\#4\\%
3646 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
3647 \else
```

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

```
3648 \def\@pdftempa{#4}%
3649 \ifx\@pdftempa\@pdftempwordfile
3650 \expandafter\@hyper@linkfile#7\\{#3}{#2}%
3651 \else
```

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

```
3652 \ifx\@pdftempa\@pdftempwordrun
3653 \ifHy@pdfa
3654 \PackageError{hyperref}{%
3655 PDF/A: Launch action is prohibited%
3656 }\@ehc
3657 \begingroup
3658 \leavevmode
3659 #2%
3660 \endgroup
3661 \else
3662 \expandafter\@hyper@launch#7\\{#3}{#2}%
3663 \fi
3664 \else
```

otherwise its a URL

```
3665 \hyper@linkurl{#3}{#7\ifx\\#2\\%else\hyper@hash#2\fi}%
3666 \fi
3667 \fi
3668 \fi
3669 \fi
3670 }
```

By default, turn run: into file:

```
3671 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
3672 \hyper@linkurl{#2}{%
3673 \Hy@linkfileprefix
3674 #1%
3675 \ifx\\#3\\%
3676 \else
```

```

3677     \hyper@hash
3678     #3%
3679     \fi
3680 }%
3681 }

```

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

```

3682 \def\@hyper@linkfile file:#1\|#2#3{%
3683     %file url,link string, name
3684     \filename@parse{#1}%
3685     \ifx\filename@ext\relax
3686         \edef\filename@ext{\XR@ext}%
3687     \fi
3688     \def\use@file{\filename@area\filename@base.\filename@ext}%
3689     \ifx\filename@ext\XR@ext
3690         \hyper@linkfile{#2}{\use@file}{#3}%
3691     \else
3692         \ifx\@baseurl\@empty
3693             \hyper@linkurl{#2}{%
3694                 \Hy@linkfileprefix\use@file\ifx\|#3\\\else\hyper@hash#3\fi
3695             }%
3696         \else
3697             \hyper@linkurl{#2}{\use@file\ifx\|#3\\\else\hyper@hash#3\fi}%
3698         \fi
3699     \fi
3700 }

```

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.

```

3701 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
3702 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
3703     \ifx\|#1\|
3704         #2\Hy@WarningNoLine{empty link? #1: #2#3}%
3705     \else
3706         \def\anchor@spot{#2#3}%
3707         \let\put@me@back\@empty
3708         \ifx\relax#2\relax
3709             \else
3710                 \ifHy@nesting
3711                     \else
3712                         \ifcat a\noexpand#2\relax
3713                             \else
3714                                 \ifcat 0\noexpand#2 \relax
3715                                     \else
3716 %                     \typeout{Anchor start is not alphanumeric %
3717 %                         on input line\the\inputlineno%
3718 %                     }%
3719                     \let\anchor@spot\@empty
3720                     \def\put@me@back{#2#3}%
3721                 \fi
3722             \fi
3723         \fi

```

```

3724 \fi
3725 \ifHy@activeanchor
3726 \anchor@spot
3727 \else
3728 \hyper@anchor{#1}%
3729 \fi
3730 \expandafter\put@me@back
3731 \fi
3732 \let\anchor@spot\@empty
3733 }

```

18 Compatibility with the *LT_εX2html* 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.

```

3734 \let\htmladding\hyperimage
3735 \def\htmladdnormallink#1#2{\href{#2}{#1}}
3736 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
3737 \def\htmlref#1#2{% anchor text, label
3738 \label@hyperref[{#2}]{#1}%
3739 }

```

This is really too much. The *LT_εX2html* 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.

```

3740 \def\@latextohtmlX{%
3741 \let\hhyperref\hyperref
3742 \def\hyperref##1##2##3##4{% anchor text for HTML
3743 % text to print before label in print
3744 % label
3745 % post-label text in print
3746 ##2\ref{##4}##3%
3747 }%
3748 }

```

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.

```

3749 \RequirePackage{bitset}

```

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

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

`\HyField@NewFlag` #1: type: F annot flags, Ff field flags
 #2: PDF name
 #3: PDF position

```
3750 \def\HyField@NewFlag#1#2{%
3751   \lowercase{\HyField@NewOption{#2}}%
3752   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3753 }
```

`\HyField@NewFlagOnly`

```
3754 \def\HyField@NewFlagOnly#1#2{%
3755   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3756 }
```

`\HyField@NewOption` #1: option name

```
3757 \def\HyField@NewOption#1{%
3758   \expandafter\newif\csname ifFld@#1\endcsname
3759   \define@key{Field}{#1}[true]{%
3760     \lowercase{\Field@boolkey{##1}}{#1}%
3761   }%
3762 }
```

`\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

```
3763 \def\HyField@NewBitsetFlag#1#2#3#4{%
3764   \begingroup
3765     \count@=#4\relax
3766     \advance\count@\m@ne
3767     \def\x##1{%
3768       \endgroup
3769       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
3770       \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
3771         \expandafter\edef\csname HyField@#3@##1\endcsname{%
3772           (\number#4) #2%
3773         }%
3774       \else
3775         \expandafter\edef\csname HyField@#3@##1\endcsname{%
3776           \csname HyField@#3@##1\endcsname
3777           /#2%
3778         }%
3779       \fi
3780     }%
3781     \expandafter\x\expandafter{\the\count@}%
3782 }
```

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

```
3783 \def\HyField@UseFlag#1#2{%
3784   \lowercase{\HyField@UseFlag{#2}}{#1}%
3785 }
```


\HyField@@UseFlag

```
3786 \def\HyField@@UseFlag#1#2{%
3787   \bitsetSetValue{HyField@#2}{%
3788     \csname HyField@#2@#1\endcsname
3789   }{%
3790     \csname ifFld@#1\endcsname 1\else 0\fi
3791   }%
3792 }
```

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

```
3793 \def\HyField@SetFlag#1#2{%
3794   \lowercase{\HyField@@SetFlag{#2}}{#1}%
3795 }
```

\HyField@@SetFlag

```
3796 \def\HyField@@SetFlag#1#2{%
3797   \bitsetSetValue{HyField@#2}{%
3798     \csname HyField@#2@#1\endcsname
3799   }{1}%
3800 }
```

\HyField@PrintFlags

```
3801 \def\HyField@PrintFlags#1#2{%
3802   \ifHy@verbose
3803     \begingroup
3804       \let\Hy@temp\@empty
3805       \let\MessageBreak\relax
3806       \expandafter\@for\expandafter\x\expandafter:\expandafter=%
3807       \bitsetGetSetBitList{HyField@#1}\do{%
3808         \edef\Hy@temp{%
3809           \Hy@temp
3810           \csname HyField@#1@\x\endcsname\MessageBreak
3811         }%
3812       }%
3813     \edef\x{\endgroup
3814       \noexpand\Hy@Info{%
3815         Field flags: %
3816         \expandafter\ifx\@car#1\@nil S\else/\fi
3817         #1 %
3818         \bitsetGetDec{HyField@#1} %
3819         (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
3820         \Hy@temp
3821         for #2%
3822       }%
3823     }\x
3824   \fi
3825 }
```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```
3826 \HyField@NewFlag{Ff}{ReadOnly}{1}
3827 \HyField@NewFlag{Ff}{Required}{2}
3828 \HyField@NewFlag{Ff}{NoExport}{3}
```

“Table 8.75 Field flags specific to button fields”

```
3829 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
3830 \HyField@NewFlag{Ff}{Radio}{16}
3831 \HyField@NewFlag{Ff}{Pushbutton}{17}
3832 \HyField@NewFlag{Ff}{RadiosInUnison}{26}
```

“Table 8.77 Field flags specific to text fields”

```
3833 \HyField@NewFlag{Ff}{Multiline}{13}
3834 \HyField@NewFlag{Ff}{Password}{14}
3835 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
3836 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3837 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
3838 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
3839 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5
```

“Table 8.79 field flags specific to choice fields”

```
3840 \HyField@NewFlag{Ff}{Combo}{18}
3841 \HyField@NewFlag{Ff}{Edit}{19}
3842 \HyField@NewFlag{Ff}{Sort}{20}
3843 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
3844 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3845 \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.

```
3846 \newif\ifFld@popdown
3847 \define@key{Field}{popdown}[true]{%
3848   \lowercase{\Field@boolkey{#1}}{popdown}%
3849 }
```

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.

```
3850 \HyField@NewFlag{F}{Invisible}{1}
3851 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
3852 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
3853 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
3854 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
3855 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
3856 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
3857 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
3858 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

3859 \ifHy@pdfa
3860   \def\HyField@PDFAFldWarning#1#2{%
3861     \Hy@Warning{%
3862       PDF/A: Annotation flag ‘#1’ must\MessageBreak
3863       be set to ‘#2’%
3864     }%
3865   }%
3866   \Fld@invisiblefalse
3867   \def\Fld@invisibletrue{%
3868     \HyField@PDFAFldWarning{invisible}{false}%
3869   }%
3870   \Fld@hiddenfalse
3871   \def\Fld@hiddentrue{%
```

```

3872 \HyField@PDFAFIWarning{hidden}{false}%
3873 }%
3874 \Fld@printtrue
3875 \def\Fld@printfalse{%
3876 \HyField@PDFAFIWarning{print}{true}%
3877 }%
3878 \Fld@nozoomtrue
3879 \def\Fld@nozoomfalse{%
3880 \HyField@PDFAFIWarning{nozoom}{true}%
3881 }%
3882 \Fld@norotatetrue
3883 \def\Fld@norotatefalse{%
3884 \HyField@PDFAFIWarning{norotate}{true}%
3885 }%
3886 \Fld@noviewfalse
3887 \def\Fld@noviewtrue{%
3888 \HyField@PDFAFIWarning{noview}{false}%
3889 }%
3890 \fi

```

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

```

3891 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
3892 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
3893 \HyField@NewFlag{Submit}{GetMethod}{4}
3894 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
3895 \HyField@NewFlagOnly{Submit}{XFDF}{6}
3896 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
3897 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
3898 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
3899 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
3900 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
3901 \HyField@NewFlag{Submit}{ExclFKey}{12}
3902 \HyField@NewFlag{Submit}{EmbedForm}{14}

3903 \define@key{Field}{export}{%
3904 \lowercase{\def\Hy@temp{#1}}%
3905 \@ifundefined{Fld@export@Hy@temp}{%
3906 \onelevel@sanitize\Hy@temp
3907 \PackageError{hyperref}{%
3908 \Known export format '\Hy@temp'.\MessageBreak
3909 \Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
3910 }{\@ehc
3911 }{%
3912 \let\Fld@export\Hy@temp
3913 }%
3914 }
3915 \def\Fld@export{fdf}
3916 \@namedef{Fld@export@fdf}{0}%
3917 \@namedef{Fld@export@html}{1}%
3918 \@namedef{Fld@export@xfdf}{2}%
3919 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

3920 \def\HyField@FlagsSubmit{%
3921 \bitsetReset{HyField@Submit}%
3922 \ifcase\@nameuse{Fld@export@Fld@export} %

```

```

3923 % FDF
3924 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3925 \HyField@UseFlag{Submit}{SubmitCoordinates}%
3926 \HyField@UseFlag{Submit}{IncludeAppendSaves}%
3927 \HyField@UseFlag{Submit}{IncludeAnnotations}%
3928 \HyField@UseFlag{Submit}{CanonicalFormat}%
3929 \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
3930 \HyField@UseFlag{Submit}{ExclFKey}%
3931 \HyField@UseFlag{Submit}{EmbedForm}%
3932 \or % HTML
3933 \HyField@SetFlag{Submit}{ExportFormat}%
3934 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3935 \HyField@UseFlag{Submit}{GetMethod}%
3936 \HyField@UseFlag{Submit}{SubmitCoordinates}%
3937 \HyField@UseFlag{Submit}{CanonicalFormat}%
3938 \or % XFDF
3939 \HyField@SetFlag{Submit}{XFDF}%
3940 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3941 \HyField@UseFlag{Submit}{SubmitCoordinates}%
3942 \HyField@UseFlag{Submit}{CanonicalFormat}%
3943 \or % PDF
3944 \HyField@SetFlag{Submit}{SubmitPDF}%
3945 \HyField@UseFlag{Submit}{GetMethod}%
3946 \fi
3947 \HyField@PrintFlags{Submit}{submit button field}%
3948 \bitsetIsEmpty{HyField@Submit}{%
3949 \def\Fld@submitflags{%
3950 }{%
3951 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
3952 }%
3953 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

3954 \def\HyField@FlagsAnnot#1{%
3955 \bitsetReset{HyField@F}%
3956 \HyField@UseFlag{F}{Invisible}%
3957 \HyField@UseFlag{F}{Hidden}%
3958 \HyField@UseFlag{F}{Print}%
3959 \HyField@UseFlag{F}{NoZoom}%
3960 \HyField@UseFlag{F}{NoRotate}%
3961 \HyField@UseFlag{F}{NoView}%
3962 \HyField@UseFlag{F}{Locked}%
3963 \HyField@UseFlag{F}{ToggleNoView}%
3964 \HyField@UseFlag{F}{LockedContents}%
3965 \HyField@PrintFlags{F}{#1}%
3966 \bitsetIsEmpty{HyField@F}{%
3967 \def\Fld@annotflags{%
3968 }{%
3969 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
3970 }%
3971 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```
3972 \def\HyField@FlagsPushButton{%
3973   \HyField@FlagsAnnot{push button field}%
3974   \bitsetReset{HyField@Ff}%
3975   \HyField@UseFlag{Ff}{ReadOnly}%
3976   \HyField@UseFlag{Ff}{Required}%
3977   \HyField@UseFlag{Ff}{NoExport}%
3978   \HyField@SetFlag{Ff}{PushButton}%
3979   \HyField@PrintFlags{Ff}{push button field}%
3980   \bitsetIsEmpty{HyField@Ff}{%
3981     \def\Fld@flags{%
3982     }{%
3983     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
3984     }%
3985 }
```

19.1.5 Check box field

\HyField@FlagsCheckBox

```
3986 \def\HyField@FlagsCheckBox{%
3987   \HyField@FlagsAnnot{check box field}%
3988   \bitsetReset{HyField@Ff}%
3989   \HyField@UseFlag{Ff}{ReadOnly}%
3990   \HyField@UseFlag{Ff}{Required}%
3991   \HyField@UseFlag{Ff}{NoExport}%
3992   \HyField@PrintFlags{Ff}{check box field}%
3993   \bitsetIsEmpty{HyField@Ff}{%
3994     \def\Fld@flags{%
3995     }{%
3996     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
3997     }%
3998 }
```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```
3999 \def\HyField@FlagsRadioButton{%
4000   \HyField@FlagsAnnot{radio button field}%
4001   \bitsetReset{HyField@Ff}%
4002   \HyField@UseFlag{Ff}{ReadOnly}%
4003   \HyField@UseFlag{Ff}{Required}%
4004   \HyField@UseFlag{Ff}{NoExport}%
4005   \HyField@UseFlag{Ff}{NoToggleToOff}%
4006   \HyField@SetFlag{Ff}{Radio}%
4007   \HyField@UseFlag{Ff}{RadiosInUnison}%
4008   \HyField@PrintFlags{Ff}{radio button field}%
4009   \bitsetIsEmpty{HyField@Ff}{%
4010     \def\Fld@flags{%
4011     }{%
4012     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4013     }%
4014 }
```

19.1.7 Text fields

\HyField@FlagsText

```
4015 \def\HyField@FlagsText{%
4016   \HyField@FlagsAnnot{text field}%
4017   \bitsetReset{HyField@Ff}%
4018   \HyField@UseFlag{Ff}{ReadOnly}%
4019   \HyField@UseFlag{Ff}{Required}%
4020   \HyField@UseFlag{Ff}{NoExport}%
4021   \HyField@UseFlag{Ff}{Multiline}%
4022   \HyField@UseFlag{Ff}{Password}%
4023   \HyField@UseFlag{Ff}{FileSelect}%
4024   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4025   \HyField@UseFlag{Ff}{DoNotScroll}%
4026   \ifFld@comb
4027     \ifcase0\ifFld@multiline
4028       \else\ifFld@password
4029       \else\ifFld@fileselect
4030       \else 1\fi\fi\fi\relax
4031     \PackageError{hyperref}{%
4032       Field option ‘comb’ cannot used together with\MessageBreak
4033       ‘multiline’, ‘password’, or ‘fileselect’%
4034     }\@ehc
4035   \else
4036     \HyField@UseFlag{Ff}{Comb}%
4037   \fi
4038 \fi
4039 \HyField@UseFlag{Ff}{RichText}%
4040 \HyField@PrintFlags{Ff}{text field}%
4041 \bitsetIsEmpty{HyField@Ff}{%
4042   \def\Fld@flags{%
4043   }{%
4044   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4045   }%
4046 }
```

19.1.8 Choice fields

\HyField@FlagsChoice

```
4047 \def\HyField@FlagsChoice{%
4048   \HyField@FlagsAnnot{choice field}%
4049   \bitsetReset{HyField@Ff}%
4050   \HyField@UseFlag{Ff}{ReadOnly}%
4051   \HyField@UseFlag{Ff}{Required}%
4052   \HyField@UseFlag{Ff}{NoExport}%
4053   \HyField@UseFlag{Ff}{Combo}%
4054   \ifFld@combo
4055     \HyField@UseFlag{Ff}{Edit}%
4056   \fi
4057   \HyField@UseFlag{Ff}{Sort}%
4058   \HyField@UseFlag{Ff}{MultiSelect}%
4059   \ifFld@combo
4060     \ifFld@edit
4061       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4062     \fi
4063   \fi
4064   \HyField@UseFlag{Ff}{CommitOnSelChange}%

```

```

4065 \HyField@PrintFlags{Ff}{choice field}%
4066 \bitsetIsEmpty{HyField@Ff}{%
4067   \def\Fld@flags{}%
4068 }{%
4069   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4070 }%
4071 }

```

19.2 Choice field

```
4072 \RequirePackage{kvsetkeys}[2007/09/29]
```

\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.

```

4073 \def\HyField@PDFChoices#1{%
4074   \begingroup
4075   \gdef\Fld@choices{}%
4076   \def\HyTmp@optlist{}%
4077   \let\HyTmp@optitem\relax
4078   \count@=0 %
4079   \kv@parse{#1}{%
4080     \Hy@pdfstringdef\kv@key\kv@key
4081     \ifx\kv@value\relax
4082       \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4083         \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4084       \else
4085         \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4086       \fi
4087     \else
4088       \Hy@pdfstringdef\kv@value\kv@value
4089       \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@value)]}%
4090     \fi
4091     \edef\HyTmp@optlist{%
4092       \HyTmp@optlist
4093       \HyTmp@optitem{the\count@}{\kv@key}0%
4094     }%
4095     \advance\count@ by 1 %
4096     \@gobbletwo
4097   }%
4098   \xdef\Fld@choices{/Opt[\Fld@choices]}%
4099   \ifFld@multiselect
4100     \HyField@@PDFChoices{DV}\Fld@default
4101     \HyField@@PDFChoices{V}\Fld@value
4102   \else
4103     \ifx\Fld@default\relax
4104     \else
4105       \pdfstringdef\Hy@gtemp\Fld@default
4106       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4107     \fi
4108     \ifx\Fld@value\relax
4109     \else
4110       \pdfstringdef\Hy@gtemp\Fld@value
4111       \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4112     \fi
4113   \fi
4114   \endgroup

```

4115 }

\HyField@@PDFChoices

```
4116 \def\HyField@@PDFChoices#1#2{%
4117   \ifx#2\relax
4118   \else
4119     \count@=0 %
4120     \def\HyTmp@optitem##1##2##3{%
4121       \def\HyTmp@key{##2}%
4122       \ifx\HyTmp@key\Hy@gtemp
4123         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4124           \HyTmp@optlist
4125           \HyTmp@optitem{##1}{##2}1%
4126         }%
4127         \let\HyTmp@found=Y%
4128       \else
4129         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4130           \HyTmp@optlist
4131           \HyTmp@optitem{##1}{##2}##3%
4132         }%
4133       \fi
4134     }%
4135     \expandafter\comma@parse\expandafter{#2}{%
4136       \pdfstringdef\Hy@gtemp\comma@entry
4137       \let\HyTmp@found=N %
4138       \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4139       \HyTmp@optlist
4140       \ifx\HyTmp@found Y%
4141         \advance\count@ by 1 %
4142       \else
4143         \@onelevel@sanitize\comma@entry
4144         \PackageWarning{hyperref}{%
4145           \string\ChoiceBox: Ignoring value ‘\comma@entry’,%
4146           \MessageBreak
4147           it cannot be found in the choices%
4148         }%
4149       \fi
4150       \@gobble
4151     }%
4152     \def\HyTmp@optitem##1##2##3{%
4153       \ifnum##3=1 %
4154         (##2)%
4155       \fi
4156     }%
4157     \ifcase\count@
4158     \or
4159       \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4160     \else
4161       \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4162       \ifx#1V%
4163         \def\HyTmp@optitem##1##2##3{%
4164           \ifnum##3=1 %
4165             \@firstofone{ ##1}%
4166           \fi
4167         }%
4168       \edef\HyTmp@optlist{\HyTmp@optlist}%
4169       \xdef\Fld@choices{%
```



```

4170         \Fld@choices
4171         /I[\expandafter\@firstofone\HyTmp@optlist]%
4172     }%
4173     \fi
4174 \fi
4175 \fi
4176 }

```

19.3 Forms

\HyField@SetKeys

```

4177 \def\HyField@SetKeys{%
4178   \setkeys{Field}%
4179 }

4180 \newif\ifFld@checked
4181 \newif\ifFld@disabled
4182 \Fld@checkedfalse
4183 \Fld@disabledfalse
4184 \newcount\Fld@menulength
4185 \newdimen\Fld@Width
4186 \newdimen\Fld@charsize
4187 \Fld@charsize=10\p@
4188 \def\Fld@maxlen{0}
4189 \def\Fld@align{0}
4190 \def\Fld@color{0 0 0 rg}
4191 \def\Fld@bcolor{1 1 1}
4192 \def\Fld@bordercolor{1 0 0}
4193 \def\Fld@bordersep{1\p@}
4194 \def\Fld@borderwidth{1}
4195 \def\Fld@borderstyle{S}
4196 \def\Fld@cbsymbol{4}
4197 \def\Fld@rotation{0}
4198 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4199 \def\endForm{\@endForm}
4200 \newif\ifForm@html
4201 \Form@htmlfalse
4202 \def\Form@boolkey#1#2{%
4203   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4204 }
4205 \define@key{Form}{action}{%
4206   \hyper@normalise\Hy@DefFormAction{#1}%
4207 }
4208 \def\Hy@DefFormAction{\def\Form@action}
4209 \def\enc@html{html}
4210 \define@key{Form}{encoding}{%
4211   \def\Hy@tempa{#1}%
4212   \ifx\Hy@tempa\enc@html
4213     \Form@htmltrue
4214     \def\Fld@export{html}%
4215   \else
4216     \typeout{hyperref: form 'encoding' key set to #1 %
4217       -- unknown type%
4218   }%
4219   \Form@htmlfalse
4220 \fi
4221 }

```

```

4222 \define@key{Form}{method}{%
4223   \lowercase{\def\Hy@temp{#1}}%
4224   \@ifundefined{Form@method@\Hy@temp}{%
4225     \onelevel@sanitize\Hy@temp
4226     \PackageError{hyperref}{%
4227       Unknown method '\Hy@temp'.\MessageBreak
4228       Known values are 'post' and 'get'%
4229     }\@ehc
4230   }{%
4231     \let\Form@method\Hy@temp
4232     \ifcase\@nameuse{Form@method@\Hy@temp} %
4233       \Fld@getmethodfalse
4234     \else
4235       \Fld@getmethodtrue
4236     \fi
4237   }%
4238 }
4239 \def\Form@method{}
4240 \@namedef{Form@method@post}{0}
4241 \@namedef{Form@method@get}{1}
4242 \def\Fld@boolkey#1#2{%
4243   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4244 }
4245 \newtoks\Fld@toks
4246 \Fld@toks={ }%
4247 \def\Fld@addtoks#1#2{%
4248   \edef\@processme{\Fld@toks{\the\Fld@toks\space #1="#2"}}%
4249   \@processme
4250 }
4251 \def\Fld@checkequals#1=#2=#3\\{%
4252   \def\@currDisplay{#1}%
4253   \ifx\#2\\%
4254     \def\@currValue{#1}%
4255   \else
4256     \def\@currValue{#2}%
4257   \fi
4258 }
4259 \define@key{Field}{loc}{%
4260   \def\Fld@loc{#1}%
4261 }
4262 \define@key{Field}{checked}[true]{%
4263   \lowercase{\Fld@boolkey{#1}}{checked}%
4264 }
4265 \define@key{Field}{disabled}[true]{%
4266   \lowercase{\Fld@boolkey{#1}}{disabled}%
4267 }
4268 \define@key{Field}{accesskey}{%
4269   \Fld@addtoks{accesskey}{#1}%
4270 }
4271 \define@key{Field}{tabkey}{%
4272   \Fld@addtoks{tabkey}{#1}%
4273 }
4274 \define@key{Field}{name}{%
4275   \def\Fld@name{#1}%
4276 }
4277 \define@key{Field}{width}{%
4278   \def\Fld@width{#1}%

```

```

4279 \Field@Width#1\setbox0=\hbox{m}%
4280 }
4281 \define@key{Field}{maxlen}{%
4282 \def\Fld@maxlen{#1}%
4283 }
4284 \define@key{Field}{menulength}{%
4285 \Fld@menulength=#1\relax
4286 }
4287 \define@key{Field}{height}{%
4288 \def\Fld@height{#1}%
4289 }
4290 \define@key{Field}{charsize}{%
4291 \Fld@charsize#1%
4292 }
4293 \define@key{Field}{borderwidth}{%
4294 \def\Fld@borderwidth{#1}%
4295 }
4296 \define@key{Field}{borderstyle}{%
4297 \def\Fld@borderstyle{#1}%
4298 }
4299 \define@key{Field}{bordersep}{%
4300 \def\Fld@bordersep{#1}%
4301 }
4302 \define@key{Field}{default}{%
4303 \def\Fld@default{#1}%
4304 }
4305 \define@key{Field}{align}{%
4306 \def\Fld@align{#1}%
4307 }
4308 \define@key{Field}{value}{%
4309 \def\Fld@value{#1}%
4310 }
4311 \define@key{Field}{checkboxsymbol}{%
4312 \def\Fld@cbsymbol{#1}%
4313 }
4314 \define@key{Field}{rotation}{%
4315 \def\Fld@rotation{#1}%
4316 }
4317 \define@key{Field}{backgroundcolor}{%
4318 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
4319 }
4320 \define@key{Field}{bordercolor}{%
4321 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
4322 }
4323 \define@key{Field}{color}{%
4324 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
4325 }
4326 \def\Fld@format@code{}
4327 \def\Fld@validate@code{}
4328 \def\Fld@calculate@code{}
4329 \def\Fld@keystroke@code{}
4330 \def\Fld@onfocus@code{}
4331 \def\Fld@onblur@code{}
4332 \def\Fld@onmousedown@code{}
4333 \def\Fld@onmouseup@code{}
4334 \def\Fld@onenter@code{}

```

```

4335 \def\Fld@onexit@code{}
4336 \def\Hy@temp#1{%
4337   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
4338 }
4339 \def\Hy@@temp#1#2{%
4340   \ifHy@pdfa
4341     \define@key{Field}{#2}{%
4342       \PackageError{hyperref}{%
4343         PDF/A: Additional action ‘#2’ is prohibited%
4344       }\@ehc
4345     }%
4346   \else
4347     \define@key{Field}{#2}{%
4348       \def#1{##1}%
4349     }%
4350   \fi
4351 }
4352 \Hy@temp{keystroke}
4353 \Hy@temp{format}
4354 \Hy@temp{validate}
4355 \Hy@temp{calculate}
4356 \Hy@temp{onfocus}
4357 \Hy@temp{onblur}
4358 \Hy@temp{onenter}
4359 \Hy@temp{onexit}
4360 \def\Hy@temp#1{%
4361   \define@key{Field}{#1}{%
4362     \Field@addtoks{#1}{##1}%
4363   }%
4364 }
4365 \Hy@temp{onselect}
4366 \Hy@temp{onchange}
4367 \Hy@temp{ondblclick}
4368 \Hy@temp{onmousedown}
4369 \Hy@temp{onmouseup}
4370 \Hy@temp{onmouseover}
4371 \Hy@temp{onmousemove}
4372 \Hy@temp{onmouseout}
4373 \Hy@temp{onkeypress}
4374 \Hy@temp{onkeydown}
4375 \Hy@temp{onkeyup}
4376 \ifHy@pdfa
4377   \define@key{Field}{onclick}{%
4378     \PackageError{hyperref}{%
4379       PDF/A: Action ‘onclick’ is prohibited%
4380     }\@ehc
4381   }%
4382 \else
4383   \define@key{Field}{onclick}{%
4384     \def\Fld@onclick{#1}%
4385     \Field@addtoks{onclick}{#1}%
4386   }%
4387 \fi
4388 \DeclareRobustCommand\TextField{%
4389   \@ifnextchar[{\@TextField}{\@TextField[]}%
4390 }
4391 \DeclareRobustCommand\ChoiceMenu{%

```

```

4392 \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
4393 }
4394 \DeclareRobustCommand\CheckBox{%
4395 \ifnextchar[{\@CheckBox}{\@CheckBox[]}%
4396 }
4397 \DeclareRobustCommand\PushButton{%
4398 \ifnextchar[{\@PushButton}{\@PushButton[]}%
4399 }
4400 \DeclareRobustCommand\Gauge{%
4401 \ifnextchar[{\@Gauge}{\@Gauge[]}%
4402 }
4403 \DeclareRobustCommand\Submit{%
4404 \ifnextchar[{\@Submit}{\@Submit[]}%
4405 }
4406 \DeclareRobustCommand\Reset{%
4407 \ifnextchar[{\@Reset}{\@Reset[]}%
4408 }
4409 \def\LayoutTextField#1#2{% label, field
4410 #1 #2%
4411 }
4412 \def\LayoutChoiceField#1#2{% label, field
4413 #1 #2%
4414 }
4415 \def\LayoutCheckField#1#2{% label, field
4416 #1 #2%
4417 }
4418 \def\LayoutPushButtonField#1{% button
4419 #1%
4420 }
4421 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4422 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4423 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4424 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4425 \def\MakeButtonField#1{%
4426 \sbox0{%
4427 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
4428 }%
4429 \@tempdima\ht0 %
4430 \advance\@tempdima by \Fld@borderwidth bp %
4431 \advance\@tempdima by \Fld@borderwidth bp %
4432 \ht0\@tempdima
4433 \@tempdima\dp0 %
4434 \advance\@tempdima by \Fld@borderwidth bp %
4435 \advance\@tempdima by \Fld@borderwidth bp %
4436 \dp0\@tempdima
4437 \box0\relax
4438 }
4439 \def\DefaultHeightofSubmit{14pt}
4440 \def\DefaultWidthofSubmit{2cm}
4441 \def\DefaultHeightofReset{14pt}
4442 \def\DefaultWidthofReset{2cm}
4443 \def\DefaultHeightofCheckBox{\baselineskip}
4444 \def\DefaultWidthofCheckBox{\baselineskip}
4445 \def\DefaultHeightofChoiceMenu{\baselineskip}
4446 \def\DefaultWidthofChoiceMenu{\baselineskip}
4447 \def\DefaultHeightofText{\baselineskip}
4448 \def\DefaultHeightofTextMultiline{4\baselineskip}

```

```

4449 \def\DefaultWidthofText{3cm}
4450 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
4451 \def\DefaultOptionsofReset{print,name=Reset,noexport}
4452 \def\DefaultOptionsofPushButton{print}
4453 \def\DefaultOptionsofCheckBox{print}
4454 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

4455 \def\DefaultOptionsofListBox{print}
4456 \def\DefaultOptionsofComboBox{print,edit,sort}
4457 \def\DefaultOptionsofPopdownBox{print}
4458 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

4459 \ifHy@figures
4460   \Hy@Info{Hyper figures ON}%
4461 \else
4462   \Hy@Info{Hyper figures OFF}%
4463 \fi
4464 \ifHy@nesting
4465   \Hy@Info{Link nesting ON}%
4466 \else
4467   \Hy@Info{Link nesting OFF}%
4468 \fi
4469 \ifHy@hyperindex
4470   \Hy@Info{Hyper index ON}%
4471 \else
4472   \Hy@Info{Hyper index OFF}%
4473 \fi
4474 \ifHy@backref
4475   \Hy@Info{backreferencing ON}%
4476 \else
4477   \Hy@Info{backreferencing OFF}%
4478 \fi
4479 \ifHy@colorlinks
4480   \Hy@Info{Link coloring ON}%
4481 \else
4482   \Hy@Info{Link coloring OFF}%
4483 \fi
4484 \ifHy@ocgcolorlinks
4485   \Hy@Info{Link coloring with OCG ON}%
4486 \else
4487   \Hy@Info{Link coloring with OCG OFF}%
4488 \fi
4489 \ifHy@pdfa
4490   \Hy@Info{PDF/A mode ON}%
4491 \else
4492   \Hy@Info{PDF/A mode OFF}%
4493 \fi

```

21 Low-level utility macros

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

```

4494 \edef\hyper@hash{\string#}
4495 \edef\hyper@tilde{\string~}

```

```

4496 \edef\hyper@quote{\string"}
4497 \let\currentHref\@empty
4498 \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.

```

4499 \AfterBeginDocument{%
4500   \Hy@pdfstringtrue
4501   \PDF@SetupDoc
4502   \let\PDF@SetupDoc\@empty
4503   \Hy@DisableOption{pdfpagescrop}%
4504   \Hy@DisableOption{pdfpagemode}%
4505   \Hy@DisableOption{pdfnonfullscreenpagemode}%
4506   \Hy@DisableOption{pdfdirection}%
4507   \Hy@DisableOption{pdfviewarea}%
4508   \Hy@DisableOption{pdfviewclip}%
4509   \Hy@DisableOption{pdfprintarea}%
4510   \Hy@DisableOption{pdfprintclip}%
4511   \Hy@DisableOption{pdfprintsclaling}%
4512   \Hy@DisableOption{pdfduplex}%
4513   \Hy@DisableOption{pdfpicktraybypdfsize}%
4514   \Hy@DisableOption{pdfprintpagerange}%
4515   \Hy@DisableOption{pdfnumcopies}%
4516   \Hy@DisableOption{pdfstartview}%
4517   \Hy@DisableOption{pdfstartpage}%
4518   \Hy@DisableOption{pdftoolbar}%
4519   \Hy@DisableOption{pdfmenubar}%
4520   \Hy@DisableOption{pdfwindowui}%
4521   \Hy@DisableOption{pdffitwindow}%
4522   \Hy@DisableOption{pdfcenterwindow}%
4523   \Hy@DisableOption{pdfdisplaydoctitle}%
4524   \Hy@DisableOption{pdfpagelayout}%
4525   \Hy@DisableOption{pdflang}%
4526   \Hy@DisableOption{baseurl}%
4527   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
4528   \Hy@pdfstringfalse
4529 }

```

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.

```

4530 \def\NoHyper{%
4531   \def\hyper@link@{##1}##2##3##4{##4}%
4532   \def\hyper@@anchor##1{}%
4533   \global\let\hyper@livelink\hyper@link
4534   \gdef\hyper@link##1##2##3{##3}%
4535   \def\hyper@anchorstart##1{}%
4536   \let\hyper@anchorend\@empty
4537   \def\hyper@linkstart##1##2{}%
4538   \let\hyper@linkend\@empty
4539   \def\hyper@linkurl##1##2{##1}%
4540   \def\hyper@linkfile##1##2##3{##1}%
4541   \def\hyper@link@{##1}##2##3{}%

```

```

4542 \let\Hy@backout\@gobble
4543 }
4544 \def\stop@hyper{%
4545   \def\hyper@link@{##1}##2##3##4{##4}%
4546   \let\Hy@backout\@gobble
4547   \def\hyper@@anchor##1{%
4548     \def\hyper@link##1##2##3{##3}%
4549     \def\hyper@anchorstart##1{%
4550       \let\hyper@anchorend\@empty
4551       \def\hyper@linkstart##1##2{%
4552         \let\hyper@linkend\@empty
4553         \def\hyper@linkurl##1##2{##1}%
4554         \def\hyper@linkfile##1##2##3{##1}%
4555         \def\hyper@link@{##1}##2##3}%
4556       }
4557     \def\endNoHyper{%
4558       \global\let\hyper@link\hyper@livelink
4559     }
4560 }

```

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:

```

4561 \*nohyperref
4562 \let\hyper@@anchor\@gobble
4563 \def\hyper@link#1#2#3{##3}%
4564 \let\hyper@anchorstart\@gobble
4565 \let\hyper@anchorend\@empty
4566 \let\hyper@linkstart\@gobbletwo
4567 \let\hyper@linkend\@empty
4568 \def\hyper@linkurl#1#2{##1}%
4569 \def\hyper@linkfile#1#2#3{##1}%
4570 \def\hyper@link@{##1}##2##3}%
4571 \let\PDF@SetupDoc\@empty
4572 \let\PDF@FinishDoc\@empty
4573 \def\nohyperpage#1{##1}

```

Some top-level commands:

```

4574 \def\Acrobatmenu#1#2{\leavevmode#2}
4575 \let\pdfstringdefDisableCommands\@gobbletwo
4576 \let\texorpdfstring\@firstoftwo
4577 \let\pdfbookmark\@undefined
4578 \newcommand\pdfbookmark[3][]{ }
4579 \let\phantomsection\@empty
4580 \let\hypersetup\@gobble
4581 \let\hyperbaseurl\@gobble
4582 \let\href\@gobble
4583 \let\hyperdef\@gobbletwo
4584 \let\hyperlink\@gobble
4585 \let\hypertarget\@gobble
4586 \def\hyperref{%

```



```

4587 \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
4588 }
4589 \long\def\@gobbleopt[#1]{%
4590 \let\hyperpage\@empty
4591 \</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}`

```

4592 \<package>
4593 \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.

```

4594 \if@filesw
4595 \ifHy@typexml
4596 \immediate\closeout\@mainaux
4597 \immediate\openout\@mainaux\jobname.aux\relax
4598 \immediate\write\@auxout{<relaxxml>\relax}%
4599 \fi
4600 \immediate\write\@auxout{%
4601 \string\ifx\string\hyper@anchor\string\@undefined^^J%
4602 \global\let\string\oldcontentsline\string\contentsline^^J%
4603 \gdef\string\contentsline%
4604 \string#1\string#2\string#3\string#4{%
4605 \string\oldcontentsline%
4606 {\string#1}{\string#2}{\string#3}}^^J%
4607 \global\let\string\oldnewlabel\string\newlabel^^J%
4608 \gdef\string\newlabel\string#1\string#2{%
4609 \string\newlabelxx{\string#1}\string#2}^^J%
4610 \gdef\string\newlabelxx%
4611 \string#1\string#2\string#3\string#4\string#5\string#6{%
4612 \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.

```

4613 \string\AtEndDocument{%
4614 \let\string\contentsline\string\oldcontentsline^^J%
4615 \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.

```

4616 \string\else^^J%
4617 \global\let\string\hyper@last\relax^^J%
4618 \string\fi^^J%
4619 }%
4620 \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.

```

4621 \ifx\hyper@last\@undefined
4622   \def\@starttoc#1{%
4623     \begingroup
4624     \makeatletter
4625     \IfFileExists{\jobname.#1}{%
4626       \Hy@WarningNoLine{%
4627         old #1 file detected, not used; run LaTeX again%
4628       }%
4629     }{%
4630       \if@filesw
4631         \expandafter\newwrite\csname tf@#1\endcsname
4632         \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
4633       \fi
4634       \@nobreakfalse
4635     \endgroup
4636   }%
4637   \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
4638 \fi
4639 }

```

25 Title strings

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

```

4640 \ifHy@usetitle
4641   \let\HyOrg@title\title
4642   \let\HyOrg@author\author
4643   \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
4644   \def\Hy@scanopttitle[#1]{%
4645     \gdef\Hy@title{#1}%
4646     \HyOrg@title[{#1}]%
4647   }%
4648   \def\Hy@scantitle#1{%
4649     \gdef\Hy@title{#1}%
4650     \HyOrg@title{#1}%
4651   }%
4652   \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
4653   \def\Hy@scanoptauthor[#1]{%
4654     \gdef\Hy@author{#1}%
4655     \HyOrg@author[{#1}]%
4656   }%
4657   \def\Hy@scanauthor#1{%
4658     \gdef\Hy@author{#1}%
4659     \HyOrg@author{#1}%
4660   }%

```

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.

```

4661 \begingroup
4662   \def\process@me#1\@nil#2{%
4663     \expandafter\let\expandafter\x\csname @#2\endcsname
4664     \edef\y{\expandafter\strip@prefix\meaning\x}%
4665     \def\c##1##2\@nil{%
4666       \ifx\\##1\\%
4667       \else
4668         \expandafter\gdef\csname Hy@#2\expandafter\endcsname

```

```

4669         \expandafter{\x}%
4670     \fi
4671 }%
4672 \expandafter\c\y\relax#1\@nil
4673 }%
4674 \expandafter\process@me\string\@latex@\@nil{title}%
4675 \expandafter\process@me\string\@latex@\@nil{author}%
4676 \endgroup
4677 \fi
4678 \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.

```

4679 \def\Hy@UseMaketitleString#1{%
4680   \@ifundefined{Hy@#1}{}{%
4681     \begingroup
4682     \let\Hy@saved@hook\pdfstringdefPreHook
4683     \pdfstringdefDisableCommands{%
4684       \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
4685       \let\newline\\%
4686     }%
4687     \expandafter\ifx\csname @pdf#1\endcsname\@empty
4688       \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
4689         \csname Hy@#1\endcsname\@empty
4690       }%
4691     \fi
4692     \global\let\pdfstringdefPreHook\Hy@saved@hook
4693   \endgroup
4694 }%
4695 }
4696 \def\Hy@newline@title#1{ #1}
4697 \def\Hy@newline@author#1{, #1}
4698 \def\Hy@UseMaketitleInfos{%
4699   \Hy@UseMaketitleString{title}%
4700   \Hy@UseMaketitleString{author}%
4701 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

4702 \RequirePackage{atbegshi}[2007/09/09]
4703 \def\Hy@EveryPageHook{}
4704 \def\Hy@EveryPageBoxHook{}
4705 \def\Hy@FirstPageHook{}
4706 \AtBeginShipout{%

```

```

4707 \Hy@EveryPageHook
4708 \ifx\Hy@EveryPageBoxHook\@empty
4709 \else
4710   \setbox\AtBeginShipoutBox=\vbox{%
4711     \offinterlineskip
4712     \Hy@EveryPageBoxHook
4713     \box\AtBeginShipoutBox
4714   }%
4715 \fi
4716 }
4717 \AtBeginShipoutFirst{%
4718   \Hy@FirstPageHook
4719 }
4720 \g@addto@macro\Hy@FirstPageHook{%
4721   \PDF@FinishDoc
4722   \gdef\PDF@FinishDoc{}}%
4723 }

```

27.1 PDF /PageLabels

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

```

4724 \ifHy@pagelabels
4725   \begingroup\expandafter\expandafter\expandafter\endgroup
4726   \expandafter\ifx\csname thepage\endcsname\relax
4727     \Hy@pagelabelsfalse
4728     \Hy@WarningNoLine{%
4729       Option ‘pdfpagelabels’ is turned off\MessageBreak
4730       because \string\thepage\space is undefined%
4731     }%
4732     \csname fi\endcsname
4733     \csname iffalse\expandafter\endcsname
4734   \fi

```

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

```

4735 \def\thispdfpagelabel#1{%
4736   \gdef\HyPL@thisLabel{#1}%
4737 }%
4738 \global\let\HyPL@thisLabel\relax

```

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

```

4739 \def\HyPL@Labels{}%

```

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

```

4740 \newcount\Hy@abspage
4741 \Hy@abspage=0 %

```

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

```

4742 \def\HyPL@LastType{init}%
4743 \def\HyPL@LastNumber{0}%
4744 \def\HyPL@LastPrefix{}%

```

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

```

4745 \def\HyPL@arabic{D}%
4746 \def\HyPL@Roman{R}%
4747 \def\HyPL@roman{r}%
4748 \def\HyPL@Alph{A}%
4749 \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.

```

4750 \def\HyPL@EveryPage{%
4751   \begingroup
4752   \ifx\HyPL@thisLabel\relax
4753     \let\HyPL@page\thepage
4754   \else
4755     \let\HyPL@page\HyPL@thisLabel
4756     \global\let\HyPL@thisLabel\relax
4757   \fi
4758   \let\HyPL@Type\relax
4759   \ifnum\the\c@page>0 %
4760     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
4761   \fi
4762   \let\Hy@temp Y%
4763   \ifx\HyPL@Type\HyPL@LastType
4764   \else
4765     \let\Hy@temp N%
4766   \fi
4767   \ifx\HyPL@Type\relax
4768     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
4769   \else
4770     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
4771   \fi
4772   \ifx\HyPL@Prefix\HyPL@LastPrefix
4773   \else
4774     \let\Hy@temp N%
4775   \fi
4776   \if Y\Hy@temp
4777     \advance\c@page by -1 %
4778     \ifnum\HyPL@LastNumber=\the\c@page\relax
4779     \else
4780       \let\Hy@temp N%
4781     \fi
4782     \Hy@StepCount\c@page
4783   \fi
4784   \if N\Hy@temp
4785     \ifx\HyPL@Type\relax
4786       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
4787     \else
4788       \HyPL@StorePageLabel{%
4789         \ifx\HyPL@Prefix\@empty
4790         \else
4791           /P(\HyPL@Prefix)%
4792         \fi
4793         /S/\csname HyPL\HyPL@Type\endcsname
4794         \ifnum\the\c@page=1 %
4795         \else
4796           \space/St \the\c@page
4797         \fi
4798       }%
4799     \fi
4800   \fi
4801   \xdef\HyPL@LastNumber{\the\c@page}%
4802   \global\let\HyPL@LastType\HyPL@Type
4803   \global\let\HyPL@LastPrefix\HyPL@Prefix
4804 \endgroup

```

```

4805 \Hy@GlobalStepCount\Hy@abspage
4806 }%

```

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

```

4807 \def\HyPL@CheckThePage#1\@nil{%
4808 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
4809 }%

```

`\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 implemenation 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`.

```

4810 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
4811 \def\Hy@tempa{#4}%
4812 \def\Hy@tempb{\csname\endcsname\c@page}%
4813 \ifx\Hy@tempa\Hy@tempb
4814 \expandafter\ifx\csname HyPL#3\endcsname\relax
4815 \else
4816 \def\HyPL@Type{#3}%
4817 \def\HyPL@Prefix{#2}%
4818 \fi
4819 \else
4820 \begingroup
4821 \let\Hy@next\endgroup
4822 \let\HyPL@found\@undefined
4823 \def\arabic{\HyPL@Format{arabic}}%
4824 \def\Roman{\HyPL@Format{Roman}}%
4825 \def\roman{\HyPL@Format{roman}}%
4826 \def\Alph{\HyPL@Format{Alph}}%
4827 \def\alph{\HyPL@Format{alph}}%
4828 \protected@edef\Hy@temp{#1}%
4829 \ifx\HyPL@found\relax
4830 \toks@{\expandafter{\Hy@temp}}%
4831 \edef\Hy@next{\endgroup
4832 \noexpand\HyPL@@CheckThePage\the\toks@
4833 \noexpand\HyPL@found\relax\noexpand\@nil
4834 }%
4835 \fi
4836 \Hy@next
4837 \fi
4838 }%

```

`\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`.

```

4839 \def\HyPL@Format#1#2{%
4840 \ifx\HyPL@found\@undefined
4841 \expandafter\ifx\csname c@#2\endcsname\c@page
4842 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
4843 \else
4844 \expandafter\noexpand\csname#1\endcsname{#2}%
4845 \fi
4846 \else
4847 \expandafter\noexpand\csname#1\endcsname{#2}%
4848 \fi
4849 }%

```

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

```

4850 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
4851   \def\Hy@tempa{#3}%
4852   \def\Hy@tempb{\HyPL@found\relax}%
4853   \ifx\Hy@tempa\Hy@tempb
4854     \def\HyPL@Type{#2}%
4855     \def\HyPL@Prefix{#1}%
4856   \fi
4857 }%
```

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

```

4858 \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`.

```

4859 \def\HyPL@Useless{0<</S/D>>}%
4860 \@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.

```

4861 \def\HyPL@SetPageLabels{%
4862   \@onelevel@sanitize\HyPL@Labels
4863   \ifx\HyPL@Labels\@empty
4864   \else
4865     \ifx\HyPL@Labels\HyPL@Useless
4866     \else
4867       \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
4868     \fi
4869   \fi
4870 }%
```

```

4871 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
4872 \fi
```

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

```

4873 \Hy@DisableOption{pdfpagelabels}
4874 </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`

```

4875 <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.

```

4876 <*vTeX>
4877 \providecommand*\XR@ext}{pdf}
4878 \edef\Hy@VTeXversion{%
4879   \ifx\VTeXversion\@undefined
4880     \z@
```

```

4881 \else
4882   \ifx\VTexVersion\relax
4883     \z@
4884   \else
4885     \VTexVersion
4886   \fi
4887 \fi
4888 }
4889 \begingroup
4890 \ifnum\Hy@VTexVersion<660 %
4891   \gdef\Hy@PutCatalog#1{%
4892     \Hy@WarningNoLine{%
4893       VTeX 6.59g or above required for pdfpagelabels%
4894     }%
4895   }%
4896 \else
4897   \gdef\Hy@PutCatalog#1{%
4898     \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
4899   }%
4900   \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
4901     \ifx\#2\%
4902     \else
4903       \immediate\special{!pdfpagelabels #2}%
4904     \fi
4905   }%
4906 \fi
4907 \endgroup
4908 </vtex>
4909 <*pdftex | vtex>

```

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

```

4910 \ifHy@pagelabels
4911   \def\HyPL@StorePageLabel#1{%
4912     \toks@ \expandafter{\HyPL@Labels}%
4913     \xdef\HyPL@Labels{%
4914       \the\toks@
4915       \the\Hy@abspage<<#1>>%
4916     }%
4917   }%

```

At the end of the document, `\clearpage` tries to make sure, that no further pages will follow. Then the PDF catalog entry for `\PageLabels` is set.

```

4918 \@ifclassloaded{revtex4}{%
4919   \g@addto@macro\clear@document{\HyPL@SetPageLabels}%
4920 }{%
4921   \AtEndDocument{\clearpage\HyPL@SetPageLabels}%
4922 }%
4923 \fi
4924 </pdftex | vtex>

```

27.1.2 pdfmarkbase, dvipdfm

```

4925 <*pdfmarkbase>
4926 \begingroup
4927 \toks@ \expandafter{\Hy@FirstPageHook}%
4928 \xdef\Hy@FirstPageHook{%

```



```

4929 \noexpand\headerps@out{%
4930   systemdict /pdfmark known%
4931   {%
4932     userdict /?pdfmark systemdict /exec get put%
4933   }{%
4934     userdict /?pdfmark systemdict /pop get put %
4935     userdict /pdfmark systemdict /cleartomark get put%
4936   }%
4937   ifelse%
4938 }%
4939 \the\toks@
4940 }%
4941 \endgroup
4942 \pdfmarkbase>

```

\Hy@PutCatalog

```

4943 <dvipdfm>\def\Hy@PutCatalog#1{\@pdfmark{docview << #1 >>}}
4944 <*pdfmarkbase>
4945 \def\Hy@PutCatalog#1{%
4946   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
4947 }
4948 \pdfmarkbase>

4949 <*pdfmarkbase | dvipdfm>
4950 \ifHy@pagelabels

```

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

```

4951 \def\HyPL@StorePageLabel#1{%
4952   \if@filesw
4953     \begingroup
4954     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
4955     \immediate\write\@mainaux{%
4956       \string\HyPL@Entry{\Hy@tempa}%
4957     }%
4958     \endgroup
4959   \fi
4960 }%

```

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.

```

4961 \AfterBeginDocument{%
4962   \if@filesw
4963     \immediate\write\@mainaux{%
4964       \string\providecommand\string*\string\HyPL@Entry[1]{}%
4965     }%
4966   \fi
4967   \ifx\HyPL@Labels\@empty
4968     \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
4969   \else
4970     \HyPL@SetPageLabels
4971   \fi
4972   \let\HyPL@Entry\@gobble
4973 }%

```

\HyPL@Entry

```

4974 \def\HyPL@Entry#1{%
4975   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%

```

```

4976      \HyPL@Labels
4977      #1%
4978    }%
4979  }%

4980 \fi
4981 \pdfmarkbase | dvipdfm)
4982 \*package)
4983 \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

```

4984 \def\Hy@CounterExists#1{%
4985   \begingroup\expandafter\expandafter\expandafter\endgroup
4986   \expandafter\ifx\csname c@#1\endcsname\relax
4987     \expandafter\@gobble
4988   \else
4989     \begingroup\expandafter\expandafter\expandafter\endgroup
4990     \expandafter\ifx\csname the#1\endcsname\relax
4991       \expandafter\expandafter\expandafter\@gobble
4992     \else
4993       \expandafter\expandafter\expandafter\@firstofone
4994     \fi
4995   \fi
4996 }
4997 \Hy@CounterExists{section}{%
4998   \newcommand\theHequation{\theHsection.\arabic{equation}}%
4999 }
5000 \Hy@CounterExists{part}{%
5001   \newcommand\theHpart{\arabic{part}}%
5002 }
5003 \@ifundefined{thechapter}{%
5004   \newcommand\theHsection    {\arabic{section}}%
5005   \newcommand\theHfigure     {\arabic{figure}}%
5006   \newcommand\theHtable      {\arabic{table}}%
5007 }{%
5008   \newcommand\theHchapter    {\arabic{chapter}}%
5009   \newcommand\theHfigure     {\theHchapter.\arabic{figure}}%

```

```

5010 \newcommand\theHtable      {\theHchapter.\arabic{table}}%
5011 \newcommand\theHsection    {\theHchapter.\arabic{section}}%
5012 }
5013 \newcommand\theHsubsection  {\theHsection.\arabic{subsection}}
5014 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5015 \newcommand\theHparagraph    {\theHsubsubsection.\arabic{paragraph}}
5016 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5017 \newcommand\theHtheorem      {\theHsection.\arabic{theorem}}
5018 \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.

```

5019 \let\H@item\item
5020 \newcounter{Item}
5021 \def\theHItem{\arabic{Item}}
5022 \def\item{%
5023   \@hyper@itemfalse
5024   \if@nmbrlist\@hyper@itemtrue\fi
5025   \H@item
5026 }
5027 \newcommand\theHenumi      {\theHItem}
5028 \newcommand\theHenumii     {\theHItem}
5029 \newcommand\theHenumiii     {\theHItem}
5030 \newcommand\theHenumiv      {\theHItem}
5031 \newcommand\theHHfootnote  {\arabic{Hfootnote}}
5032 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5033 \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.

```

5034 \let\H@refstepcounter\refstepcounter
5035 \edef\name@of@eq{equation}%
5036 \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.

```

5037 \newif\if@hyper@item
5038 \newif\if@skiphyperref
5039 \@hyper@itemfalse
5040 \@skiphyperreffalse
5041 \def\refstepcounter#1{%
5042   \ifHy@pdfstring
5043   \else
5044     \H@refstepcounter{#1}%
5045     \edef\This@name{#1}%
5046     \ifx\This@name\name@of@slide
5047     \else
5048       \if@skiphyperref
5049       \else
5050         \if@hyper@item
5051           \stepcounter{Item}%
5052           \hyper@refstepcounter{Item}%
5053         \@hyper@itemfalse
5054       \else
5055         \hyper@refstepcounter{#1}%

```

```

5056         \fi
5057     \fi
5058     \fi
5059 \fi
5060 }

```

AMST_{EX} 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.

```

5061 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@measuring@false}

```

`\hyper@refstepcounter`

```

5062 \def\hyper@refstepcounter#1{%
5063     \edef\This@name{#1}%
5064     \ifx\This@name\name@of@eq
5065         \@ifundefined{theHequation}{%
5066             \make@stripped@name{\theequation}%
5067             \let\theHequation\newname
5068         }{}%
5069     \fi
5070     \@ifundefined{theH#1}{%
5071         \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5072     }{}%
5073     \hyper@makecurrent{#1}%
5074     \ifmeasuring@
5075     \else
5076         \Hy@raisedlink{%
5077             \hyper@anchorstart{\@currentHref}\hyper@anchorend
5078         }%
5079     \fi
5080 }

```

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`.

```

5081 \begingroup\expandafter\expandafter\expandafter\endgroup
5082 \expandafter\ifx\csname chapter\endcsname\relax
5083     \def\Hy@chapterstring{section}%
5084 \else
5085     \def\Hy@chapterstring{chapter}%
5086 \fi
5087 \def\Hy@appendixstring{appendix}
5088 \def\Hy@chapapp{\Hy@chapterstring}
5089 \let\HyOrg@appendix\appendix
5090 \def\appendix{%
5091     \@ifundefined{chapter}%
5092     {\gdef\theHsection{\Alph{section}}}%
5093     {\gdef\theHchapter{\Alph{chapter}}}%
5094     \xdef\Hy@chapapp{\Hy@appendixstring}%
5095     \HyOrg@appendix
5096 }

```

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

```

5097 \def\hyper@makecurrent#1{%
5098   \begingroup
5099   \edef\Hy@param{#1}%
5100   \ifx\Hy@param\Hy@chapterstring
5101     \let\Hy@param\Hy@chapapp
5102   \fi
5103   \ifHy@hypertextnames
5104     \let\@number\@firstofone
5105     \ifundefined{latin@Alph}{\}%
5106       \ifx\@Alph\greek@Alph
5107         \def\@Alph{Alph\@arabic}%
5108       \fi
5109     }%
5110     \ifx\@Alph\@Alph@bul
5111       \def\@Alph{Alph\@arabic}%
5112     \fi
5113     \ifx\@alph\@alph@bul
5114       \def\@alph{alph\@arabic}%
5115     \fi
5116     \ifHy@naturalnames
5117       \let\textlatin\@firstofone
5118       \xdef\@currentHlabel{\csname the#1\endcsname}%
5119     \else
5120       \xdef\@currentHlabel{\csname theH#1\endcsname}%
5121     \fi
5122     \xdef\@currentHref{%
5123       \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5124     }%
5125   \else
5126     \Hy@GlobalStepCount\Hy@linkcounter
5127     \xdef\@currentHref{\Hy@param.the\Hy@linkcounter}%
5128   \fi
5129 \endgroup
5130 }

5131 \ifpackageloaded{fancyvrb}{%
5132   \ifpackageafter{fancyvrb}{1998/05/20}{\}%
5133   \def\FV@StepLineNo{%
5134     \FV@SetLineNo
5135     \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
5136     \FV@StepLineNo
5137   }%
5138 }%
5139 }{}

```

29 Package lastpage support

Package lastpage directly writes the `\newlabel` command to the aux file. Because package hyperref requires additional arguments, the internal command `\lastpage@putlabel` is redefined. The patch is deferred by `\AtBeginDocument`, because it is possible that package lastpage is loaded after package hyperref. The same algorithm (options hypertextnames and plainpages) is used to get the page anchor name as in `\Hy@EveryPageAnchor` (see sec. 38). The link will not work if option pageanchor is set to false.

```
\lastpage@putlabel
```

```
5140 \AtBeginDocument{%
```

```

5141 \@ifclassloaded{revtex4}{%
5142   \@namedef{ver@lastpage.sty}{1994/06/25}%
5143 }{}%
5144 \@ifpackageloaded{lastpage}{%
5145   \ifHy@pageanchor
5146   \else
5147     \Hy@WarningNoLine{%
5148       The \string\pageref{LastPage} link doesn't work\MessageBreak
5149       with disabled option 'pageanchor'%
5150     }%
5151   \fi
5152   \def\lastpage@putlabel{%
5153     \addtocounter{page}{-1}%
5154     \if@filesw
5155       \begingroup
5156         \let\@number\@firstofone
5157         \ifHy@pageanchor
5158           \ifHy@hypertextnames
5159             \ifHy@plainpages
5160               \def\Hy@temp{\arabic{page}}%
5161             \else
5162               \Hy@unicodefalse
5163               \pdfstringdef\Hy@temp{\thepage}%
5164             \fi
5165           \else
5166             \def\Hy@temp{\the\Hy@pagecounter}%
5167           \fi
5168         \fi
5169         \immediate\write\@auxout{%
5170           \string\newlabel
5171             {LastPage}{\the\Hy@temp}{\thepage}{\the\Hy@temp}{\the\Hy@temp}{\the\Hy@temp}%
5172           \ifHy@pageanchor page.\Hy@temp\fi}}}%
5173     }%
5174   \endgroup
5175   \fi
5176   \addtocounter{page}{1}%
5177 }{}%
5178 \@ifclassloaded{revtex4}{%
5179   \begingroup
5180     \toks@\expandafter{\lastpage@putlabel}%
5181     \edef\x{\endgroup
5182       \def\noexpand\lastpage@putlabel{%
5183         \noexpand\stepcounter{page}%
5184         \the\toks@
5185         \noexpand\addtocounter{page}\noexpand\m@ne
5186       }%
5187     }%
5188     \x
5189   }{}%
5190 }{}%
5191 }
5192 \end{package}
5193 \checkpackage{lastpage}[1994/06/25]
5194 \checkcommand\def\lastpage@putlabel{%
5195   \addtocounter{page}{-1}%
5196   \immediate\write\@auxout{%

```

```

5198 \string\newlabel{LastPage}{\thepage}%
5199 }%
5200 \addtocounter{page}{1}%
5201 }
5202 </check>
5203 <*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.

```

5204 \def\hypergetref#1{\getrefbykeydefault{#1}{}}{??}}
5205 \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:

```

5206 \@ifpackageloaded{titlesec}{%
5207 \def\ttl@Hy@steplink#1{%
5208 \Hy@GlobalStepCount\Hy@linkcounter
5209 \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5210 \def\ttl@Hy@saveanchor{%
5211 \Hy@raisedlink{%
5212 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5213 }%
5214 }%
5215 }%
5216 \def\ttl@Hy@refstepcounter#1{%
5217 \let\ttl@b\Hy@raisedlink
5218 \def\Hy@raisedlink##1{%
5219 \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
5220 }%
5221 \refstepcounter{#1}%
5222 \let\Hy@raisedlink\ttl@b
5223 }%
5224 }{}

```

Package titletoc support:

```

5225 \@ifpackageloaded{titletoc}{%
5226 \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
5227 }{}

```

32 Package varioref support

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

```

5228 \def\Hy@varioref@undefined{???}{??}{-}{-}}
5229 \@ifpackageloaded{varioref}{%
5230 \def\vref@pagenum#1#2{%
5231 \@ifundefined{r@#2}{%
5232 \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined

```

```

5233 }{}%
5234 \edef#1{\getpagerefnumber{#2}}%
5235 }%
5236 }{}

```

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

```

5237 \@ifpackageloaded{longtable}{%
5238   \begingroup
5239   \def\y{\LT@array}%
5240   \@ifundefined{scr@LT@array}{\def\y{\scr@LT@array}}%
5241   \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
5242     \expandafter\endgroup
5243     \expandafter\def\y[##1]##2{%
5244       \H@refstepcounter{#1}%
5245       \hyper@makecurrent{table}%
5246       \let\Hy@LT@currentHlabel\@currentHlabel
5247       \let\Hy@LT@currentHref\@currentHref
5248       #2\@sharp####4%
5249     }%
5250   }%
5251   \expandafter\expandafter\expandafter\x\y[##1][##2]\@nil

```

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

```

5252   \begingroup
5253   \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
5254     \endgroup
5255     \def\LT@start{%
5256       #1%
5257       \let\@currentHlabel\Hy@LT@currentHlabel
5258       \let\@currentHref\Hy@LT@currentHref
5259       \Hy@raisedlink{%
5260         \hyper@anchorstart{\@currentHref}\hyper@anchorend
5261       }%
5262       \ifvoid\LT@firsthead\copy
5263       #2%
5264     }%
5265   }%
5266   \expandafter\x\LT@start\@nil
5267 }{}

```

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.

```

5268 \let\new@refstepcounter\refstepcounter

```



```

5269 \let\H@equation\equation
5270 \let\H@endequation\endequation

5271 \@ifpackageloaded{amsmath}{%
5272   \long\def\Hy@temp{%
5273     \incr@eqnum
5274     \mathdisplay@push
5275     \st@rredfalse \global\@eqnswtrue
5276     \mathdisplay{equation}%
5277   }%
5278   \ifx\Hy@temp\equation
5279     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
5280       \csname iftrue\endcsname
5281   \else
5282     \long\def\equation{%
5283       \mathdisplay@push
5284       \st@rredfalse \global\@eqnswtrue
5285       \mathdisplay{equation}%
5286       \incr@eqnum
5287     }%
5288   \fi
5289 \fi
5290 }{%
5291 \def\equation{%
5292   \let\refstepcounter\H@refstepcounter
5293   \H@equation
5294   \@ifundefined{theHequation}{%
5295     \make@stripped@name{\theequation}%
5296     \let\theHequation\newname
5297   }{%
5298     \hyper@makecurrent{equation}%
5299     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}}%
5300   \let\refstepcounter\new@refstepcounter
5301 }%
5302 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
5303 }

```

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.

```

5304 \newif\if@eqnstar
5305 \@eqnstarfalse
5306 \let\H@eqnarray\eqnarray
5307 \let\H@endeqnarray\endeqnarray
5308 \def\eqnarray{%
5309   \let\Hy@reserved@a\relax
5310   \def\@currentHref{}%
5311   \H@eqnarray
5312   \if@eqnstar
5313   \else
5314     \ifx\\\@currentHref\\%
5315     \else
5316       \@ifundefined{theHequation}{%
5317         \make@stripped@name{\theequation}%
5318         \let\theHequation\newname
5319       }{%

```

```

5320     \hyper@makecurrent{equation}%
5321     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
5322     \fi
5323   \fi
5324 }
5325 \def\endeqnarray{%
5326   \H@endeqnarray
5327 }

```

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.

```

5328 \@namedef{eqnarray*}{%
5329   \def\@eqnocr{\nonumber\@seqnocr}\@eqnstartrue\eqnarray
5330 }
5331 \@namedef{endeqnarray*}{%
5332   \nonumber\endeqnarray\@eqnstarfalse
5333 }

```

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

```

5334 \@ifundefined{subeqnarray}{\fi}%
5335   \let\H@subeqnarray\subeqnarray
5336   \let\H@endsubeqnarray\endsubeqnarray
5337   \def\subeqnarray{%
5338     \let\Hy@reserved@a\relax
5339     \H@subeqnarray
5340     \@ifundefined{theHequation}{%
5341       \make@stripped@name{\theequation}%
5342       \let\theHequation\newname
5343     }{}%
5344     \hyper@makecurrent{equation}%
5345     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
5346   }%
5347   \def\endsubeqnarray{%
5348     \H@endsubeqnarray
5349   }%
5350   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
5351 }

```

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

```

5352 \def\make@stripped@name#1{%
5353   \begingroup
5354     \escapechar\m@ne
5355     \global\let\newname\@empty
5356     \protected@edef\Hy@tempa{#1}%
5357     \edef\@tempb{%
5358       \noexpand\@tfor\noexpand\Hy@tempa:=%
5359       \expandafter\strip@prefix\meaning\Hy@tempa
5360     }%
5361     \@tempb\do{%
5362       \if\Hy@tempa\else
5363         \if\Hy@tempa\else
5364           \xdef\newname{\newname\Hy@tempa}%
5365         \fi
5366       \fi
5367     }%
5368   \endgroup
5369 }

```

Support for amsmath's subequations:

```

5370 \begingroup\expandafter\expandafter\expandafter\endgroup
5371 \expandafter\ifx\cename subequations\endcsname\relax
5372 \else
5373   \let\HyOrg@subequations\subequations
5374   \def\subequations{%
5375     \stepcounter{equation}%
5376     \protected@edef\theHparentequation{%
5377       \ifundefined{theHequation}\theequation\theHequation
5378     }%
5379     \addtocounter{equation}{-1}%
5380     \HyOrg@subequations
5381     \def\theHequation{\theHparentequation\alph{equation}}%
5382     \ignorespaces
5383   }%
5384 \fi

```

Support for package amsthm (Daniel Müllner):

```

5385 \@ifpackageloaded{amsthm}{%
5386   \def\@thm#1#2#3{%
5387     \ifhmode
5388       \unskip\unskip\par
5389     \fi
5390     \normalfont
5391     \trivlist
5392     \let\thmheadnl\relax
5393     \let\thm@swap\@gobble
5394     \thm@notefont{\fontseries\mddefault\upshape}%
5395     \thm@headpunct{.}% add period after heading
5396     \thm@headsep 5\p@ plus\p@ minus\p@\relax
5397     \thm@space@setup
5398     #1% style overrides
5399     \@topsep \thm@preskip           % used by thm head
5400     \@topsepadd \thm@postskip      % used by \endparenv
5401     \def\dth@counter{#2}%
5402     \ifx\@empty\dth@counter
5403       \def\@tempa{%
5404         \@oparg{\@begintheorem{#3}{}}{}[]%
5405       }%
5406     \else
5407       \H@refstepcounter{#2}%
5408       \hyper@makecurrent{#2}%
5409       \def\@tempa{%
5410         \@oparg{\@begintheorem{#3}{\cename the#2\endcsname}}{}[]%
5411       }%
5412     \fi
5413     \@tempa
5414   }%
5415   \dth@everypar={%
5416     \@minipagefalse
5417     \global\@newlistfalse
5418     \@noparitemfalse
5419     \if@inlabel
5420       \global\@inlabelfalse
5421     \begingroup
5422       \setbox\z@\lastbox
5423       \ifvoid\z@
5424         \kern-\itemindent

```

```

5425         \fi
5426     \endgroup
5427     \ifx\@empty\dth@counter
5428     \else
5429         \Hy@raisedlink{%
5430             \hyper@anchorstart{\@currentHref}\hyper@anchorend
5431         }%
5432     \fi
5433     \unhbox\@labels
5434 \fi
5435 \if@nobreak
5436     \clubpenaltyfalse \clubpenalty\@M
5437 \else
5438     \clubpenalty\@clubpenalty \everypar{}%
5439 \fi
5440 }%
5441 }{}

```

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.

```

5442 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
5443 \ifHy@hyperfootnotes
5444     \newcounter{Hfootnote}%
5445     \let\H@@footnotetext\@footnotetext
5446     \let\H@@footnotemark\@footnotemark
5447     \def\@xfootnotenext[#1]{%
5448         \begingroup
5449             \csname c@\@mpfn\endcsname #1\relax
5450             \unrestored@protected@xdef\@thefnmark{\thempfn}%
5451         \endgroup
5452         \ifx\@footnotetext\@mpfootnotetext
5453             \expandafter\H@@mpfootnotetext
5454         \else
5455             \expandafter\H@@footnotetext
5456         \fi
5457     }%
5458     \def\@xfootnotemark[#1]{%
5459         \begingroup
5460             \c@footnote #1\relax
5461             \unrestored@protected@xdef\@thefnmark{\thefnmark}%
5462         \endgroup
5463         \H@@footnotemark
5464     }%
5465     \let\H@@mpfootnotetext\@mpfootnotetext
5466     \long\def\@mpfootnotetext#1{%
5467         \H@@mpfootnotetext{%
5468             \ifHy@nesting
5469                 \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5470             \else
5471                 \Hy@raisedlink{%
5472                     \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%

```

```

5473     }#1%
5474     \fi
5475   }%
5476 }%
5477 \long\def\@footnotetext#1{%
5478   \H@@footnotetext{%
5479     \ifHy@nesting
5480       \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5481     \else
5482       \Hy@raisedlink{%
5483         \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5484       }%
5485       \let\@currentHlabel\Hy@footnote@currentHlabel
5486       \let\@currentHref\Hy@footnote@currentHref
5487       \let\@currentlabelname\@empty
5488       #1%
5489     \fi
5490   }%
5491 }%

```

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.

```

5492 \def\@footnotemark{%
5493   \leavevmode
5494   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
5495   \stepcounter{Hfootnote}%
5496   \global\let\Hy@saved@currentHlabel\@currentHlabel
5497   \global\let\Hy@saved@currentHref\@currentHref
5498   \hyper@makecurrent{Hfootnote}%
5499   \global\let\Hy@footnote@currentHlabel\@currentHlabel
5500   \global\let\Hy@footnote@currentHref\@currentHref
5501   \global\let\@currentHlabel\Hy@saved@currentHlabel
5502   \global\let\@currentHref\Hy@saved@currentHref
5503   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
5504   \@makefnmark
5505   \hyper@linkend
5506   \ifhmode\spacefactor\x@sf\fi
5507   \relax
5508 }%

```

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

```

5509 \@ifpackageloaded{longtable}{%
5510   \CheckCommand*\LT@p@ftntext}[1]{%
5511     \edef\@tempa{%
5512       \the\LT@p@ftn
5513       \noexpand\footnotetext[\the\c@footnote]%
5514     }%
5515     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
5516   }%
5517   \long\def\LT@p@ftntext#1{%
5518     \edef\@tempa{%
5519       \the\LT@p@ftn
5520       \begingroup

```

```

5521         \noexpand\c@footnote=\the\c@footnote\relax
5522         \noexpand\protected@xdef
5523             \noexpand\@thefnmark{\noexpand\thempfn}%
5524         \noexpand\protected@xdef\noexpand\@thefnmark{%
5525             \noexpand\thempfn
5526         }%
5527         \expandafter\expandafter\expandafter\noexpand
5528         \expandafter\expandafter\expandafter\Hy@LT@footnotetext
5529         \expandafter\expandafter\expandafter{%
5530             \expandafter\Hy@footnote@currentHref\expandafter
5531             }\expandafter{\Hy@footnote@currentHlabel}%
5532     }%
5533     \global\LT@p@ftn\expandafter{%
5534         \@tempa{#1}%
5535     \endgroup
5536 }%
5537 }%
5538 \long\def\Hy@LT@footnotetext#1#2#3{%
5539     \H@@footnotetext{%
5540         \ifHy@nesting
5541             \hyper@@anchor{#1}{#3}%
5542         \else
5543             \Hy@raisedlink{%
5544                 \hyper@@anchor{#1}{\relax}%
5545             }%
5546             \def\@currentHlabel{#2}%
5547             \def\@currentHref{#1}%
5548             \let\@currentlabelname\@empty
5549             #3%
5550         \fi
5551     }%
5552 }%
5553 }{}%

```

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

```

5554 \@ifpackageloaded{fancyvrb}{%
5555     \def\V@@footnotetext{%
5556         \insert\footins\bgroup
5557         \csname reset@font\endcsname
5558         \footnotesize
5559         \interlinepenalty\interfootnotelinepenalty
5560         \splittopskip\footnotesep
5561         \splitmaxdepth\dp\strutbox
5562         \floatingpenalty \@MM
5563         \hsize\columnwidth
5564         \@parboxrestore
5565         \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
5566         \@makefntext{}%
5567         \rule{\z@}{\footnotesep}%
5568         \bgroup
5569         \aftergroup\V@@footnotetext
5570         \Hy@raisedlink{%
5571             \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5572         }%
5573         \let\@currentHlabel\Hy@footnote@currentHlabel
5574         \let\@currentHref\Hy@footnote@currentHref
5575         \let\@currentlabelname\@empty
5576         \ignorespaces

```

```

5577 }%
5578 }{}%

```

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.

```

5579 \let\HyOrg@maketitle\maketitle
5580 \def\maketitle{%
5581   \let\Hy@saved@footnotemark\@footnotemark
5582   \let\Hy@saved@footnotetext\@footnotetext
5583   \let\@footnotemark\H@@footnotemark
5584   \let\@footnotetext\H@@footnotetext
5585   \@ifnextchar[\Hy@maketitle@optarg{% ]
5586     \HyOrg@maketitle
5587     \Hy@maketitle@end
5588   }%
5589 }%
5590 \def\Hy@maketitle@optarg[#1]{%
5591   \HyOrg@maketitle[#1]%
5592   \Hy@maketitle@end
5593 }%
5594 \def\Hy@maketitle@end{%
5595   \ifx\@footnotemark\H@@footnotemark
5596     \let\@footnotemark\Hy@saved@footnotemark
5597   \fi
5598   \ifx\@footnotetext\H@@footnotetext
5599     \let\@footnotetext\Hy@saved@footnotetext
5600   \fi
5601 }%

```

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

```

5602 \def\realfootnote{%
5603   \@ifnextchar[\@xfootnote{%
5604     \stepcounter{\@mpfn}%
5605     \protected@xdef\@thefnmark{\thempfn}%
5606     \H@@footnotemark\H@@footnotetext
5607   }%
5608 }%

5609 \fi
5610 \Hy@DisableOption{hyperfootnotes}

5611 </package>
5612 <*check>
5613 \checklatex
5614 \checkcommand\def\@xfootnotenext[#1]{%
5615   \begingroup
5616     \csname c@\@mpfn\endcsname #1\relax
5617     \unrestored@protected@xdef\@thefnmark{\thempfn}%
5618   \endgroup
5619   \@footnotetext
5620 }
5621 \checkcommand\def\@xfootnotemark[#1]{%
5622   \begingroup
5623     \c@footnote #1\relax
5624     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5625   \endgroup
5626   \@footnotemark
5627 }

```

```

5628 \checkcommand\def\@footnotemark{%
5629   \leavevmode
5630   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
5631   \@makefnmark
5632   \ifhmode\spacefactor\@x@sf\fi
5633   \relax
5634 }
5635 \end{check}
5636 \end{package}

```

36 Float captions

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

```

5637 \def\caption{%
5638   \ifx\@capytype\@undefined
5639     \@latex@error{\noexpand\caption outside float}\@ehd
5640     \expandafter\@gobble
5641   \else
5642     \H@refstepcounter\@capytype
5643     \let\Hy@tempa\@caption
5644     \ifundefined{float@caption}{%
5645       {%
5646         \expandafter\ifx\csname @float@c@\@capytype\endcsname
5647           \float@caption
5648         \let\Hy@tempa\Hy@float@caption
5649       \fi
5650     }%
5651     \expandafter\@firstofone
5652   \fi
5653   {\@dblarg{\Hy@tempa\@capytype}}}%
5654 }
5655 \long\def\@caption#1[#2]#3{%
5656   \expandafter\ifx\csname if@capstart\expandafter\endcsname
5657     \csname iftrue\endcsname
5658     \global\let\@currentHref\hc@currentHref
5659   \else
5660     \hyper@makecurrent{\@capytype}%
5661   \fi
5662   \def\@currentlabelname{#2}%
5663   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
5664     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
5665   }%
5666   \begingroup
5667     \@parboxrestore
5668     \if@minipage
5669       \setminipage
5670     \fi
5671     \normalsize
5672     \expandafter\ifx\csname if@capstart\expandafter\endcsname
5673       \csname iftrue\endcsname
5674       \global\@capstartfalse
5675       \makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
5676     \else
5677       \makecaption{\csname fnum@#1\endcsname}{%
5678         \ignorespaces

```


If we cannot have nesting, the anchor is empty.

```

5679      \ifHy@nesting
5680      \hyper@@anchor{\@currentHref}{#3}%
5681      \else
5682      \Hy@raisedlink{\hyper@@anchor{\@currentHref}{\relax}}#3%
5683      \fi
5684  }%
5685  \fi
5686  \par
5687  \endgroup
5688 }

```

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.

```

5689 \let\Hy@float@caption\@caption
5690 \ifpackageloaded{float}{%
5691   \def\Hy@float@caption{%
5692     \ifx\Hy@float@currentHref\undefined
5693       \hyper@makecurrent{\@capytype}%
5694       \global\let\Hy@float@currentHref\@currentHref
5695     \else
5696       \let\@currentHref\Hy@float@currentHref
5697     \fi
5698     \float@caption
5699   }%
5700   \let\HyOrg@float@makebox\float@makebox
5701   \renewcommand{\float@makebox}[1]{%
5702     \HyOrg@float@makebox{%
5703       #1\relax
5704       \ifx\Hy@float@currentHref\undefined
5705       \else
5706         \hyper@@anchor{\Hy@float@currentHref}{\relax}%
5707         \global\let\Hy@float@currentHref\undefined
5708       \fi
5709     }%
5710   }%
5711 }{}

5712 </package>
5713 <*check>
5714 \checklatex[1999/06/01 - 2000/06/01]
5715 \checkcommand\def\caption{%
5716   \ifx\@capytype\undefined
5717     \@latex@error{noexpand\caption outside float}\@ehd
5718     \expandafter\@gobble
5719   \else
5720     \refstepcounter\@capytype
5721     \expandafter\@firstofone
5722   \fi
5723   {\@dblarg{\@caption\@capytype}}}%
5724 }

5725 \checkcommand\long\def\@caption#1[#2]#3{%
5726   \par
5727   \addcontentsline{\csname ext@#1\endcsname}{#1}%
5728   {\protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
5729   \begingroup
5730     \@parboxrestore
5731     \if@minipage

```

```

5732     \@setminipage
5733     \fi
5734     \normalsize
5735     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
5736 \endgroup
5737 }
5738 </check>
5739 <*package>

```

37 Bibliographic references

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

However, 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.

```

5740 \def\hyper@natlinkstart#1{%
5741   \Hy@backout{#1}%
5742   \hyper@linkstart{cite}{cite.#1}%
5743   \def\hyper@nat@current{#1}%
5744 }
5745 \def\hyper@natlinkend{%
5746   \hyper@linkend
5747 }
5748 \def\hyper@natlinkbreak#1#2{%
5749   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
5750 }
5751 \def\hyper@natanchorstart#1{%
5752   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
5753 }
5754 \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.

```

5755 \@ifundefined{NAT@parse}{%
5756   \providecommand*\@extra@binfo{}%
5757   \providecommand*\@extra@b@citeb{}%
5758   \def\bibcite#1#2{%
5759     \newl@bel{b}{#1\@extra@binfo}{%
5760       \hyper@@link[cite]{}{cite.#1\@extra@b@citeb}{#2}%
5761     }%
5762   }%
5763   \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.”.

```

5764 \let\Hy@bibcite\bibcite
5765 \begingroup
5766   \@ifundefined{bbl@cite@choice}{}{%
5767     \g@addto@macro\bbl@cite@choice{%
5768       \let\bibcite\Hy@bibcite

```

```

5769     }%
5770   }%
5771 \endgroup
\@BIBLABEL is working around a ‘feature’ of RevTeX.
5772 \providecommand*\@BIBLABEL{\@biblabel}%
5773 \def\@lbibitem[#1]#2{%
5774   \skiphyperreftrue
5775   \H@item[%
5776     \ifx\Hy@raisedlink\@empty
5777       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
5778       \@BIBLABEL{#1}%
5779       \hyper@anchorend
5780     \else
5781       \Hy@raisedlink{%
5782         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
5783       }%
5784     \@BIBLABEL{#1}%
5785   \fi
5786   \hfill
5787 ]%
5788 \skiphyperreffalse
5789 \if@filesw
5790   \begingroup
5791     \let\protect\noexpand
5792     \immediate\write\@auxout{%
5793       \string\bibcite{#2}{#1}%
5794     }%
5795   \endgroup
5796 \fi
5797 \ignorespaces
5798 }%

```

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

```

5799 \def\@bibitem#1{%
5800   \skiphyperreftrue\H@item\skiphyperreffalse
5801   \Hy@raisedlink{%
5802     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
5803   }%
5804   \if@filesw
5805     \begingroup
5806       \let\protect\noexpand
5807       \immediate\write\@auxout{%
5808         \string\bibcite{#1}{\the\value{\@listctr}}%
5809       }%
5810     \endgroup
5811   \fi
5812   \ignorespaces
5813 }%
5814 }{}

5815 </package>
5816 <*check>
5817 \checklatex
5818 \checkcommand\def\@lbibitem[#1]#2{%
5819   \item[\@biblabel{#1}\hfill]%
5820   \if@filesw
5821     {%

```

```

5822 \let\protect\noexpand
5823 \immediate\write\@auxout{%
5824 \string\bibcite{#2}{#1}%
5825 }%
5826 }%
5827 \fi
5828 \ignorespaces
5829 }
5830 \checkcommand\def\@bibitem#1{%
5831 \item
5832 \if@filesw
5833 \immediate\write\@auxout{%
5834 \string\bibcite{#1}{\the\value{\@listctr}}%
5835 }%
5836 \fi
5837 \ignorespaces
5838 }
5839 \</check>
5840 \<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.

```

5841 \@ifclassloaded{revtext}{%
5842 \Hy@Info{*** compatibility with revtext **** }%
5843 \def\revtext@checking#1#2{%
5844 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
5845 \expandafter\def\csname b@#1\endcsname{#2}%
5846 \@SetMaxRnhefLabel{#1}%
5847 \expandafter\let\csname b@#1\endcsname\T@temp
5848 }%

```

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

```

5849 \@ifundefined{CITE}{\def\CITE{\@cite}}{}%
5850 \providecommand*\@extra@b@citeb{}%
5851 \def\CITE[#1]#2{%
5852 \let\@citea\@empty
5853 \leavevmode
5854 \unskip
5855 $^{}%
5856 \scriptstyle
5857 \CITE{%
5858 \@for\@citeb:=#2\do{%
5859 \@citea
5860 \def\@citea{,\penalty\@m\ }%
5861 \edef\@citeb{\expandafter\@firstofone\@citeb}%
5862 \if@filesw
5863 \immediate\write\@auxout{\string\citation{\@citeb}}%
5864 \fi
5865 \@ifundefined{b@\@citeb\extra@b@citeb}{%
5866 \mbox{\reset@font\bfseries ?}%
5867 \G@refundefinedtrue
5868 \@latex@warning{%
5869 Citation ‘\@citeb’ on page \thepage \space undefined%
5870 }%
5871 }{}%
5872 {\csname b@\@citeb\@extra@b@citeb\endcsname}%

```

```

5873         }%
5874     }%
5875     }{#1}%
5876     }$%
5877 }%

```

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.

```

5878 \def\@citex[#1]#2{%
5879     \let\@citea\@empty
5880     \@cite{%
5881         \@for\@citeb:=#2\do{%
5882             \@citea
5883             \def\@citea{\penalty\@m\ }%
5884             \edef\@citeb{\expandafter\@firstofone\@citeb}%
5885             \if@filesw
5886                 \immediate\write\@auxout{\string\citation{\@citeb}}%
5887             \fi
5888             \ifundefined{b@\@citeb\@extra@b@citeb}{%
5889                 \mbox{\reset@font\bfseries ?}%
5890                 \G@refundefinedtrue
5891                 \@latex@warning{%
5892                     Citation ‘\@citeb’ on page \thepage \space undefined%
5893                 }%
5894             }{%
5895                 \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
5896             }%
5897         }%
5898     }{#1}%
5899 }%
5900 }{}

```

37.1 Package harvard

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

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

```

5901 \ifpackageloaded{harvard}{%
5902     \AtBeginDocument{%
5903         \Hy@Info{*** compatibility with harvard ***}%
5904         \Hy@raiselinksfalse
5905         \def\harvardcite#1#2#3#4{%
5906             \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{\cite.#1}{#2}}%
5907             \global\@namedef{HAR@an@#1}{\hyper@link[cite]{\cite.#1}{#3}}%
5908             \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{\cite.#1}{#4}}%
5909             \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
5910         }%
5911         \def\HAR@citetoaux#1{%
5912             \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
5913             \ifHy@backref
5914                 \ifx\@empty\@currentlabel
5915                     \else
5916                         \@bsphack
5917                     \if@filesw

```

```

5918         \protected@write\@auxout{}\{
5919         \string\@writefile{brf}\{
5920         \string\backcite{#1}\{
5921         {\thepage}\{\@currentlabel}\{\@currentHref}\}
5922         }\%
5923     }\%
5924 }\%
5925 \fi
5926 \@esphack
5927 \fi
5928 \fi
5929 }\%
5930 \def\harvarditem{%
5931     \ifnextchar[{\@harvarditem}\@harvarditem[\null]}%
5932 }\%
5933 \def\@harvarditem[#1]#2#3#4#5\par{%
5934     \item[]%
5935     \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
5936     \if@filesw
5937         \begingroup
5938         \def\protect##1{\string ##1\space}%
5939         \ifthenelse{\equal{#1}\{\null}}%
5940             {\def\next{{#4}{#2}{#3}}}%
5941             {\def\next{{#4}{#2}{#1}{#3}}}%
5942         \immediate\write\@auxout{\string\harvardcite\codeof\next}%
5943     \endgroup
5944     \fi
5945     \protect\hspace*{-\labelwidth}%
5946     \protect\hspace*{-\labelsep}%
5947     \ignorespaces
5948     #5%
5949     \ifHy@backref
5950         \newblock
5951         \backref{\csname br@#4\endcsname}%
5952     \fi
5953     \par
5954 }\%

```

\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:

```

5955 \long\def\HAR@checkcitations#1#2#3#4{%
5956     \def\HAR@tempa{\hyper@@link[cite]{}\{cite.#1\}{#2}}%
5957     \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
5958     \def\HAR@tempa{\hyper@@link[cite]{}\{cite.#1\}{#3}}%
5959     \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
5960     \def\HAR@tempa{\hyper@@link[cite]{}\{cite.#1\}{#4}}%
5961     \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
5962     \else
5963         \@tempswatrue
5964     \fi
5965     \else
5966         \@tempswatrue
5967     \fi
5968     \else
5969         \@tempswatrue
5970     \fi

```

```

5971 }%
5972 }%

5973 }{}

```

37.2 Package chicago

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

```

5974 \@ifpackageloaded{chicago}{%

```

```

\citeN

```

```

5975 \def\citeN{%
5976   \def\@citesep{--1000}%
5977   \def\@cite##1##2{##1}%
5978   \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
5979   \@citedata@opt
5980 }%

```

```

\shortciteN

```

```

5981 \def\shortciteN{%
5982   \def\@citesep{--1000}%
5983   \def\@cite##1##2{##1}%
5984   \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
5985   \@citedata@opt
5986 }%

```

```

\@citedata@opt

```

```

5987 \def\@citedata@opt{%
5988   \let\@cite@opt\@empty
5989   \@ifnextchar [{%
5990     \@tempwatrue
5991     \@citedatax@opt
5992   }{%
5993     \@tempwafalse
5994     \@citedatax[]%
5995   }%
5996 }%

```

```

\@citedatax@opt

```

```

5997 \def\@citedatax@opt[#1]{%
5998   \def\@cite@opt{, #1}%
5999   \@citedatax[#1]}%
6000 }%

6001 }{}

```

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.

```

6002 \def\Hy@EveryPageAnchor{%
6003   \Hy@DistillerDestFix
6004   \ifHy@pageanchor
6005     \ifHy@hypertextnames
6006     \ifHy@plainpages
6007       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6008     \else
6009       \begingroup
6010         \let\@number\@firstofone
6011         \Hy@unicodedefalse
6012         \pdfstringdef\@the@H@page{\thepage}%
6013       \endgroup
6014       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6015     \fi
6016   \else
6017     \Hy@GlobalStepCount\Hy@pagecounter
6018     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\Hy@pagecounter}}%
6019   \fi
6020   \vbox to 0pt{%
6021     \kern\voffset
6022     \kern\topmargin
6023     \kern-1bp\relax
6024     \hbox to 0pt{%
6025       \kern\hoffset
6026       \kern\ifodd\value{page}%
6027         \oddsidemargin
6028       \else
6029         \evensidemargin
6030       \fi
6031       \kern-1bp\relax
6032       \Hy@TempPageAnchor
6033     \hss
6034   }%
6035   \vss
6036 }%
6037 \fi
6038 }
6039 \g@addto@macro\Hy@EveryPageBoxHook{%
6040   \Hy@EveryPageAnchor
6041 }

```

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.

```

6042 \begingroup\expandafter\expandafter\expandafter\endgroup
6043 \expandafter\ifx\csname chapter\endcsname\relax
6044   \def\toclevel@part{0}%
6045 \else
6046   \def\toclevel@part{-1}%
6047 \fi
6048 \def\toclevel@chapter{0}
6049 \def\toclevel@section{1}
6050 \def\toclevel@subsection{2}
6051 \def\toclevel@subsubsection{3}

```



```

6052 \def\toclevel@paragraph{4}
6053 \def\toclevel@subparagraph{5}
6054 \def\toclevel@figure{0}
6055 \def\toclevel@table{0}
6056 \@ifpackageloaded{listings}{%
6057   \providecommand*\theHlstlisting{\thelstlisting}%
6058   \providecommand*\toclevel@lstlisting{0}%
6059 }{}
6060 \@ifpackageloaded{listing}{%
6061   \providecommand*\theHlisting{\thelisting}%
6062   \providecommand*\toclevel@listing{0}%
6063 }{}
6064 \def\addcontentsline#1#2#3{% toc extension, type, tag
6065   \begingroup
6066     \let\label\gobble
6067     \let\textlatin\@firstofone
6068     \ifx\@currentHref\@empty
6069       \Hy@Warning{%
6070         No destination for bookmark of \string\addcontentsline,%
6071         \MessageBreak destination is added%
6072       }%
6073     \phantomsection
6074   \fi
6075   \expandafter\ifx\csname toclevel@#2\endcsname\relax
6076     \begingroup
6077       \def\Hy@tempa{#1}%
6078       \ifx\Hy@tempa\Hy@bookmarkstype
6079         \Hy@WarningNoLine{%
6080           bookmark level for unknown #2 defaults to 0%
6081         }%
6082       \else
6083         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6084       \fi
6085     \endgroup
6086     \expandafter\gdef\csname toclevel@#2\endcsname{0}%
6087   \fi
6088   \edef\Hy@toclevel{\csname toclevel@#2\endcsname}%
6089   \Hy@writebookmark{\csname the#2\endcsname}%
6090     {#3}%
6091     {\@currentHref}%
6092     {\Hy@toclevel}%
6093     {#1}%
6094   \ifHy@verbose
6095     \def\Hy@tempa{#3}%
6096     \@onelevel@sanitize\Hy@tempa
6097     \typeout{pdftex: bookmark at \the\inputlineno: %
6098       {\csname the#2\endcsname}%
6099       {\Hy@tempa}%
6100       {\@currentHref}%
6101       {\Hy@toclevel}%
6102       {#1}%
6103     }%
6104   \fi
6105   \addtocontents{#1}{%
6106     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6107   }%
6108 \endgroup

```

```

6109 }
6110 \def\contentsline#1#2#3#4{%
6111   \ifx\#4\%
6112     \csname l@#1\endcsname{#2}{#3}%
6113   \else
6114     \ifcase\Hy@linktoc % none
6115       \csname l@#1\endcsname{#2}{#3}%
6116     \or % section
6117       \csname l@#1\endcsname{%
6118         \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6119       }{#3}%
6120     \or % page
6121       \csname l@#1\endcsname{#2}{#3}%
6122       \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6123     }%
6124   \else % all
6125     \csname l@#1\endcsname{%
6126       \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6127     }{#3}%
6128     \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6129   }%
6130   \fi
6131 \fi
6132 }

6133 \</package>
6134 \<*check>
6135 \checklatex
6136 \checkcommand\def\addcontentsline#1#2#3{%
6137   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
6138 }
6139 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6140 \</check>
6141 \<*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.

```

6142 \let\H@definecounter\@definecounter
6143 \def\@definecounter#1{%
6144   \H@definecounter{#1}%
6145   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6146 }

```

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.

```

6147 \let\H@newctr\@newctr
6148 \def\@newctr#1[#2]{%
6149   \H@newctr#1[#2]%
6150   \expandafter\def\csname theH#1\endcsname{%
6151     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
6152   }%
6153 }

```

41 AMSL^AT_EX compatibility

Oh, no, they don't use anything as simple as `\refstepcounter` in the AMS! We need to intercept some low-level operations of theirs. Damned if we are going to try and work out what they get up to. Just stick a label of 'AMS' on the front, and use the label *they* worked out. If that produces something invalid, I give up. They'll change all the code again anyway, I expect (SR).

Version 6.77p uses a patch by Ross Moore.

```

6154 \ifpackageloaded{amsmath}{%
6155   \def\Hy@make@anchor{%
6156     \Hy@GlobalStepCount\Hy@linkcounter
6157     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6158     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6159   }%
6160   \def\Hy@make@df@tag@#1{%
6161     \gdef\df@tag{%
6162       \maketag@@@{\Hy@make@anchor#1}%
6163       \def\@currentlabel{#1}%
6164     }%
6165   }%
6166   \def\Hy@make@df@tag@@#1{%
6167     \gdef\df@tag{%
6168       \tagform@{\Hy@make@anchor#1}%
6169       \toks@{\xp{\p@equation{#1}}}%
6170       \edef\@currentlabel{\the\toks@}%
6171     }%
6172   }%
6173   \let\HyOrg@make@df@tag@@\make@df@tag@@
6174   \let\HyOrg@make@df@tag@@@ \make@df@tag@@@
6175   \let\make@df@tag@@\Hy@make@df@tag@@
6176   \let\make@df@tag@@@ \Hy@make@df@tag@@@
6177 }{}

```

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

```

6178 \ifpackagewith{hyperref}{pdftex}{%
6179   \let\H@seteqlabel\@seteqlabel
6180   \def\@seteqlabel#1{%
6181     \H@seteqlabel{#1}%
6182     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6183     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6184   }%
6185 }{}

```

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.

```

6186 \let\HyOrg@addtoreset\@addtoreset
6187 \def\@addtoreset#1#2{%
6188   \HyOrg@addtoreset{#1}{#2}%
6189   \expandafter\xdef\csname theH#1\endcsname{%
6190     \expandafter\noexpand
6191       \csname the\@ifundefined{theH#2}{H#2}\endcsname
6192     .\noexpand\the\noexpand\value{#1}%
6193   }%
6194 }
```

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

```

6195 \end{package}
6196 \check
6197 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
6198 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
6199   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6200     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6201       \@addtoreset{#2}{#3}%
6202       \@xp\xdef\csname the#2\endcsname{%
6203         \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6204       }%
6205     }%
6206   }%
6207 }%
6208 \end{check}
6209 \end{package}
6210 \@ifpackageloaded{amsmath}{%
6211   \@ifpackagelater{amsmath}[1999/12/14]{%
6212     \renewcommand*\@numberwithin[3][\arabic]{%
6213       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6214         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6215           \HyOrg@addtoreset{#2}{#3}%
6216           \@xp\xdef\csname the#2\endcsname{%
6217             \@xp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6218           }%
6219           \@xp\xdef\csname theH#2\endcsname{%
6220             \@xp\@nx
6221             \csname the\@ifundefined{theH#3}{H#3}\endcsname
6222             .\@nx#1{#2}%
6223           }%
6224         }%
6225       }%
6226     }%
6227   }%
6228   \Hy@WarningNoLine{%
6229     \string\numberwithin\space of package 'amsmath' %
6230     only fixed\MessageBreak
6231     for version 2000/06/06 v2.12 or newer%
6232   }%
6233 }%
6234 }
```

42 Included figures

Simply intercept the low level graphics package macro.

```
6235 \ifHy@figures
6236   \let\Hy@Gin@setfile\Gin@setfile
6237   \def\Gin@setfile#1#2#3{%
6238     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
6239   }%
6240 \fi
6241 \Hy@DisableOption{hyperfigures}
```

43 hyperindex entries

Internal command names are prefixed with \HyInd@.

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

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

```
6242 \ifHy@hyperindex
6243   \def\HyInd@ParenLeft{({}%
6244   \def\HyInd@ParenRight{)}}%
6245   \Hy@nextfalse
6246   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
6247   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
6248   \begingroup
6249     \lccode'\|=\expandafter'\HyInd@EncapChar\relax
6250   \lowercase{\endgroup
6251     \ifHy@next
6252       \let\HyInd@org@wrindex\@wrindex
6253       \def\@wrindex#1#2{\HyInd@@wrindex{#1}{#2}||\}%
6254       \def\HyInd@@wrindex#1#2|#3|#4\{\%
6255         \ifx\|#3\%
6256           \HyInd@org@wrindex{#1}{#2|hyperpage}%
6257         \else
6258           \def\Hy@temp@A{#3}%
6259           \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6260             \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6261             \relax
6262           \HyInd@org@wrindex{#1}{#2|#3}%
6263         \else
6264           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
6265         \fi
6266       \fi
6267     }%
6268   \else
6269     \def\@wrindex#1{\@@wrindex#1||\}%
6270     \def\@@wrindex#1|#2|#3\{\%
6271       \if@filesw
6272         \ifx\|#2\%
6273           \protected@write\@indexfile{\%
6274             \string\indexentry{#1|hyperpage}{\thepage}%

```

```

6275         }%
6276     \else
6277         \def\Hy@temp@A{#2}%
6278         \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6279             \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6280             \relax
6281             \protected@write\@indexfile{}\{%
6282                 \string\indexentry{#1|#2}{\thepage}%
6283             }%
6284     \else
6285         \protected@write\@indexfile{}\{%
6286             \string\indexentry{#1|#2hyperpage}{\thepage}%
6287         }%
6288     \fi
6289 \fi
6290 \fi
6291 \endgroup
6292 \@esphack
6293 }%
6294 \fi
6295 }%
6296 \fi
6297 \Hy@DisableOption{hyperindex}
6298 \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.

```

6299 \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.

```

6300 \def\hyperpage#1{%
6301   \HyInd@hyperpage#1\nohyperpage{}\@nil
6302 }
6303 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
6304   \HyInd@@hyperpage{#1}%
6305   #2%
6306   \def\Hy@temp{#3}%
6307   \ifx\Hy@temp\@empty
6308   \else
6309     \Hy@ReturnAfterFi{%
6310       \HyInd@hyperpage#3\@nil
6311     }%
6312   \fi
6313 }
6314 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
6315 \def\@hyperpage#1--#2--#3\{\{%
6316   \ifx\#2\%
6317     \@commahyperpage{#1}%
6318   \else
6319     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
6320   \fi
6321 }
6322 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
6323 \def\@commahyperpage#1, #2,#3\{\{%
6324   \ifx\#2\%
6325     \HyInd@pagelink{#1}%

```

```

6326 \else
6327   \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
6328 \fi
6329 }

```

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

```

6330 \def\HyInd@pagelink#1{%
6331   \begingroup
6332   \toks@={}%
6333   \HyInd@removespaces#1 \@nil
6334 \endgroup
6335 }
6336 \def\HyInd@removespaces#1 #2\@nil{%
6337   \toks@=\expandafter{\the\toks@#1}%
6338   \ifx\#2\%
6339     \edef\x{\the\toks@}%
6340     \ifx\x\@empty
6341       \else
6342         \hyperlink{page.\the\toks@}{\the\toks@}%
6343       \fi
6344     \else
6345       \Hy@ReturnAfterFi{%
6346         \HyInd@removespaces#2\@nil
6347       }%
6348     \fi
6349 }

```

44 Compatibility with foiltex

```

6350 \@ifclassloaded{foils}{%
6351   \providecommand*\ext@table{lot}%
6352   \providecommand*\ext@figure{lof}%
6353 }{}

```

45 Compatibility with seminar slide package

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

```

6354 \@ifclassloaded{seminar}{%
6355   \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}%
6356 }{%
6357   \Hy@seminarslidesfalse
6358 }
6359 \@ifpackageloaded{slidesec}{%
6360   \newcommand\theHslidesection {\arabic{slidesection}}%
6361   \newcommand\theHslidesubsection{%
6362     \theHslidesection.\arabic{slidesubsection}%
6363   }%
6364   \def\slide@heading[#1]#2{%
6365     \H@refstepcounter{slidesection}%
6366     \@addtoreset{slidesubsection}{slidesection}%
6367     \addtocontents{los}{%
6368       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
6369       {\@SCTR}{slideheading.\theslidesection}%
6370     }%

```

```

6371 \def\Hy@tempa{#2}%
6372 \ifx\Hy@tempa\@empty
6373 \else
6374 {%
6375 \edef\@currentlabel{%
6376 \csname p@slidesection\endcsname\theslidesection
6377 }%
6378 \makeslideheading{#2}%
6379 }%
6380 \fi
6381 \gdef\theslideheading{#1}%
6382 \gdef\theslidesubheading{}%
6383 \ifHy@bookmarksnumbered
6384 \def\Hy@slidetitle{\theslidesection\space #1}%
6385 \else
6386 \def\Hy@slidetitle{#1}%
6387 \fi
6388 \ifHy@hypertextnames
6389 \ifHy@naturalnames
6390 \hyper@@anchor{slideheading.\theslidesection}{\relax}%
6391 \Hy@writebookmark
6392 {\theslidesection}%
6393 {\Hy@slidetitle}%
6394 {slideheading.\theslidesection}%
6395 {1}%
6396 {toc}%
6397 \else
6398 \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
6399 \Hy@writebookmark
6400 {\theslidesection}%
6401 {\Hy@slidetitle}%
6402 {slideheading.\theHslidesection}%
6403 {1}%
6404 {toc}%
6405 \fi
6406 \else
6407 \Hy@GlobalStepCount\Hy@linkcounter
6408 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6409 \Hy@writebookmark
6410 {\theslidesection}%
6411 {\Hy@slidetitle}%
6412 {slideheading.\the\Hy@linkcounter}%
6413 {1}%
6414 {toc}%
6415 \fi
6416 }%
6417 \def\slide@subheading[#1]#2{%
6418 \H@refstepcounter{slidesubsection}%
6419 \addtocontents{los}{%
6420 \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
6421 {\@SCTR}{slideheading.\theslidesubsection}%
6422 }%
6423 \def\Hy@tempa{#2}%
6424 \ifx\Hy@tempa\@empty
6425 \else
6426 {%
6427 \edef\@currentlabel{%

```



```

6428         \csname p@slidessubsection\endcsname\theslidessubsection
6429     }%
6430     \makeslidesubheading{#2}%
6431 }%
6432 \fi
6433 \gdef\theslidesubheading{#1}%
6434 \ifHy@bookmarksnumbered
6435     \def\Hy@slidetitle{\theslidessubsection\space #1}%
6436 \else
6437     \def\Hy@slidetitle{#1}%
6438 \fi
6439 \ifHy@hypertextnames
6440     \ifHy@naturalnames
6441         \hyper@@anchor{slideheading.\theslidessubsection}{\relax}%
6442         \Hy@writebookmark
6443             {\theslidessubsection}%
6444             {\Hy@slidetitle}%
6445             {slideheading.\theslidessubsection}%
6446             {2}%
6447             {toc}%
6448     \else
6449         \hyper@@anchor{slideheading.\theHslidessubsection}{\relax}%
6450         \Hy@writebookmark
6451             {\theslidessubsection}%
6452             {\Hy@slidetitle}%
6453             {slideheading.\theHslidessubsection}%
6454             {2}%
6455             {toc}%
6456     \fi
6457 \else
6458     \Hy@GlobalStepCount\Hy@linkcounter
6459     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6460     \Hy@writebookmark
6461         {\theslidessubsection}%
6462         {\Hy@slidetitle}%
6463         {slideheading.\the\Hy@linkcounter}%
6464         {1}%
6465         {toc}%
6466 \fi
6467 }%
6468 \providecommand*\{listslicdename}{List of Slides}%
6469 \def\listofslides{%
6470     \section*{%
6471         \listslicdename
6472         \@mkboth{%
6473             \expandafter\MakeUppercase\listslicdename
6474             }{%
6475                 \expandafter\MakeUppercase\listslicdename
6476             }%
6477     }%
6478     \def\l@slide##1##2##3##4{%
6479         \slide@undottedcline{%
6480             \slidenumberline{##3}{\hyperlink{##4}{##2}}%
6481         }{%
6482         }%
6483     \let\l@subslide\l@slide
6484     \@startlos

```

```

6485 }%
6486 \def\slide@contents{%
6487   \def\l@slide##1##2##3##4{%
6488     \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
6489   }%
6490   \let\l@subslide\@gobblefour
6491   \@startlos
6492 }%
6493 \def\Slide@contents{%
6494   \def\l@slide##1##2##3##4{%
6495     \ifcase\lslide@flag
6496       \message{##1 ** \the\c@slide@section}%
6497       \ifnum##1>\c@slide@section
6498         \def\lslide@flag{1}%
6499         {%
6500           \large
6501           \slide@ccline{%
6502             \slidenumberline{$\Rightarrow\bullet$}%
6503             {\hyperlink{##4}{##2}}%
6504           }{##3}%
6505         }%
6506       \else
6507         {%
6508           \large
6509           \slide@ccline{%
6510             \slidenumberline{$\surd\;\bullet$}%
6511             {\hyperlink{##4}{##2}}%
6512           }{##3}%
6513         }%
6514       \fi
6515     \or
6516     \def\lslide@flag{2}%
6517     {%
6518       \large
6519       \slide@ccline{%
6520         \slidenumberline{$\bullet$}%
6521         {\hyperlink{##4}{##2}}%
6522       }{##3}%
6523     }%
6524     \or
6525     {%
6526       \large
6527       \slide@ccline{%
6528         \slidenumberline{$\bullet$}%
6529         {\hyperlink{##4}{##2}}%
6530       }{##3}%
6531     }%
6532     \fi
6533   }%
6534   \def\l@subslide##1##2##3##4{%
6535     \ifnum\lslide@flag=1 %
6536       \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
6537     \fi
6538   }%
6539   \def\lslide@flag{0}%
6540   \@startlos
6541 }%

```

```
6542 }{}
```

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.)

```
6543 \ifHy@texht
6544   \expandafter\endinput
6545 \fi
6546 \let\real@setref\@setref
6547 \def\@setref#1#2#3{% csname, extract group, refname
6548   \ifx#1\relax
6549     \protect\G@refundefinedtrue
6550     \nfss@text{\reset@font\bfseries ??}%
6551     \@latex@warning{%
6552       Reference ‘#3’ on page \thepage \space undefined%
6553     }%
6554   \else
6555     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
6556   \fi
6557 }
```

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

```
6558 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
6559   \begingroup
6560   \toks0={\hyper@@link{#5}{#4}}%
6561   \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
6562   \edef\x{\endgroup
6563     \the\toks0 {\the\toks1 }%
6564   }%
6565   \x
6566 }
6567 \def\@pagesetref#1#2#3{% csname, extract macro, ref
6568   \ifx#1\relax
6569     \protect\G@refundefinedtrue
6570     \nfss@text{\reset@font\bfseries ??}%
6571     \@latex@warning{%
6572       Reference ‘#3’ on page \thepage \space undefined%
6573     }%
6574   \else
6575     \protect\hyper@@link
6576     {\expandafter\@fifthoffive#1}%
6577     {page.\expandafter\@secondoffive#1}%
6578     {\expandafter\@secondoffive#1}%
6579   \fi
6580 }
6581 </package>
6582 <*check>
6583 \checklatex
6584 \checkcommand\def\@setref#1#2#3{%
6585   \ifx#1\relax
6586     \protect\G@refundefinedtrue
6587     \nfss@text{\reset@font\bfseries ??}%
6588     \@latex@warning{%
6589       Reference ‘#3’ on page \thepage\space undefined%
6590     }%
6591   \else
6592     \expandafter#2#1\@null
```

```

6593 \fi
6594 }
6595 \</check>
6596 <*package>

```

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

```

6597 \def\HyRef@StarSetRef#1{%
6598   \begingroup
6599   \Hy@safe@activetrue
6600   \edef\x{#1}%
6601   \@onelevel@sanitize\x
6602   \edef\x{\endgroup
6603     \noexpand\HyRef@@StarSetRef
6604     \expandafter\noexpand\csname r@\x\endcsname{\x}%
6605   }%
6606   \x
6607 }
6608 \def\HyRef@@StarSetRef#1#2#3{%
6609   \ifx#1\@undefined
6610     \let#1\relax
6611   \fi
6612   \real@setref#1#3{#2}%
6613 }
6614 \def\@refstar#1{%
6615   \HyRef@StarSetRef{#1}\@firstoffive
6616 }
6617 \def\@pagerefstar#1{%
6618   \HyRef@StarSetRef{#1}\@secondoffive
6619 }
6620 \AtBeginDocument{%
6621   \@ifpackageloaded{varioref}{%
6622     \def\@Refstar#1{%
6623       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
6624     }%
6625     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
6626       \MakeUppercase#1%
6627     }%
6628     \DeclareRobustCommand*\Ref*{%
6629       \@ifstar\@Refstar\HyRef@Ref
6630     }%
6631     \def\HyRef@Ref#1{%
6632       \hyperref[#{1}]{\Ref*{#1}}%
6633     }%
6634     \def\Vr@f#1{%
6635       \leavevmode\unskip\vref@space
6636       \hyperref[#{1}]{%
6637         \Ref*{#1}%
6638         \let\vref@space\nobreakspace
6639         \@vpageref[\unskip]{#1}%
6640       }%
6641     }%
6642     \def\vr@f#1{%
6643       \leavevmode\unskip\vref@space
6644       \begingroup
6645         \let\T@pageref\@pagerefstar
6646         \hyperref[#{1}]{%
6647           \ref*{#1}%

```

```

6648         \vpageref[\unskip]{#1}%
6649     }%
6650 \endgroup
6651 }%
6652 }{}%
6653 }
6654 \DeclareRobustCommand*\autopageref{%
6655     \@ifstar{%
6656         \HyRef@autopagerefname\pageref*%
6657     }\HyRef@autopageref
6658 }
6659 \def\HyRef@autopageref#1{%
6660     \hyperref[#{1}]{\HyRef@autopagerefname\pageref*{#1}}%
6661 }
6662 \def\HyRef@autopagerefname{%
6663     \@ifundefined{pageautorefname}{%
6664         \@ifundefined{pagename}{%
6665             \Hy@Warning{No autoref name for 'page'}%
6666         }{%
6667             \pagename\nobreakspace
6668         }%
6669     }{%
6670         \pageautorefname\nobreakspace
6671     }%
6672 }
6673 \DeclareRobustCommand*\autoref{%
6674     \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
6675 }
6676 \def\HyRef@autoref#1#2{%
6677     \begingroup
6678         \Hy@safe@activetrue
6679         \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
6680     \endgroup
6681 }
6682 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
6683     \HyRef@ShowKeysRef{#2}%
6684     \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
6685         \edef\HyRef@thisref{%
6686             \expandafter\@fourthoffive#1\@empty\@empty\@empty
6687         }%
6688         \expandafter\HyRef@testreftype\HyRef@thisref.\.%
6689         \Hy@safe@activesfalse
6690         #3{%
6691             \expandafter\@fifthoffive#1\@empty\@empty\@empty
6692         }{%
6693             \expandafter\@fourthoffive#1\@empty\@empty\@empty
6694         }{%
6695             \HyRef@currentHtag
6696             \expandafter\@firstoffive#1\@empty\@empty\@empty
6697             \null
6698         }%
6699     \else
6700         \protect\G@refundefinedtrue
6701         \nfss@text{\reset@font\bfseries ??}%
6702         \@latex@warning{%
6703             Reference '#2' on page \thepage\space undefined%
6704         }%

```

```

6705 \fi
6706 }
6707 \def\HyRef@testreftype#1.#2\{%
6708 \@ifundefined{#1autorefname}{%
6709 \@ifundefined{#1name}{%
6710 \HyRef@StripStar#1\*\@nil{#1}%
6711 \@ifundefined{\HyRef@name autorefname}{%
6712 \@ifundefined{\HyRef@name name}{%
6713 \def\HyRef@currentHtag{%
6714 \Hy@Warning{No autoref name for '#1'}%
6715 }{%
6716 \edef\HyRef@currentHtag{%
6717 \expandafter\noexpand\csname\HyRef@name name\endcsname
6718 \noexpand~%
6719 }%
6720 }%
6721 }{%
6722 \edef\HyRef@currentHtag{%
6723 \expandafter\noexpand\csname\HyRef@name autorefname\endcsname
6724 \noexpand~%
6725 }%
6726 }%
6727 }{%
6728 \edef\HyRef@currentHtag{%
6729 \expandafter\noexpand\csname#1name\endcsname
6730 \noexpand~%
6731 }%
6732 }%
6733 }{%
6734 \edef\HyRef@currentHtag{%
6735 \expandafter\noexpand\csname#1autorefname\endcsname
6736 \noexpand~%
6737 }%
6738 }%
6739 }
6740 \def\HyRef@StripStar#1*\#2\@nil#3{%
6741 \def\HyRef@name{#2}%
6742 \ifx\HyRef@name\HyRef@CaseStar
6743 \def\HyRef@name{#1}%
6744 \else
6745 \def\HyRef@name{#3}%
6746 \fi
6747 }
6748 \def\HyRef@CaseStar{*\\}
6749 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

6750 \let\HyRef@ShowKeysRef\@gobble
6751 \def\HyRef@ShowKeysInit{%
6752 \begingroup\expandafter\expandafter\expandafter\endgroup
6753 \expandafter\ifx\csname SK@@label\endcsname\relax
6754 \else
6755 \ifx\SK@ref\@empty
6756 \else
6757 \def\HyRef@ShowKeysRef{%
6758 \SK@\SK@\ref

```

```

6759     }%
6760     \fi
6761     \fi
6762 }
6763 \@ifpackageloaded{showkeys}{%
6764     \HyRef@ShowKeysInit
6765 }{%
6766     \AtBeginDocument{%
6767         \@ifpackageloaded{showkeys}{%
6768             \HyRef@ShowKeysInit
6769         }{%
6770             }%
6771     }

```

Defaults for the names that `\autoref` uses.

```

6772 \providecommand*{\AMSautorefname}{\equationautorefname}
6773 \providecommand*{\Hfootnoteautorefname}{\footnoteautorefname}
6774 \providecommand*{\Itemautorefname}{\itemautorefname}
6775 \providecommand*{\itemautorefname}{item}
6776 \providecommand*{\equationautorefname}{Equation}
6777 \providecommand*{\footnoteautorefname}{footnote}
6778 \providecommand*{\itemautorefname}{item}
6779 \providecommand*{\figureautorefname}{Figure}
6780 \providecommand*{\tableautorefname}{Table}
6781 \providecommand*{\partautorefname}{Part}
6782 \providecommand*{\appendixautorefname}{Appendix}
6783 \providecommand*{\chapterautorefname}{chapter}
6784 \providecommand*{\sectionautorefname}{section}
6785 \providecommand*{\subsectionautorefname}{subsection}
6786 \providecommand*{\subsubsectionautorefname}{subsubsection}
6787 \providecommand*{\paragraphautorefname}{paragraph}
6788 \providecommand*{\subparagraphautorefname}{subparagraph}
6789 \providecommand*{\FancyVerbLineautorefname}{line}
6790 \providecommand*{\theoremautorefname}{Theorem}
6791 \providecommand*{\pageautorefname}{page}
6792 \end{package}

```

46 Configuration files

46.1 PS/PDF strings

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

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

```

6793 < *pdftex | dvipdfm | vtex | pdfmarkbase | dviwindo >
6794 \RequirePackage{pdfTEXcmds}[2007/11/11]
6795 \begingroup\expandafter\expandafter\expandafter\endgroup
6796 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
6797     \begingroup
6798         \catcode'\|0 %
6799         \@makeother\|
6800     \@firstofone{\endgroup

```

```

6801 |def|Hy@pstringdef#1#2{%
6802 |begingroup
6803 |edef~{|string~}%
6804 |xdef|Hy@gtemp{#2}%
6805 |endgroup
6806 |let#1|Hy@gtemp
6807 |@onelevel@sanitize#1%
6808 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
6809 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
6810 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
6811 }%
6812 |def|Hy@ExchangeBackslash#1\#2|@nil{%
6813 #1%
6814 |ifx|\#2|\%%
6815 |else
6816 \\\%
6817 |Hy@ReturnAfterFi{%
6818 |Hy@ExchangeBackslash#2|@nil
6819 }%
6820 |fi
6821 }%
6822 }%
6823 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
6824 #1%
6825 \ifx\\#2\\%
6826 \else
6827 \@backslashchar(%
6828 \Hy@ReturnAfterFi{%
6829 \Hy@ExchangeLeftParenthesis#2\@nil
6830 }%
6831 \fi
6832 }%
6833 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
6834 #1%
6835 \ifx\\#2\\%
6836 \else
6837 \@backslashchar)%
6838 \Hy@ReturnAfterFi{%
6839 \Hy@ExchangeRightParenthesis#2\@nil
6840 }%
6841 \fi
6842 }%
6843 \else
6844 \def\Hy@pstringdef#1#2{%
6845 \begingroup
6846 \edef~{\string~}%
6847 \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
6848 \endgroup
6849 \let#1\Hy@gtemp
6850 }%
6851 \fi
6852 </pdfTeX | dvipdfm | vTeX | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

6853 <*pdfTeX>
6854 \providecommand*{\XR@ext}{pdf}

```



```
6855 \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

```
6856 \let\Hy@pdfminorversion\relax
6857 \begingroup\expandafter\expandafter\expandafter\endgroup
6858 \expandafter\ifx\csname pdfminorversion\endcsname\relax
6859 \begingroup\expandafter\expandafter\expandafter\endgroup
6860 \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
6861 \else
6862 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
6863 \fi
6864 \else
6865 \def\Hy@pdfminorversion{\pdfminorversion}%
6866 \fi
6867 \@ifundefined{Hy@pdfminorversion}{%
6868 \PackageInfo{hyperref}{%
6869 PDF version is not set, because pdfTeX is too old (<1.10a)%
6870 }%
6871 }%
6872 \ifHy@ocgcolorlinks
6873 \ifnum\Hy@pdfminorversion<5 %
6874 \setkeys{Hyp}{pdfversion=1.5}%
6875 \fi
6876 \fi
6877 \ifHy@setpdfversion
6878 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
6879 \else
6880 \Hy@pdfminorversion=\Hy@pdfversion\relax
6881 \fi
6882 \PackageInfo{hyperref}{%
6883 \expandafter\string\Hy@pdfminorversion
6884 :=\number\Hy@pdfversion\space
6885 }%
6886 \fi
6887 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
6888 }
6889 \Hy@DisableOption{pdfversion}%

6890 \ifHy@ocgcolorlinks
6891 \immediate\pdfobj{%
6892 <<%
6893 /Type/OCG%
6894 /Name(View)%
6895 /Usage<<%
6896 /Print<<%
6897 /PrintState/OFF%
6898 >>%
6899 /View<<%
6900 /ViewState/ON%
6901 >>%
6902 >>%
6903 >>%
```

```

6904 }%
6905 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
6906 \immediate\pdfobj{%
6907   <<%
6908     /Type/OCG%
6909     /Name(Print)%
6910     /Usage<<%
6911       /Print<<%
6912         /PrintState/ON%
6913       >>%
6914     /View<<%
6915       /ViewState/OFF%
6916     >>%
6917   >>%
6918 }%
6919 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
6920 \immediate\pdfobj{%
6921   [%
6922     \OBJ@OCG@view\space\OBJ@OCG@print
6923   ]%
6924 }%
6925 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
6926 \pdfcatalog{%
6927   /OCProperties<<%
6928     /OCGs \OBJ@OCGs
6929   /D<<%
6930     /OFF[\OBJ@OCG@print]%
6931     /AS[%
6932       <<%
6933         /Event/View%
6934         /OCGs \OBJ@OCGs
6935         /Category[/View]%
6936       >>%
6937       <<%
6938         /Event/Print%
6939         /OCGs \OBJ@OCGs
6940         /Category[/Print]%
6941       >>%
6942       <<%
6943         /Event/Export%
6944         /OCGs \OBJ@OCGs
6945         /Category[/Print]%
6946       >>%
6947     ]%
6948   >>%
6949 }%
6950 \beginingroup
6951 \edef\x{\endgroup
6952   \pdfpageresources{%
6953     /Properties<<%
6954       /OCView \OBJ@OCG@view
6955       /OCPrint \OBJ@OCG@print
6956     >>%
6957   }%
6958 }%
6959 }%
6960 }%

```

```

6961 \x
6962 \AtBeginDocument{%
6963   \def\Hy@colorlink#1{%
6964     \begingroup
6965     \ifHy@ocgcolorlinks
6966       \def\Hy@ocgcolor{#1}%
6967       \setbox0=\color@hbox
6968     \else
6969       \HyColor@UseColor#1%
6970     \fi
6971   }%
6972   \def\Hy@endcolorlink{%
6973     \ifHy@ocgcolorlinks
6974       \color@endbox
6975       \mbox{%
6976         \pdfliteral page{/OC/OCPrint BDC}%
6977         \rlap{\copy0}%
6978         \pdfliteral page{EMC/OC/OCView BDC}%
6979         \begingroup
6980           \expandafter\HyColor@UseColor\Hy@ocgcolor
6981         \box0 %
6982       \endgroup
6983       \pdfliteral page{EMC}%
6984     }%
6985   \fi
6986 \endgroup
6987 }%
6988 }%
6989 \else
6990 \Hy@DisableOption{ocgcolorlinks}%
6991 \fi

```

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

```

6992 \def\setpdflinkmargin#1{\pdflinkmargin#1}
6993 \ifx\pdfstartlink\@undefined% less than version 14
6994   \let\pdfstartlink\pdfannotlink
6995   \let\pdflinkmargin\@tempdima
6996   \let\pdfxform\pdfform
6997   \let\pdflastxform\pdfastform
6998   \let\pdfrefxform\pdfrefform
6999 \else
7000   \pdflinkmargin1pt %
7001 \fi

```

First set up the default linking

```
7002 \providecommand*\@pdfview{XYZ}
```

First define the anchors:

```

7003 \def\new@pdflink#1{%
7004   \ifHy@verbose
7005     \typeout{pdftex: define anchor at line \the\inputlineno: #1}%
7006   \fi
7007   \Hy@SaveLastskip
7008   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7009   \Hy@DestName\Hy@pstringDest\@pdfview
7010   \Hy@RestoreLastskip
7011 }
7012 \let\pdf@endanchor\@empty

```

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

```
7013 \def\Hy@DestName#1#2{%
7014   \pdfdest name{#1}#2\relax
7015 }
```

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.

```
7016 \providecommand*\pdfborder{0 0 1}
7017 \providecommand*\pdfborderstyle{}
7018 \def\Hy@undefinedname{UNDEFINED}
7019 \def\find@pdflink#1#2{%
7020   \leavevmode
7021   \protected@edef\Hy@testname{#2}%
7022   \ifx\Hy@testname\@empty
7023     \let\Hy@testname\Hy@undefinedname
7024   \else
7025     \Hy@pstringdef\Hy@testname{%
7026       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7027     }%
7028   \fi
7029   \Hy@StartlinkName{%
7030     \ifHy@pdfa /F 4\fi
7031     \Hy@setpdfborder
7032     \ifx\@pdfhighlight\@empty
7033       \else
7034         /H\@pdfhighlight
7035       \fi
7036       \ifx\CurrentBorderColor\relax
7037       \else
7038         /C[\CurrentBorderColor]%
7039       \fi
7040   }\Hy@testname
7041   \expandafter\Hy@colorlink\csname @#1color\endcsname
7042 }
7043 \def\Hy@StartlinkName#1#2{%
7044   \pdfstartlink attr{#1}goto name{#2}\relax
7045 }
7046 \def\close@pdflink{\Hy@endcolorlink\pdfendlink}
7047 \def\hyper@anchor#1{\new@pdflink{#1}\anchor@spot\pdf@endanchor}
7048 \def\hyper@anchorstart#1{\new@pdflink{#1}\Hy@activeanchortrue}
7049 \def\hyper@anchorend{\pdf@endanchor\Hy@activeanchorfalse}
7050 \def\hyper@linkstart#1#2{%
7051   \@ifundefined{#1bordercolor}{%
7052     \let\CurrentBorderColor\relax
7053   }{%
7054     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7055   }%
7056   \find@pdflink{#1}{#2}%
7057 }
7058 \def\hyper@linkend{\close@pdflink}
7059 \def\hyper@link#1#2#3{%
7060   \@ifundefined{#1bordercolor}{%
7061     \let\CurrentBorderColor\relax
7062   }{%
```

```

7063 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7064 }%
7065 \find@pdflink{#1}{#2}#3%
7066 \close@pdflink
7067 }
7068 \let\CurrentBorderColor\@linkbordercolor
7069 \def\hyper@linkurl#1#2{%
7070 \begingroup
7071 \Hy@pstringdef\Hy@pstringURI{#2}%
7072 \hyper@chars
7073 \leavevmode
7074 \pdfstartlink
7075 attr{%
7076 \Hy@setpdfborder
7077 \ifx\@pdfhighlight\@empty
7078 \else
7079 /H\@pdfhighlight
7080 \fi
7081 \ifx\@urlbordercolor\relax
7082 \else
7083 /C[\@urlbordercolor]%
7084 \fi
7085 }%
7086 user{%
7087 /Subtype/Link%
7088 \ifHy@pdfa /F 4\fi
7089 /A<<%
7090 /Type/Action%
7091 /S/URI%
7092 /URI(\Hy@pstringURI)%
7093 >>%
7094 }%
7095 \relax
7096 \Hy@colorlink\@urlcolor#1%
7097 \close@pdflink
7098 \endgroup
7099 }
7100 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
7101 \begingroup
7102 \Hy@pstringdef\Hy@pstringF{#2}%
7103 \Hy@pstringdef\Hy@pstringD{#3}%
7104 \leavevmode
7105 \pdfstartlink
7106 attr{%
7107 \Hy@setpdfborder
7108 \ifx\@pdfhighlight\@empty
7109 \else
7110 /H\@pdfhighlight
7111 \fi
7112 \ifx\@filebordercolor\relax
7113 \else
7114 /C[\@filebordercolor]%
7115 \fi
7116 }%
7117 user {%
7118 /Subtype/Link%
7119 \ifHy@pdfa /F 4\fi

```

```

7120      /A<<%
7121      /F(\Hy@pstringF)%
7122      /S/GoToR%
7123      \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}

```

```

7124      \ifx\#3\%
7125      /D[0 \@pdfstartview]%
7126      \else
7127      /D(\Hy@pstringD)%
7128      \fi
7129      >>%
7130    }%
7131    \relax
7132    \Hy@colorlink\@filecolor#1%
7133    \close@pdflink
7134  \endgroup
7135 }
7136 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
7137  \begingroup
7138    \Hy@pstringdef\Hy@pstringF{#1}%
7139    \Hy@pstringdef\Hy@pstringP{#3}%
7140    \leavevmode
7141    \pdfstartlink
7142    attr{%
7143      \Hy@setpdfborder
7144      \ifx\@pdfhighlight\@empty
7145      \else
7146      /H\@pdfhighlight
7147      \fi
7148      \ifx\@runbordercolor\relax
7149      \else
7150      /C[\@runbordercolor]%
7151      \fi
7152    }%
7153    user {%
7154      /Subtype/Link%
7155      \ifHy@pdfa /F 4\fi
7156      /A<<%
7157      /F(\Hy@pstringF)%
7158      /S/Launch%
7159      \Hy@SetNewWindow
7160      \ifx\#3\%
7161      \else
7162      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
7163      \fi
7164      >>%
7165    }%

```

```

7166     \relax
7167     \Hy@colorlink\@gruncolor#2%
7168     \close@pdflink
7169 \endgroup
7170 }

```

\@pdfproducer

```

7171 \ifx\@pdfproducer\relax
7172 \begingroup\expandafter\expandafter\expandafter\endgroup
7173 \expandafter\ifx\csname luatexversion\endcsname\relax
7174   \def\@pdfproducer{pdfTeX}%
7175   \ifx\TeXversion\@undefined
7176   \else
7177     \ifx\TeXversion\relax
7178     \else
7179       \ifnum\TeXversion>0 %
7180         \def\@pdfproducer{pdfTeX}%
7181       \fi
7182     \fi
7183   \fi
7184   \ifx\pdfTeXversion\@undefined
7185   \else
7186     \ifnum\pdfTeXversion<100 %
7187       \edef\@pdfproducer{%
7188         \@pdfproducer
7189         \the\pdfTeXversion.\pdfTeXrevision
7190       }%
7191     \else
7192       \ifnum\pdfTeXversion<130 %
7193         \edef\@pdfproducer{%
7194           \@pdfproducer-
7195           \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7196           \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
7197           \pdfTeXrevision
7198         }%
7199       \else
7200         \ifnum\pdfTeXversion<140 %
7201         \else
7202           \def\@pdfproducer{pdfTeX}%
7203         \fi
7204         \edef\@pdfproducer{%
7205           \@pdfproducer-
7206           \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7207           \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
7208           \pdfTeXrevision
7209         }%
7210       \fi
7211     \fi
7212   \fi
7213 \else
7214   \begingroup
7215   \count@=\luatexversion
7216   \divide\count@ by 100 %
7217   \edef\x{\the\count@}%
7218   \count@=-\x\relax
7219   \multiply\count@ by 100 %
7220   \advance\count@ by \luatexversion

```

```

7221     \edef\x{\endgroup
7222         \def\noexpand\@pdfproducer{%
7223             LuaTeX-x.\the\count@.\luatexrevision
7224         }%
7225     }%
7226     \x
7227 \fi
7228 \fi

```

\PDF@SetupDox

```

7229 \def\PDF@SetupDoc{%
7230     \ifx\@pdfpagescrop\@empty
7231     \else
7232         \edef\process@me{%
7233             \pdfpagesattr={%
7234                 /CropBox[\@pdfpagescrop]%
7235                 \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
7236                 \else
7237                     ^^J\the\pdfpagesattr
7238                 \fi
7239             }%
7240         }%
7241         \process@me
7242     \fi
7243     \Hy@pstringdef\Hy@pstringB{\@baseurl}%
7244     \pdfcatalog{%
7245         /PageMode/\@pdfpagemode
7246         \ifx\@baseurl\@empty
7247         \else
7248             /URI<</Base(\Hy@pstringB)>>%
7249         \fi
7250     }%
7251     \ifx\@pdfstartpage\@empty
7252     \else
7253         \ifx\@pdfstartview\@empty
7254         \else
7255             openaction goto page\@pdfstartpage{\@pdfstartview}%
7256         \fi
7257     \fi
7258     \edef\Hy@temp{%
7259         \ifHy@toolbar\else /HideToolbar true\fi
7260         \ifHy@menubar\else /HideMenubar true\fi
7261         \ifHy>windowui\else /HideWindowUI true\fi
7262         \ifHy@fitwindow /FitWindow true\fi
7263         \ifHy@centerwindow /CenterWindow true\fi
7264         \ifHy@displaydoctitle /DisplayDocTitle true\fi
7265         \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7266         \Hy@UseNameKey{Direction}\@pdfdirection
7267         \Hy@UseNameKey{ViewArea}\@pdfviewarea
7268         \Hy@UseNameKey{ViewClip}\@pdfviewclip
7269         \Hy@UseNameKey{PrintArea}\@pdfprintarea
7270         \Hy@UseNameKey{PrintClip}\@pdfprintclip
7271         \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7272         \Hy@UseNameKey{Duplex}\@pdfduplex
7273         \ifx\@pdfpicktraybypdfsize\@empty
7274         \else
7275             /PickTrayByPDFSize \@pdfpicktraybypdfsize

```



```

7276 \fi
7277 \ifx\@pdfprintpagerange\@empty
7278 \else
7279 /PrintPageRange[\@pdfprintpagerange]%
7280 \fi
7281 \ifx\@pdfnumcopies\@empty
7282 \else
7283 /NumCopies \@pdfnumcopies
7284 \fi
7285 }%
7286 \pdfcatalog{%
7287 \ifx\Hy@temp\@empty
7288 \else
7289 /ViewerPreferences<<\Hy@temp>>%
7290 \fi
7291 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7292 \ifx\@pdflang\@empty
7293 \else
7294 /Lang(\@pdflang)%
7295 \fi
7296 }%
7297 }

```

\PDF@FinishDoc

```

7298 \def\PDF@FinishDoc{%
7299 \Hy@UseMaketitleInfos
7300 \pdfinfo{%
7301 /Author(\@pdfauthor)%
7302 /Title(\@pdftitle)%
7303 /Subject(\@pdfsubject)%
7304 /Creator(\@pdfcreator)%
7305 \ifx\@pdfcreationdate\@empty
7306 \else
7307 /CreationDate(\@pdfcreationdate)%
7308 \fi
7309 \ifx\@pdfmoddate\@empty
7310 \else
7311 /ModDate(\@pdfmoddate)%
7312 \fi
7313 \ifx\@pdfproducer\relax
7314 \else
7315 /Producer(\@pdfproducer)%
7316 \fi
7317 /Keywords(\@pdfkeywords)%
7318 }%
7319 \Hy@DisableOption{pdfauthor}%
7320 \Hy@DisableOption{pdftitle}%
7321 \Hy@DisableOption{pdfsubject}%
7322 \Hy@DisableOption{pdfcreator}%
7323 \Hy@DisableOption{pdfcreationdate}%
7324 \Hy@DisableOption{pdfmoddate}%
7325 \Hy@DisableOption{pdfproducer}%
7326 \Hy@DisableOption{pdfkeywords}%
7327 }

```

\hyper@pagetransition \@pdfpagetransition is initialized with \relax. So it indicates, if option pdfpage-transition is used. First previous /Trans entries are removed. If a new /Trans key

exists, it is appended to \pdfpageattr.

```

7328 \def\hyper@pagetransition{%
7329   \ifx\@pdfpagetransition\relax
7330   \else
7331     \expandafter\Hy@RemoveTransPageAttr
7332     \the\pdfpageattr^^J/Trans{>>\END
7333     \ifx\@pdfpagetransition\empty
7334     \else
7335       \edef\@processme{%
7336         \global\pdfpageattr{%
7337           \the\pdfpageattr
7338             ^^J/Trans << /S /\@pdfpagetransition\space >>%
7339         }%
7340       }%
7341       \@processme
7342     \fi
7343   \fi
7344 }
```

\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.

```

7345 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
7346   \ifx\#2\%
7347     \global\pdfpageattr{#1}%
7348   \else
7349     \Hy@RemoveTransPageAttr#1#4\END
7350   \fi
7351 }
```

\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.

```

7352 \def\hyper@pageduration{%
7353   \ifx\@pdfpageduration\relax
7354   \else
7355     \expandafter\Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{ } \END
7356     \ifx\@pdfpageduration\empty
7357     \else
7358       \edef\@processme{%
7359         \global\pdfpageattr{%
7360           \the\pdfpageattr
7361             ^^J/Dur \@pdfpageduration\space
7362         }%
7363       }%
7364       \@processme
7365     \fi
7366   \fi
7367 }
```

\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.

```

7368 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
```

```

7369 \ifx\#2\%
7370 \global\pdfpageattr{#1}%
7371 \else
7372 \Hy@RemoveDurPageAttr#1#4\END
7373 \fi
7374 }

```

`\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).

```

7375 \def\hyper@pagehidden{%
7376 \ifHy@useHidKey
7377 \expandafter\Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
7378 \ifHy@pdfpagehidden
7379 \edef\@processme{%
7380 \global\pdfpageattr{%
7381 \the\pdfpageattr
7382 ^^J/Hid true % SPACE
7383 }%
7384 }%
7385 \@processme
7386 \fi
7387 \fi
7388 }

```

`\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.

```

7389 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
7390 \ifx\#2\%
7391 \global\pdfpageattr{#1}%
7392 \else
7393 \Hy@RemoveHidPageAttr#1#4\END
7394 \fi
7395 }

```

```

7396 \g@addto@macro\Hy@EveryPageHook{%
7397 \hyper@pagetransition
7398 \hyper@pageduration
7399 \hyper@pagehidden
7400 }

```

```

7401 \AtBeginDocument{%
7402 \ifHy@setpagesize
7403 \expandafter\@firstofone
7404 \else
7405 \expandafter\@gobble
7406 \fi
7407 {%
7408 \@ifclassloaded{seminar}{%
7409 \setlength{\pdfhorigin}{1truein}%
7410 \setlength{\pdfvorigin}{1truein}%
7411 \ifportrait
7412 \ifdim\paperwidth=\z@
7413 \else
7414 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
7415 \fi

```

```

7416     \ifdim\paperheight=\z@
7417     \else
7418         \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
7419     \fi
7420 \else
7421     \ifdim\paperheight=\z@
7422     \else
7423         \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
7424     \fi
7425     \ifdim\paperwidth=\z@
7426     \else
7427         \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
7428     \fi
7429 \fi
7430 }{%
7431 \@ifundefined{stockwidth}{%
7432     \ifdim\paperwidth=\z@
7433     \else
7434         \setlength{\pdfpagewidth}{\paperwidth}%
7435     \fi
7436     \ifdim\paperheight=\z@
7437     \else
7438         \setlength{\pdfpageheight}{\paperheight}%
7439     \fi
7440 }{%
7441     \ifdim\stockwidth=\z@
7442     \else
7443         \setlength{\pdfpagewidth}{\stockwidth}%
7444     \fi
7445     \ifdim\stockheight=\z@
7446     \else
7447         \setlength{\pdfpageheight}{\stockheight}%
7448     \fi
7449 }%
7450 }%
7451 }%
7452 \Hy@DisableOption{setpagesize}%
7453 }
7454 \def\Acrobatmenu#1#2{%
7455     \Hy@Acrobatmenu{#1}{#2}{%
7456         \pdfstartlink
7457         attr{%
7458             \Hy@setpdfborder
7459             \ifx\@pdfhighlight\@empty
7460             \else
7461                 /H\@pdfhighlight
7462             \fi
7463             \ifx\@menubordercolor\relax
7464             \else
7465                 /C[\@menubordercolor]%
7466             \fi
7467         }%
7468         user{%
7469             /Subtype/Link%
7470             \ifHy@pdfa /F 4\fi
7471             /A<<%
7472             /S/Named/N/#1%

```

```

7473      >>%
7474      }%
7475      \relax
7476      \Hy@colorlink\@menucolor#2%
7477      \close@pdflink
7478      }%
7479      }

```

46.2.1 Fix for problem with different nesting levels

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

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

```

7480 \def\Hy@FixNotFirstPage{%
7481   \gdef\Hy@FixNotFirstPage{%
7482     \setbox\AtBeginShipoutBox=\hbox{%
7483       \copy\AtBeginShipoutBox
7484     }%
7485   }%
7486 }
7487 \AtBeginShipout{\Hy@FixNotFirstPage}
7488 \pdfTeX

```

46.3 hypertex

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

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

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

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

or as part of a URL (of the form *URL#name_string*). Here *href_string* is a valid URL or local identifier, while *name_string* could be any string at all: the only caveat is that ‘’ characters should be escaped with a backslash (\), and if it looks like a URL name it may cause problems.

```

7489 \hypertex
7490 \providecommand*\XR@ext}{dvi}
7491 \def\PDF@FinishDoc{}
7492 \def\PDF@SetupDoc{%
7493   \ifx\@baseurl\@empty
7494   \else
7495     \special{html:<base href="\@baseurl">}%
7496   \fi
7497 }
7498 \def\hyper@anchor#1{%
7499   \Hy@SaveLastskip
7500   \begingroup
7501     \let\protect=\string
7502     \hyper@chars
7503     \special{html:<a name=%
7504       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7505   \endgroup
7506   \Hy@Activeanchortrue
7507   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7508   \special{html:</a>}%
7509   \Hy@Activeanchorfalse
7510   \Hy@RestoreLastskip
7511 }
7512 \def\hyper@anchorstart#1{%
7513   \Hy@SaveLastskip
7514   \begingroup
7515     \hyper@chars
7516     \special{html:<a name=%
7517       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7518   \endgroup
7519   \Hy@Activeanchortrue
7520 }
7521 \def\hyper@anchorend{%
7522   \special{html:</a>}%
7523   \Hy@Activeanchorfalse
7524   \Hy@RestoreLastskip
7525 }
7526 \def\@urltype{url}
7527 \def\hyper@linkstart#1#2{%
7528   \expandafter\Hy@colorlink\csname @#1color\endcsname
7529   \def\Hy@tempa{#1}%
7530   \ifx\Hy@tempa\@urltype
7531     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7532   \else
7533     \begingroup
7534       \hyper@chars
7535       \special{html:<a href=%
7536         \hyper@quote\#1\HyperDestNameFilter{#2}\hyper@quote>}%
7537     \endgroup
7538   \fi
7539 }
7540 \def\hyper@linkend{%
7541   \special{html:</a>}%

```

```

7542 \Hy@endcolorlink
7543 }
7544 \def\hyper@linkfile#1#2#3{%
7545 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
7546 }
7547 \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.

```

7548 \leavevmode
7549 \ifHy@raiselinks
7550 \setbox\@tempboxa=\color@hbox #1\color@endbox
7551 \@linkdim\dp\@tempboxa
7552 \lower\@linkdim\hbox{%
7553 \hyper@chars
7554 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
7555 }%
7556 \Hy@colorlink\@urlcolor#1%
7557 \@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).

```

7558 \advance\@linkdim by -6.5\p@
7559 \raise\@linkdim\hbox{\special{html:</a>}}%
7560 \Hy@endcolorlink
7561 \else
7562 \begingroup
7563 \hyper@chars
7564 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
7565 \Hy@colorlink\@urlcolor#1%
7566 \special{html:</a>}}%
7567 \Hy@endcolorlink
7568 \endgroup
7569 \fi
7570 }

```

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

```

7571 \def\hyper@link#1#2#3{%
7572 \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}%
7573 }
7574 \def\hyper@image#1#2{%
7575 \begingroup
7576 \hyper@chars
7577 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
7578 \endgroup
7579 }
7580 </hypertex>
7581 <*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.

```

7582 \providecommand*\XR@ext}{dvi}
7583 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
7584 \def\hyper@anchor#1{%
7585   \Hy@SaveLastskip
7586   \begingroup
7587     \let\protect=\string
7588     \special{mark: #1}%
7589   \endgroup
7590   \Hy@activeanchortrue
7591   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7592   \Hy@activeanchorfalse
7593   \Hy@RestoreLastskip
7594 }
7595 \def\hyper@anchorstart#1{%
7596   \Hy@SaveLastskip
7597   \special{mark: #1}%
7598   \Hy@activeanchortrue
7599 }
7600 \def\hyper@anchorend{%
7601   \Hy@activeanchorfalse
7602   \Hy@RestoreLastskip
7603 }
7604 \def\hyper@linkstart#1#2{%
7605   \expandafter\Hy@colorlink\csname @#1color\endcsname
7606   \special{button: %
7607     10000000 %
7608     \number\baselineskip\space
7609     #2%
7610   }%
7611 }
7612 \def\hyper@linkend{%
7613   \Hy@endcolorlink
7614 }
7615 \def\hyper@link#1#2#3{%
7616   \setbox\@tempboxa=\color@hbox #3\color@endbox
7617   \leavevmode
7618   \ifHy@raiselinks
7619     \@linkdim\dp\@tempboxa
7620     \lower\@linkdim\hbox{%
7621       \special{button: %
7622         \number\wd\@tempboxa\space
7623         \number\ht\@tempboxa\space
7624         #2%
7625       }%
7626       \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7627       \Hy@endcolorlink
7628     }%
7629     \@linkdim\ht\@tempboxa
7630     \advance\@linkdim by -6.5\p@
7631     \raise\@linkdim\hbox{}%
7632   \else

```



```

7633 \special{button: %
7634 \number\wd\@tempboxa\space
7635 \number\ht\@tempboxa\space
7636 #2%
7637 }%
7638 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7639 \Hy@endcolorlink
7640 \fi
7641 }
7642 \def\hyper@linkurl#1#2{%
7643 \begingroup
7644 \hyper@chars
7645 \leavevmode
7646 \setbox\@tempboxa=\color@hbox #1\color@endbox
7647 \ifHy@raiselinks
7648 \@linkdim\dp\@tempboxa
7649 \lower\@linkdim\hbox{%
7650 \special{button: %
7651 \number\wd\@tempboxa\space
7652 \number\ht\@tempboxa\space
7653 launch: \wwwbrowser\space
7654 #2%
7655 }%
7656 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7657 }%
7658 \@linkdim\ht\@tempboxa
7659 \advance\@linkdim by -6.5\p@
7660 \raise\@linkdim\hbox{}}%
7661 \else
7662 \special{button: %
7663 \number\wd\@tempboxa\space
7664 \number\ht\@tempboxa\space
7665 launch: \wwwbrowser\space
7666 #2%
7667 }%
7668 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7669 \fi
7670 \endgroup
7671 }
7672 \def\hyper@linkfile#1#2#3{%
7673 \begingroup
7674 \hyper@chars
7675 \leavevmode
7676 \setbox\@tempboxa=\color@hbox #1\color@endbox
7677 \ifHy@raiselinks
7678 \@linkdim\dp\@tempboxa
7679 \lower\@linkdim\hbox{%
7680 \special{button: %
7681 \number\wd\@tempboxa\space
7682 \number\ht\@tempboxa\space
7683 #3,%
7684 file: #2%
7685 }%
7686 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7687 }%
7688 \@linkdim\ht\@tempboxa
7689 \advance\@linkdim by -6.5\p@

```

```

7690     \raise\@linkdim\hbox{}}%
7691   \else
7692     \special{button: %
7693       \number\wd\@tempboxa\space
7694       \number\ht\@tempboxa\space
7695       #3,%
7696       file: #2%
7697     }%
7698     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7699   \fi
7700 \endgroup
7701 }
7702 \ifx\@pdfproducer\relax
7703   \def\@pdfproducer{dviwindo + Distiller}%
7704 \fi
7705 \def\PDF@FinishDoc{%
7706   \Hy@UseMaketitleInfos
7707   \special{PDF: Keywords \@pdfkeywords}%
7708   \special{PDF: Title \@pdftitle}%
7709   \special{PDF: Creator \@pdfcreator}%
7710   \ifx\@pdfcreationdate\@empty
7711   \else
7712     \special{PDF: CreationDate \@pdfcreationdate}%
7713   \fi
7714   \ifx\@pdfmoddate\@empty
7715   \else
7716     \special{PDF: ModDate \@pdfmoddate}%
7717   \fi
7718   \special{PDF: Author \@pdfauthor}%
7719   \ifx\@pdfproducer\relax
7720   \else
7721     \special{PDF: Producer \@pdfproducer}%
7722   \fi
7723   \special{PDF: Subject \@pdfsubject}%
7724   \Hy@DisableOption{pdfauthor}%
7725   \Hy@DisableOption{pdftitle}%
7726   \Hy@DisableOption{pdfsubject}%
7727   \Hy@DisableOption{pdfcreator}%
7728   \Hy@DisableOption{pdfcreationdate}%
7729   \Hy@DisableOption{pdfmoddate}%
7730   \Hy@DisableOption{pdfproducer}%
7731   \Hy@DisableOption{pdfkeywords}%
7732 }
7733 \def\PDF@SetupDoc{%
7734   \ifx\@baseurl\@empty
7735   \else
7736     \special{PDF: Base \@baseurl}%
7737   \fi
7738   \ifx\@pdfpagescrop\@empty\else
7739     \special{PDF: BBox \@pdfpagescrop}%
7740   \fi
7741   \def\Hy@temp{}%
7742   \ifx\@pdfstartpage\@empty
7743   \else
7744     \ifx\@pdfstartview\@empty
7745     \else
7746       \edef\Hy@temp{%

```

```

7747         ,Page=\@pdfstartpage
7748         ,View=\@pdfstartview
7749     }%
7750 \fi
7751 \fi
7752 \edef\Hy@temp{%
7753     \noexpand\pdfmark{%
7754         pdfmark=/DOCVIEW,%
7755         PageMode=/\@pdfpagemode
7756     }\Hy@temp
7757 }%
7758 }%
7759 \Hy@temp
7760 \ifx\@pdfpagescrop\@empty
7761 \else
7762     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
7763 \fi
7764 \edef\Hy@temp{%
7765     \ifHy@toolbar\else /HideToolbar true\fi
7766     \ifHy@menubar\else /HideMenubar true\fi
7767     \ifHy>windowui\else /HideWindowUI true\fi
7768     \ifHy@fitwindow /FitWindow true\fi
7769     \ifHy@centerwindow /CenterWindow true\fi
7770     \ifHy@displaydoctitle /DisplayDocTitle true\fi
7771     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7772     \Hy@UseNameKey{Direction}\@pdfdirection
7773     \Hy@UseNameKey{ViewArea}\@pdfviewarea
7774     \Hy@UseNameKey{ViewClip}\@pdfviewclip
7775     \Hy@UseNameKey{PrintArea}\@pdfprintarea
7776     \Hy@UseNameKey{PrintClip}\@pdfprintclip
7777     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7778     \Hy@UseNameKey{Duplex}\@pdfduplex
7779     \ifx\@pdfpicktraybypdfsize\@empty
7780     \else
7781         /PickTrayByPDFSize \@pdfpicktraybypdfsize
7782     \fi
7783     \ifx\@pdfprintpagerange\@empty
7784     \else
7785         /PrintPageRange[\@pdfprintpagerange]%
7786     \fi
7787     \ifx\@pdfnumcopies\@empty
7788     \else
7789         /NumCopies \@pdfnumcopies
7790     \fi
7791 }%
7792 \pdfmark{pdfmark=/PUT,%
7793     Raw={%
7794         \string{Catalog\string}<<%
7795         \ifx\Hy@temp\@empty
7796         \else
7797             /ViewerPreferences<<\Hy@temp>>%
7798         \fi
7799         \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7800         \ifx\@pdflang\@empty
7801         \else
7802             /Lang(\@pdflang)%
7803         \fi

```

```

7804     >>%
7805   }%
7806 }%
7807 }
7808 </dviwindo>
7809 < *dvipdfm>

```

46.5 dvipdfm dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

7810 \providecommand*{\XR@ext}{pdf}
7811 \Hy@setbreaklinks{true}
7812 \newsavebox{\pdfm@box}
7813 \def\@pdfm@mark#1{\special{pdf:#1}}
7814 \def\@pdfm@dest#1{%
7815   \Hy@SaveLastskip
7816   \begingroup
7817     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7818     \def\x{XYZ}%
7819     \ifx\x\@pdfview
7820       \def\x{XYZ @xpos @ypos null}%
7821     \else
7822       \def\x{FitH}%
7823       \ifx\x\@pdfview
7824         \def\x{FitH @ypos}%
7825       \else
7826         \def\x{FitBH}%
7827         \ifx\x\@pdfview
7828           \def\x{FitBH @ypos}%
7829         \else
7830           \def\x{FitV}%
7831           \ifx\x\@pdfview
7832             \def\x{FitV @xpos}%
7833           \else
7834             \def\x{FitBV}%
7835             \ifx\x\@pdfview
7836               \def\x{FitBV @xpos}%
7837             \else
7838               \def\x{Fit}%
7839               \ifx\x\@pdfview
7840                 \let\x\@pdfview
7841               \else
7842                 \def\x{FitB}%
7843                 \ifx\x\@pdfview
7844                   \let\x\@pdfview
7845                 \else
7846                   \def\x{FitR}%
7847                   \ifx\x\@pdfview
7848                     \Hy@Warning{'pdfview=FitR' is not supported}%
7849                     \def\x{XYZ @xpos @ypos null}%
7850                   \else
7851                     \@onelevel@sanitize\@pdfview
7852                     \Hy@Warning{Unknown value '\@pdfview' for pdfview}%
7853                     \def\x{XYZ @xpos @ypos null}%
7854                   \fi
7855                 \fi
7856               \fi

```

```

7857         \fi
7858         \fi
7859         \fi
7860         \fi
7861         \fi
7862         \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
7863     \endgroup
7864     \Hy@RestoreLastskip
7865 }
7866 \providecommand*\@pdfview{XYZ}
7867 \providecommand*\@pdfborder{0 0 1}
7868 \providecommand*\@pdfborderstyle{}
7869 \def\hyper@anchor#1{%
7870     \@pdfm@dest{#1}%
7871 }
7872 \def\hyper@anchorstart#1{%
7873     \Hy@activeanchortrue
7874     \@pdfm@dest{#1}%
7875 }
7876 \def\hyper@anchorend{%
7877     \Hy@activeanchorfalse
7878 }
7879 \ifHy@ocgcolorlinks
7880     \def\OBJ@OCG@view{@OCG@view}%
7881     \@pdfm@mark{%
7882         obj \OBJ@OCG@view <<%
7883             /Type/OCG%
7884             /Name(View)%
7885             /Usage<<%
7886             /Print<<%
7887             /PrintState/OFF%
7888             >>%
7889             /View<<%
7890             /ViewState/ON%
7891             >>%
7892             >>%
7893             >>%
7894     }%
7895     \@pdfm@mark{close \OBJ@OCG@view}%
7896     \def\OBJ@OCG@print{@OCG@print}%
7897     \@pdfm@mark{%
7898         obj \OBJ@OCG@print <<%
7899             /Type/OCG%
7900             /Name(Print)%
7901             /Usage<<%
7902             /Print<<%
7903             /PrintState/ON%
7904             >>%
7905             /View<<%
7906             /ViewState/OFF%
7907             >>%
7908             >>%
7909             >>%
7910     }%
7911     \@pdfm@mark{close \OBJ@OCG@print}%
7912     \def\OBJ@OCGs{@OCGs}%
7913     \@pdfm@mark{%

```

```

7914     obj \OBJ@OCGs [%
7915         \OBJ@OCG@view\space\OBJ@OCG@print
7916     ]%
7917 }%
7918 \@pdfm@mark{close \OBJ@OCGs}%
7919 \@pdfm@mark{%
7920     put @catalog <<%
7921         /OCProperties<<%
7922         /OCGs \OBJ@OCGs
7923         /D<<%
7924         /OFF[\OBJ@OCG@print]%
7925         /AS[%
7926             <<%
7927                 /Event/View%
7928                 /OCGs \OBJ@OCGs
7929                 /Category[/View]%
7930             >>%
7931             <<%
7932                 /Event/Print%
7933                 /OCGs \OBJ@OCGs
7934                 /Category[/Print]%
7935             >>%
7936             <<%
7937                 /Event/Export%
7938                 /OCGs \OBJ@OCGs
7939                 /Category[/Print]%
7940             >>%
7941         ]%
7942     >>%
7943 >>%
7944 >>%
7945 }%
7946 \AtBeginShipout{%
7947     \setbox\AtBeginShipoutBox=\hbox{%
7948         \copy\AtBeginShipoutBox
7949         \@pdfm@mark{%
7950             put @resources <<%
7951                 /Properties<<%
7952                 /OCView \OBJ@OCG@view
7953                 /OCPrint \OBJ@OCG@print
7954             >>%
7955             >>%
7956         }%
7957     }%
7958 }%
7959 \AtBeginDocument{%
7960     \def\Hy@colorlink#1{%
7961         \begingroup
7962             \ifHy@ocgcolorlinks
7963                 \def\Hy@ocgcolor{#1}%
7964                 \setbox0=\color@hbox
7965             \else
7966                 \HyColor@UseColor#1%
7967             \fi
7968     }%
7969     \def\Hy@endcolorlink{%
7970         \ifHy@ocgcolorlinks

```

```

7971         \color@endbox
7972         \mbox{%
7973             \@pdfm@mark{content /OC/OCPrint BDC}%
7974             \rlap{\copy0}%
7975             \@pdfm@mark{content EMC/OC/OCView BDC}%
7976             \begingroup
7977                 \expandafter\HyColor@UseColor\Hy@ocgcolor
7978                 \box0 %
7979             \endgroup
7980             \@pdfm@mark{content EMC}%
7981         }%
7982     \fi
7983 \endgroup
7984 }%
7985 }%
7986 \else
7987     \Hy@DisableOption{ocgcolorlinks}%
7988 \fi
7989 \def\Hy@undefinedname{UNDEFINED}
7990 \def\hyper@linkstart#1#2{%
7991     \protected@edef\Hy@testname{#2}%
7992     \ifx\Hy@testname\@empty
7993         \let\Hy@testname\Hy@undefinedname
7994     \else
7995         \Hy@pstringdef\Hy@testname{%
7996             \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7997         }%
7998     \fi
7999     \@pdfm@mark{%
8000         bann<<%
8001         /Type/Annot%
8002         /Subtype/Link%
8003         \ifHy@pdfa /F 4\fi
8004         \Hy@setpdfborder
8005         \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8006         \else
8007             /C[\csname @#1bordercolor\endcsname]%
8008         \fi
8009         /A<<%
8010         /S/GoTo%
8011         /D(\Hy@testname)%
8012         >>%
8013     >>%
8014 }%
8015 \expandafter\Hy@colorlink\csname @#1color\endcsname
8016 }
8017 \def\hyper@linkend{%
8018     \Hy@endcolorlink
8019     \@pdfm@mark{eann}%
8020 }
8021 \def\hyper@link#1#2#3{%
8022     \hyper@linkstart{#1}{#2}#3\hyper@linkend
8023 }
8024 \def\hyper@linkfile#1#2#3{%
8025     \Hy@pstringdef\Hy@pstringF{#2}%
8026     \Hy@pstringdef\Hy@pstringD{#3}%
8027     \leavevmode

```

```

8028 \pdfmark{
8029   bann<<
8030     /Type/Annot
8031     /Subtype/Link
8032     \ifHy@pdfa /F 4\fi
8033     \Hy@setpdfborder
8034     \ifx\@filebordercolor\relax
8035     \else
8036       /C[\@filebordercolor]
8037     \fi
8038   /A<<
8039     /S/GoToR
8040     /F(\Hy@pstringF)
8041     /D\ifx\@#3\@0 \pdfstartview\else(\Hy@pstringD)\fi
8042     \Hy@SetNewWindow
8043   >>
8044 >>
8045 }
8046 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8047 \pdfmark{eann}
8048 }
8049 \def\hyper@linkurl#1#2{
8050   \Hy@pstringdef\Hy@pstringURI{#2}
8051   \leavevmode
8052   \pdfmark{
8053     bann<<
8054       /Type/Annot
8055       /Subtype/Link
8056       \ifHy@pdfa /F 4\fi
8057       \Hy@setpdfborder
8058       \ifx\@urlbordercolor\relax
8059       \else
8060         /C[\@urlbordercolor]
8061       \fi
8062     /A<<
8063       /S/URI
8064       /URI(\Hy@pstringURI)
8065     >>
8066   >>
8067 }
8068 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8069 \pdfmark{eann}
8070 }
8071 \def\Acrobatmenu#1#2{
8072   \Hy@Acrobatmenu{#1}{#2}{
8073     \pdfmark{
8074       bann<<
8075         /Type/Annot
8076         /Subtype/Link
8077         \ifHy@pdfa /F 4\fi
8078       /A<<
8079         /S/Named
8080         /N/#1
8081       >>
8082       \Hy@setpdfborder
8083       \ifx\@menubordercolor\relax
8084       \relax

```



```

8085         /C[\@menubordercolor]%
8086         \fi
8087     >>%
8088 }%
8089 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
8090 \@pdfm@mark{eann}%
8091 }%
8092 }
8093 \ifx\@pdfproducer\relax
8094 \def\@pdfproducer{dvipdfm}%

```

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

```

8095 \begingroup\expandafter\expandafter\expandafter\endgroup
8096 \expandafter\ifx\csname XeTeXversion\endcsname\relax
8097 \else
8098 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
8099 \fi
8100 \fi
8101 \def\PDF@FinishDoc{%
8102 \Hy@UseMaketitleInfos
8103 \@pdfm@mark{%
8104     docinfo<<%
8105         /Title(\@pdftitle)%
8106         /Subject(\@pdfsubject)%
8107         /Creator(\@pdfcreator)%
8108         \ifx\@pdfcreationdate\@empty
8109         \else
8110             /CreationDate(\@pdfcreationdate)%
8111         \fi
8112         \ifx\@pdfmoddate\@empty
8113         \else
8114             /ModDate(\@pdfmoddate)%
8115         \fi
8116         /Author(\@pdfauthor)%
8117         \ifx\@pdfproducer\relax
8118         \else
8119             /Producer(\@pdfproducer)%
8120         \fi
8121         /Keywords(\@pdfkeywords)%
8122     >>%
8123 }%
8124 \Hy@DisableOption{pdfauthor}%
8125 \Hy@DisableOption{pdftitle}%
8126 \Hy@DisableOption{pdfsubject}%
8127 \Hy@DisableOption{pdfcreator}%
8128 \Hy@DisableOption{pdfcreationdate}%
8129 \Hy@DisableOption{pdfmoddate}%
8130 \Hy@DisableOption{pdfproducer}%
8131 \Hy@DisableOption{pdfkeywords}%
8132 }
8133 \def\PDF@SetupDoc{%
8134 \edef\Hy@temp{%
8135     \ifHy@toolbar\else /HideToolbar true\fi
8136     \ifHy@menubar\else /HideMenubar true\fi
8137     \ifHy>windowui\else /HideWindowUI true\fi
8138     \ifHy@fitwindow /FitWindow true\fi
8139     \ifHy@centerwindow /CenterWindow true\fi

```

```

8140 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8141 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8142 \Hy@UseNameKey{Direction}\@pdfdirection
8143 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8144 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8145 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8146 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8147 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8148 \Hy@UseNameKey{Duplex}\@pdfduplex
8149 \ifx\@pdfpicktraybypdfsize\@empty
8150 \else
8151 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8152 \fi
8153 \ifx\@pdfprintpagerange\@empty
8154 \else
8155 /PrintPageRange[\@pdfprintpagerange]%
8156 \fi
8157 \ifx\@pdfnumcopies\@empty
8158 \else
8159 /NumCopies \@pdfnumcopies
8160 \fi
8161 }%
8162 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8163 \@pdfm@mark{%
8164 docview<<%
8165 \ifx\@pdfstartpage\@empty
8166 \else
8167 \ifx\@pdfstartview\@empty
8168 \else
8169 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
8170 \fi
8171 \fi
8172 \ifx\@baseurl\@empty
8173 \else
8174 /URI<</Base(\Hy@pstringB)>>%
8175 \fi
8176 /PageMode/\@pdfpagemode
8177 \ifx\Hy@temp\@empty
8178 \else
8179 /ViewerPreferences<<\Hy@temp>>%
8180 \fi
8181 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8182 \ifx\@pdflang\@empty
8183 \else
8184 /Lang(\@pdflang)%
8185 \fi
8186 >>%
8187 }%
8188 \ifx\@pdfpagescrop\@empty
8189 \else
8190 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
8191 \fi
8192 }
8193 \AtBeginShipoutFirst{%
8194 \ifx\special@paper\@empty
8195 \else
8196 \ifHy@setpagesize

```

```

8197      \special{papersize=\special@paper}%
8198      \fi
8199  \fi
8200  \Hy@DisableOption{setpagesize}%
8201 }
8202 </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.

```

8203 <*vtexhtml>
8204 \providecommand*{\XR@ext}{htm}
8205 \RequirePackage{vtexhtml}
8206 \newif\if@Localurl
8207 \def\PDF@FinishDoc{}
8208 \def\PDF@SetupDoc{%
8209   \ifx\@baseurl\@empty
8210   \else
8211     \special{!direct <base href="\@baseurl">}%
8212   \fi
8213 }
8214 \def\@urltype{url}
8215 \def\hyper@link#1#2#3{%
8216   \leavevmode
8217   \special{!direct <a href=%
8218     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
8219   #3%
8220   \special{!direct </a>}%
8221 }
8222 \def\hyper@linkurl#1#2{%
8223   \begingroup
8224     \hyper@chars
8225     \leavevmode
8226     \MathBSuppress=1\relax
8227     \special{!direct <a href=%
8228       \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
8229     #1%
8230     \MathBSuppress=0\relax
8231     \special{!direct </a>}%
8232   \endgroup
8233 }
8234 \def\hyper@linkfile#1#2#3{%
8235   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
8236 }
8237 \def\hyper@linkstart#1#2{%
8238   \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
8239     \@Localurltrue
8240     \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
8241   \else
8242     \@Localurlfalse
8243     \begingroup
8244       \hyper@chars
8245       \special{!aref \HyperDestNameFilter{#2}}%
8246     \endgroup
8247   \fi
8248 }

```

```

8249 \def\hyper@linkend{%
8250   \if@Localurl
8251     \special{!endaref}%
8252   \else
8253     \special{!direct </a>}%
8254   \fi
8255 }
8256 \def\hyper@anchorstart#1{%
8257   \Hy@SaveLastskip
8258   \begingroup
8259     \hyper@chars
8260     \special{!aname #1}%
8261     \special{!direct <a name=%
8262       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8263   \endgroup
8264   \Hy@Activeanchortrue
8265 }
8266 \def\hyper@anchorend{%
8267   \special{!direct </a>}%
8268   \Hy@Activeanchorfalse
8269   \Hy@RestoreLastskip
8270 }
8271 \def\hyper@anchor#1{%
8272   \Hy@SaveLastskip
8273   \begingroup
8274     \let\protect=\string
8275     \hyper@chars
8276     \leavevmode
8277     \special{!aname #1}%
8278     \special{!direct <a name=%
8279       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8280   \endgroup
8281   \Hy@Activeanchortrue
8282   \bgroup\anchor@spot\egroup
8283   \special{!direct </a>}%
8284   \Hy@Activeanchorfalse
8285   \Hy@RestoreLastskip
8286 }
8287 \def\@Form[#1]{\typeout{Sorry, TeXpider does not yet support FORMs}}
8288 \def\@endForm{}
8289 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
8290   \typeout{Sorry, TeXpider does not yet support FORM gauges}%
8291 }
8292 \def\@TextField[#1]#2{% parameters, label
8293   \typeout{Sorry, TeXpider does not yet support FORM text fields}%
8294 }
8295 \def\@CheckBox[#1]#2{% parameters, label
8296   \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
8297 }
8298 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
8299   \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
8300 }
8301 \def\@PushButton[#1]#2{% parameters, label
8302   \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
8303 }
8304 \def\@Reset[#1]#2{%
8305   \typeout{Sorry, TeXpider does not yet support FORMs}%

```

```

8306 }
8307 \def\@Submit[#1]#2{%
8308   \typeout{Sorry, TeXpider does not yet support FORMs}%
8309 }
8310 </vtexhtml>
8311 <*vtex>

```

VTeX version 6.68 supports `\mediawidth` and `\mediaheight`. The `\ifx` construct is better than a `\csname`, because it avoids the definition and the hash table entry of a previous undefined macro.

```

8312 \ifx\mediaheight\@undefined
8313 \else
8314   \ifx\mediaheight\relax
8315   \else
8316     \ifHy@setpagesize
8317       \providecommand*\{VTeXInitMediaSize}{%
8318         \@ifundefined{stockwidth}{%
8319           \ifdim\paperheight>0pt %
8320             \setlength\mediaheight\paperheight
8321           \fi
8322           \ifdim\paperheight>0pt %
8323             \setlength\mediawidth\paperwidth
8324           \fi
8325         }{%
8326           \ifdim\stockheight>0pt %
8327             \setlength\mediaheight\stockheight
8328           \fi
8329           \ifdim\stockwidth>0pt %
8330             \setlength\mediawidth\stockwidth
8331           \fi
8332         }%
8333       }%
8334       \AtBeginDocument{\VTeXInitMediaSize}%
8335     \fi
8336     \Hy@DisableOption{setpagesize}%
8337   \fi
8338 \fi

```

Older versions of VTeX require xyz in lower case.

```

8339 \providecommand*\@pdfview{xyz}
8340 \providecommand*\@pdfborder{0 0 1}
8341 \providecommand*\@pdfborderstyle{}
8342 \let\CurrentBorderColor\@linkbordercolor
8343 \def\hyper@anchor#1{%
8344   \Hy@SaveLastskip
8345   \begingroup
8346     \let\protect=\string
8347     \hyper@chars
8348     \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8349   \endgroup
8350   \Hy@activeanchortrue
8351   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8352   \Hy@activeanchorfalse
8353   \Hy@RestoreLastskip
8354 }
8355 \def\hyper@anchorstart#1{%
8356   \Hy@SaveLastskip
8357   \begingroup

```

```

8358 \hyper@chars
8359 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8360 \endgroup
8361 \Hy@activeanchortrue
8362 }
8363 \def\hyper@anchorend{%
8364 \Hy@activeanchorfalse
8365 \Hy@RestoreLastskip
8366 }
8367 \def\@urltype{url}
8368 \def\Hy@undefinedname{UNDEFINED}
8369 \def\hyper@linkstart#1#2{%
8370 \Hy@pstringdef\Hy@pstringURI{#2}%
8371 \expandafter\Hy@colorlink\csname @#1color\endcsname
8372 \@ifundefined{#1bordercolor}{%
8373 \let\CurrentBorderColor\relax
8374 }{%
8375 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8376 }%
8377 \def\Hy@tempa{#1}%
8378 \ifx\Hy@tempa\@urltype
8379 \special{!%
8380 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8381 a=<%
8382 \ifHy@pdfa /F 4\fi
8383 \Hy@setpdfborder
8384 \ifx\CurrentBorderColor\relax
8385 \else
8386 /C [\CurrentBorderColor]%
8387 \fi
8388 >%
8389 }%
8390 \else
8391 \protected@edef\Hy@testname{#2}%
8392 \ifx\Hy@testname\@empty
8393 \let\Hy@testname\Hy@undefinedname
8394 \fi
8395 \special{!%
8396 aref \expandafter\HyperDestNameFilter
8397 \expandafter{\Hy@testname};%
8398 a=<%
8399 \ifHy@pdfa /F 4\fi
8400 \Hy@setpdfborder
8401 \ifx\CurrentBorderColor\relax
8402 \else
8403 /C [\CurrentBorderColor]%
8404 \fi
8405 >%
8406 }%
8407 \fi
8408 }
8409 \def\hyper@linkend{%
8410 \special{!endaref}%
8411 \Hy@endcolorlink
8412 }
8413 \def\hyper@linkfile#1#2#3{%
8414 \leavevmode

```

```

8415 \special{!%
8416   aref <%
8417     \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
8418     f=#2>#3;%
8419     a=<%
8420       \ifHy@pdfa /F 4\fi
8421       \Hy@setpdfborder
8422       \ifx\@filebordercolor\relax
8423       \else
8424         /C [\@filebordercolor]%
8425       \fi
8426     >%
8427   }%
8428   \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8429 \special{!endaref}%
8430 }
8431 \def\hyper@linkurl#1#2{%
8432   \begingroup
8433     \Hy@pstringdef\Hy@pstringURI{#2}%
8434     \hyper@chars
8435     \leavevmode
8436     \special{!%
8437       aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8438       a=<%
8439         \ifHy@pdfa /F 4\fi
8440         \Hy@setpdfborder
8441         \ifx\@urlbordercolor\relax
8442         \else
8443           /C [\@urlbordercolor]%
8444         \fi
8445       >%
8446     }%
8447     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8448     \special{!endaref}%
8449   \endgroup
8450 }
8451 \def\hyper@link#1#2#3{%
8452   \@ifundefined{#@1bordercolor}{%
8453     \let\CurrentBorderColor\relax
8454   }{%
8455     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8456   }%
8457   \leavevmode
8458   \protected@edef\Hy@testname{#2}%
8459   \ifx\Hy@testname\@empty
8460     \let\Hy@testname\Hy@undefinedname
8461   \fi
8462   \special{!%
8463     aref \expandafter\HyperDestNameFilter
8464         \expandafter{\Hy@testname};%
8465     a=<%
8466       \ifHy@pdfa /F 4\fi
8467       \Hy@setpdfborder
8468       \ifx\CurrentBorderColor\relax
8469       \else
8470         /C [\CurrentBorderColor]%
8471       \fi

```

```

8472 >%
8473 }%
8474 \expandafter\Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
8475 \special{!endaref}%
8476 }
8477 \def\hyper@image#1#2{%
8478 \hyper@linkurl{#2}{#1}%
8479 }
8480 \def\@hyper@launch run:#1\#2#3{%
8481 \Hy@pstringdef\Hy@pstringF{#1}%
8482 \Hy@pstringdef\Hy@pstringP{#3}%
8483 \leavevmode
8484 \special{!aref %
8485 <u=%
8486 /Type/Action%
8487 /S/Launch%
8488 /F(\Hy@pstringF)%
8489 \Hy@SetNewWindow
8490 \ifx\#3\else /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>\fi%
8491 >;%
8492 a=<%
8493 \ifHy@pdfa /F 4\fi
8494 \Hy@setpdfborder
8495 \ifx\@runbordercolor\relax
8496 \else
8497 /C[\@runbordercolor]%
8498 \fi
8499 >%
8500 }%
8501 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
8502 \special{!endaref}%
8503 }
8504 \def\Acrobatmenu#1#2{%
8505 \Hy@Acrobatmenu{#1}{#2}{%
8506 \special{!%
8507 aref <u=/S /Named /N /#1>;%
8508 a=<%
8509 \ifHy@pdfa /F 4\fi
8510 \Hy@setpdfborder
8511 \ifx\@menubordercolor\relax
8512 \else
8513 /C[\@menubordercolor]%
8514 \fi
8515 >%
8516 }%
8517 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
8518 \special{!endaref}%
8519 }%
8520 }

```

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

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

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

```

8521 \ifnum\Hy@VTeXversion<702 %
8522 \else
8523 \def\hyper@pagetransition{%
8524 \ifx\@pdfpagetransition\relax
8525 \else

```



```
8526 \ifx\@pdfpagetransition\@empty
```

Standard incantation.

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

```
8527 \else
8528 \hvtex@parse@trans\@pdfpagetransition
8529 \fi
8530 \fi
8531 }%
```

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

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

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

Transition codes:

```
8532 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
8533 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
8534 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
8535 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
8536 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
8537 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
8538 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%
```

Optional parameters:

```
8539 \def\hvtex@par@dimension{/Dm}%
8540 \def\hvtex@par@direction{/Di}%
8541 \def\hvtex@par@duration{/D}%
8542 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
8543 \def\hvtex@gettoken{\expandafter\hvtex@gettoken@\hvtex@buffer\@nil}%
```

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

```
8544 \def\hvtex@gettoken@#1 #2\@nil{%
8545 \edef\hvtex@token{#1}%
8546 \edef\hvtex@buffer{#2}%
8547 }%
8548 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
8549 \let\hvtex@trans@code\@empty
8550 \let\hvtex@param@dimension\@empty
8551 \let\hvtex@param@direction\@empty
8552 \let\hvtex@param@duration\@empty
```

```

8553 \let\hvtex@param@motion\@empty
8554 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

8555 \hvtex@gettoken
8556 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

8557 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

8558 \else
8559 \hvtex@gettoken
8560 \fi
8561 \fi
8562 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

8563 \hvtex@trans@params
8564 }%

```

Reentrant macro to parse optional parameters.

```

8565 \def\hvtex@trans@params{%
8566 \ifx\hvtex@buffer\@empty
8567 \else
8568 \hvtex@gettoken
8569 \let\hvtex@trans@par\hvtex@token
8570 \ifx\hvtex@buffer\@empty
8571 \else
8572 \hvtex@gettoken
8573 \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```

8574 \let\hvtex@param@duration\hvtex@token
8575 \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

8576 \expandafter\edef\expandafter\hvtex@param@motion
8577 \expandafter{\expandafter\@gobble\hvtex@token}%
8578 \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

8579 \expandafter\edef\expandafter\hvtex@param@dimension
8580 \expandafter{\expandafter\@gobble\hvtex@token}%
8581 \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).

```

8582 \let\hvtex@param@direction\hvtex@token
8583 \fi\fi\fi\fi
8584 \fi
8585 \fi
8586 \ifx\hvtex@buffer\@empty
8587 \let\next\hvtex@produce@trans
8588 \else
8589 \let\next\hvtex@trans@params
8590 \fi
8591 \next
8592 }%

```

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

```

8593 \def\hvtex@produce@trans{%
8594   \let\vtex@trans@special\@empty
8595   \if S\hvtex@trans@code
8596     \edef\vtex@trans@special{\hvtex@trans@code
8597       \hvtex@param@dimension\hvtex@param@motion}%
8598   \else\if B\hvtex@trans@code
8599     \edef\vtex@trans@special{%
8600       \hvtex@trans@code\hvtex@param@dimension
8601     }%
8602   \else\if X\hvtex@trans@code
8603     \edef\vtex@trans@special{%
8604       \hvtex@trans@code\hvtex@param@motion
8605     }%
8606   \else\if W\hvtex@trans@code
8607     \edef\vtex@trans@special{%
8608       \hvtex@trans@code\hvtex@param@direction
8609     }%
8610   \else\if D\hvtex@trans@code
8611     \let\vtex@trans@special\hvtex@trans@code
8612   \else\if R\hvtex@trans@code
8613     \let\vtex@trans@special\hvtex@trans@code
8614   \else\if G\hvtex@trans@code
8615     \edef\vtex@trans@special{%
8616       \hvtex@trans@code\hvtex@param@direction
8617     }%
8618   \fi\fi\fi\fi\fi\fi
8619   \ifx\vtex@trans@special\@empty
8620   \else
8621     \ifx\hvtex@param@duration\@empty
8622     \else
8623       \setlength{\dimen@}{\hvtex@param@duration\p}%

```

I'm not guilty of possible overflow.

```

8624     \multiply\dimen@\@m
8625     \edef\vtex@trans@special{%
8626       \vtex@trans@special,\strip@pt\dimen@
8627     }%
8628   \fi

```

And all the mess is just for this.

```

8629     \special{!trans \vtex@trans@special}%
8630   \fi
8631 }%
8632 \def\hyper@pageduration{%
8633   \ifx\@pdfpageduration\relax
8634   \else
8635     \ifx\@pdfpageduration\@empty
8636       \special{!duration-}%
8637     \else
8638       \special{!duration \@pdfpageduration}%
8639     \fi
8640   \fi
8641 }%
8642 \def\hyper@pagehidden{%
8643   \ifHy@useHidKey

```

```

8644     \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
8645     \fi
8646 }%
8647 \g@addto@macro\Hy@EveryPageBoxHook{%
8648     \hyper@pagetransition
8649     \hyper@pageduration
8650     \hyper@pagehidden
8651 }%
8652 \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

```

8653 \ifx\@pdfproducer\relax
8654   \def\@pdfproducer{VTeX}%
8655   \ifnum\Hy@VTeXversion>\z@
8656     \count@\VTeXversion
8657     \divide\count@ 100 %
8658     \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
8659     \multiply\count@ -100 %
8660     \advance\count@\VTeXversion
8661     \edef\@pdfproducer{%
8662       \@pdfproducer
8663       .\ifnum\count@<10 0\fi\the\count@
8664       \ifx\VTeXOS\@undefined\else
8665         \ifnum\VTeXOS>0 %
8666           \ifnum\VTeXOS<6 %
8667             \space(%
8668             \ifcase\VTeXOS
8669               \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
8670             \fi
8671             )%
8672           \fi
8673         \fi
8674       \fi
8675       ,\space
8676       \ifnum\OpMode=\@one PDF\else PS\fi
8677       \space backend%
8678       \ifx\gexmode\@undefined\else
8679         \ifnum\gexmode>\z@\space with GeX\fi
8680       \fi
8681     }%
8682   \fi
8683 \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).

```

8684 \def\PDF@SetupDoc{%
8685   \ifx\@pdfpagescrop\@empty
8686   \else
8687     \special{!pdfinfo b=<\@pdfpagescrop>}%
8688   \fi
8689   \ifx\@pdfstartpage\@empty
8690   \else
8691     \ifx\@pdfstartview\@empty
8692     \else
8693       \special{!onopen Page\@pdfstartpage}%
8694     \fi
8695   \fi
8696   \special{!pdfinfo p=</\@pdfpagemode>}%
8697   \ifx\@baseurl\@empty
8698   \else
8699     \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
8700   \fi
8701   \special{!pdfinfo v=<<<%
8702     \ifHy@toolbar\else /HideToolbar true\fi
8703     \ifHy@menubar\else /HideMenubar true\fi
8704     \ifHy@windowui\else /HideWindowUI true\fi
8705     \ifHy@fitwindow /FitWindow true\fi
8706     \ifHy@centerwindow /CenterWindow true\fi
8707     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8708     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8709     \Hy@UseNameKey{Direction}\@pdfdirection
8710     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8711     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8712     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8713     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8714     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8715     \Hy@UseNameKey{Duplex}\@pdfduplex
8716     \ifx\@pdfpicktraybypdfsize\@empty
8717     \else
8718       /PickTrayByPDFSize \@pdfpicktraybypdfsize
8719     \fi
8720     \ifx\@pdfprintpagerange\@empty
8721     \else
8722       /PrintPageRange[\@pdfprintpagerange]%
8723     \fi
8724     \ifx\@pdfnumcopies\@empty
8725     \else
8726       /NumCopies \@pdfnumcopies

```

```

8727 \fi
8728 >>>}%
8729 \ifx\@pdfpagelayout\@empty
8730 \else
8731 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
8732 \fi
8733 }%
8734 \def\PDF@FinishDoc{%
8735 \Hy@UseMaketitleInfos
8736 \special{!pdfinfo a=<\@pdfauthor>}%
8737 \special{!pdfinfo t=<\@pdftitle>}%
8738 \special{!pdfinfo s=<\@pdfsubject>}%
8739 \special{!pdfinfo c=<\@pdfcreator>}%
8740 \ifx\@pdfproducer\relax
8741 \else
8742 \special{!pdfinfo r=<\@pdfproducer>}%
8743 \fi
8744 \special{!pdfinfo k=<\@pdfkeywords>}%
8745 \Hy@DisableOption{pdfauthor}%
8746 \Hy@DisableOption{pdftitle}%
8747 \Hy@DisableOption{pdfsubject}%
8748 \Hy@DisableOption{pdfcreator}%
8749 \Hy@DisableOption{pdfcreationdate}%
8750 \Hy@DisableOption{pdfmoddate}%
8751 \Hy@DisableOption{pdfproducer}%
8752 \Hy@DisableOption{pdfkeywords}%
8753 }
8754 </vtx>

```

46.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

8755 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
8756 <package>\providecommand*\Hy@DistillerDestFix{}
8757 <*pdfmark | dviwindo>
8758 \def\Hy@DistillerDestFix{%
8759 \beginpgroup
8760 \let\x\literalps@out

```

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

```

8761 \ifnum \@ifundefined{OpMode}{0}{}%
8762 \ifundefined{gexmode}{0}{%
8763 \ifnum\gexmode>0 \OpMode\else 0\fi
8764 }}>1 %
8765 \def\x##1{%
8766 \immediate\special{!=##1}%
8767 }%
8768 \fi

```

```

8769 \x{%
8770 /product where{%
8771   pop %
8772   product(Distiller)search{%
8773     pop pop pop %
8774     version(.)search{%
8775       exch pop exch pop%
8776       (3011)eq{%
8777         gsave %
8778         newpath 0 0 moveto closepath clip%
8779         /Courier findfont 10 scalefont setfont %
8780         72 72 moveto(.)show %
8781         grestore%
8782       }if%
8783     }{pop}ifelse%
8784   }{pop}ifelse%
8785 }if%
8786 }%
8787 \endgroup
8788 }
8789 </pdfmark | dviwindo>

```

46.8 Direct pdfmark support

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

```

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

```

and the correct definitions of the following PostScript procedures:

```

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

```

```

8790 <*pdfmark>
8791 \Hy@breaklinks@unsupported
8792 \def\hyper@anchor#1{%
8793   \Hy@SaveLastskip
8794   \begingroup
8795     \pdfmark[\anchor@spot]{%
8796       pdfmark=/DEST,%
8797       linktype=anchor,%
8798       View=/\@pdfview \@pdfviewparams,%
8799       DestAnchor={#1}%
8800     }%
8801   \endgroup
8802   \Hy@RestoreLastskip
8803 }
8804 \@ifundefined{hyper@anchorstart}{-}{\endinput}
8805 \def\hyper@anchorstart#1{%
8806   \Hy@SaveLastskip
8807   \literalps@out{H.S}%
8808   \xdef\hyper@currentanchor{#1}%
8809   \Hy@activeanchortrue

```

```

8810 }
8811 \def\hyper@anchorend{%
8812   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
8813   \pdfmark{%
8814     pdfmark=/DEST,%
8815     linktype=anchor,%
8816     View=/\@pdfview \@pdfviewparams,%
8817     DestAnchor=\hyper@currentanchor,%
8818   }%
8819   \Hy@activeanchorfalse
8820   \Hy@RestoreLastskip
8821 }
8822 \def\hyper@linkstart#1#2{%
8823   \ifHy@breaklinks
8824   \else
8825     \leavevmode\hbox\bgroup
8826     \fi
8827     \expandafter\Hy@colorlink\csname @#1color\endcsname
8828     \literalps@out{H.S}%
8829     \xdef\hyper@currentanchor{#2}%
8830     \gdef\hyper@currentlinktype{#1}%
8831 }
8832 \def\hyper@linkend{%
8833   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
8834   \@ifundefined{@\hyper@currentlinktype bordercolor}{%
8835     \let\Hy@tempcolor\relax
8836   }{%
8837     \edef\Hy@tempcolor{%
8838       \csname @\hyper@currentlinktype bordercolor\endcsname
8839     }%
8840   }%
8841   \pdfmark{%
8842     pdfmark=/ANN,%
8843     linktype=link,%
8844     Subtype=/Link,%
8845     PDFAMark=4,%
8846     Dest=\hyper@currentanchor,%
8847     AcroHighlight=\@pdfhighlight,%
8848     Border=\@pdfborder,%
8849     BorderStyle=\@pdfborderstyle,%
8850     Color=\Hy@tempcolor,%
8851     Raw=H.B%
8852   }%
8853   \Hy@endcolorlink
8854   \ifHy@breaklinks
8855   \else
8856     \egroup
8857   \fi
8858 }

```

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.

```

8859 \begingroup
8860 \catcode'P=12 %
8861 \catcode'T=12 %
8862 \lowercase{\endgroup
8863 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%

```



```

8864 }
8865 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

8866 \def\hyper@pagetransition{%
8867   \ifx\@pdfpagetransition\relax
8868   \else
8869     \ifx\@pdfpagetransition\@empty
8870     % 1. Does an old entry have to be deleted?
8871     % 2. If 1=yes, how to delete?
8872   \else
8873     \pdfmark{%
8874       pdfmark=/PUT,%
8875       Raw={%
8876         \string{ThisPage\string}%
8877         <</Trans << /S /\@pdfpagetransition\space >> >>%
8878       }%
8879     }%
8880   \fi
8881 \fi
8882 }

```

\hyper@pageduration

```

8883 \def\hyper@pageduration{%
8884   \ifx\@pdfpageduration\relax
8885   \else
8886     \ifx\@pdfpageduration\@empty
8887     % 1. Does an old entry have to be deleted?
8888     % 2. If 1=yes, how to delete?
8889   \else
8890     \pdfmark{%
8891       pdfmark=/PUT,%
8892       Raw={%
8893         \string{ThisPage\string}%
8894         <</Dur \@pdfpageduration>>%
8895       }%
8896     }%
8897   \fi
8898 \fi
8899 }

```

\hyper@pagehidden

```

8900 \def\hyper@pagehidden{%
8901   \ifHy@useHidKey
8902     \pdfmark{%
8903       pdfmark=/PUT,%
8904       Raw={%
8905         \string{ThisPage\string}%
8906         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
8907       }%
8908     }%
8909   \fi
8910 }

8911 \g@addto@macro\Hy@EveryPageBoxHook{%
8912   \hyper@pagetransition
8913   \hyper@pageduration

```

```

8914 \hyper@pagehidden
8915 }

8916 \def\hyper@image#1#2{%
8917 \hyper@linkurl{#2}{#1}%
8918 }
8919 \def\Hy@undefinedname{UNDEFINED}
8920 \def\hyper@link#1#2#3{%
8921 \@ifundefined{#1bordercolor}{%
8922 \let\Hy@tempcolor\relax
8923 }{%
8924 \edef\Hy@tempcolor{\csname #1bordercolor\endcsname}%
8925 }%
8926 \begingroup
8927 \protected@edef\Hy@testname{#2}%
8928 \ifx\Hy@testname\@empty
8929 \let\Hy@testname\Hy@undefinedname
8930 \fi
8931 \pdfmark[{#3}] {%
8932 Color=\Hy@tempcolor,%
8933 linktype={#1},%
8934 AcroHighlight=\@pdfhighlight,%
8935 Border=\@pdfborder,%
8936 BorderStyle=\@pdfborderstyle,%
8937 pdfmark=/ANN,%
8938 Subtype=/Link,%
8939 PDFAFlags=4,%
8940 Dest=\Hy@testname
8941 }%
8942 \endgroup
8943 }
8944 \newtoks\pdf@docset
8945 \def\PDF@FinishDoc{%
8946 \Hy@UseMaketitleInfos
8947 \let\Hy@temp\@empty
8948 \ifx\@pdfcreationdate\@empty
8949 \else
8950 \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
8951 \fi
8952 \ifx\@pdfmoddate\@empty
8953 \else
8954 \expandafter\def\expandafter\Hy@temp\expandafter{%
8955 \Hy@temp
8956 ModDate=\@pdfmoddate,%
8957 }%
8958 \fi
8959 \ifx\@pdfproducer\relax
8960 \else
8961 \expandafter\def\expandafter\Hy@temp\expandafter{%
8962 \Hy@temp
8963 Producer=\@pdfproducer,%
8964 }%
8965 \fi
8966 \expandafter
8967 \pdfmark\expandafter{%
8968 \Hy@temp
8969 pdfmark=/DOCINFO,%
8970 Title=\@pdftitle,%

```

```

8971     Subject=\@pdfsubject,%
8972     Creator=\@pdfcreator,%
8973     Author=\@pdfauthor,%
8974     Keywords=\@pdfkeywords
8975 }%
8976 \Hy@DisableOption{pdfauthor}%
8977 \Hy@DisableOption{pdftitle}%
8978 \Hy@DisableOption{pdfsubject}%
8979 \Hy@DisableOption{pdfcreator}%
8980 \Hy@DisableOption{pdfcreationdate}%
8981 \Hy@DisableOption{pdfmoddate}%
8982 \Hy@DisableOption{pdfproducer}%
8983 \Hy@DisableOption{pdfkeywords}%
8984 }
8985 \def\PDF@SetupDoc{%
8986   \def\Hy@temp{%
8987     \ifx\@pdfstartpage\@empty
8988     \else
8989       \ifx\@pdfstartview\@empty
8990       \else
8991         \edef\Hy@temp{%
8992           ,Page=\@pdfstartpage
8993           ,View=\@pdfstartview
8994         }%
8995       \fi
8996     \fi
8997     \edef\Hy@temp{%
8998       \noexpand\pdfmark{%
8999         pdfmark=/DOCVIEW,%
9000         PageMode=/\@pdfpagemode
9001       }\Hy@temp
9002     }%
9003   }%
9004   \Hy@temp
9005   \ifx\@pdfpagescrop\@empty
9006   \else
9007     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9008   \fi
9009   \edef\Hy@temp{%
9010     \ifHy@toolbar\else /HideToolbar true\fi
9011     \ifHy@menubar\else /HideMenubar true\fi
9012     \ifHy@windowui\else /HideWindowUI true\fi
9013     \ifHy@fitwindow /FitWindow true\fi
9014     \ifHy@centerwindow /CenterWindow true\fi
9015     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9016     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9017     \Hy@UseNameKey{Direction}\@pdfdirection
9018     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9019     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9020     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9021     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9022     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9023     \Hy@UseNameKey{Duplex}\@pdfduplex
9024     \ifx\@pdfpicktraybypdfsize\@empty
9025     \else
9026       /PickTrayByPDFSize \@pdfpicktraybypdfsize
9027     \fi

```

```

9028 \ifx\@pdfprintpagerange\@empty
9029 \else
9030 /PrintPageRange[\@pdfprintpagerange]%
9031 \fi
9032 \ifx\@pdfnumcopies\@empty
9033 \else
9034 /NumCopies \@pdfnumcopies
9035 \fi
9036 }%
9037 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9038 \pdfmark{%
9039 pdfmark=/PUT,%
9040 Raw={%
9041 \string{Catalog\string}<<%
9042 \ifx\Hy@temp\@empty
9043 \else
9044 /ViewerPreferences<<\Hy@temp>>%
9045 \fi
9046 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9047 \ifx\@pdflang\@empty
9048 \else
9049 /Lang(\@pdflang)%
9050 \fi
9051 \ifx\@baseurl\@empty
9052 \else
9053 /URI<</Base(\Hy@pstringB)>>%
9054 \fi
9055 >>%
9056 }%
9057 }%
9058 }
9059 </pdfmark>
9060 <*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.

```

9061 \newif\ifHy@pdfmarkerror
9062 \def\pdfmark{\@ifnextchar [{\pdfmark@}{\pdfmark@[]}}
9063 \def\pdfmark@[#1]#2{%
9064 \Hy@pdfmarkerrorfalse
9065 \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
9066 \@processme
9067 \let\pdf@type\relax
9068 \setkeys{PDF}{#2}%
9069 \ifHy@pdfmarkerror
9070 \else
9071 \ifx\pdf@type\relax
9072 \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
9073 \ifx\#1\%
9074 \else
9075 \pdf@rect{#1}%
9076 \fi
9077 \else
9078 \ifx\#1\%

```

```

9079      \literalps@out{%
9080      [\the\pdf@toks\space\pdf@type\space pdfmark%
9081      }%
9082    \else
9083      \@ifundefined{@\pdf@linktype color}{%
9084      \Hy@colorlink\@linkcolor
9085      }{%
9086      \expandafter\Hy@colorlink
9087      \csname @\pdf@linktype color\endcsname
9088      }%
9089      \pdf@rect{#1}%
9090      \literalps@out{%
9091      [\the\pdf@toks\space\pdf@type\space pdfmark%
9092      }%
9093      \Hy@endcolorlink
9094    \fi
9095  \fi
9096 \fi
9097 }

```

The complicated bit is working out the right enclosing rectangle of some piece of TeX text, needed by the /Rect key. This solution originates with Toby Thain (tobyth@netspace.net.au).

For the case breaklinks is enabled, I have added two hooks, the first one for package setouterhbox, it provides a hopefully better method without setting the text twice.

```
\usepackage[hyperref]{setouterhbox}
```

With the second hook, also you can set the text twice, e.g.:

```

\long\def\Hy@setouterhbox#1#2{\long\def\my@temp{#2}}
\def\Hy@breaklinksunhbox#1{\my@temp}

```

```

9098 \newsavebox{\pdf@box}
9099 \providecommand*{\Hy@setouterhbox}{\sbox}
9100 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
9101 \def\Hy@DEST{/DEST}
9102 \def\pdf@rect#1{%
9103   \leavevmode
9104   \ifHy@breaklinks
9105     \Hy@setouterhbox\pdf@box{#1}%
9106   \else
9107     \sbox\pdf@box{#1}%
9108   \fi
9109   \dimen@ht\pdf@box
9110   \ifdim\dp\pdf@box=\z@
9111     \literalps@out{H.S}%
9112   \else
9113     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
9114   \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...).

```

9115   \ifHy@breaklinks
9116     \expandafter\Hy@breaklinksunhbox
9117   \else
9118     \expandafter\box
9119   \fi
9120 \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

9121 \ifdim\dimen@=\z@
9122   \literalps@out{H.R}%
9123 \else
9124   \raise\dimen@ \hbox{\literalps@out{H.R}}%
9125 \fi
9126 \ifx\pdf@type\Hy@DEST
9127 \else
9128   \pdf@addtoksx{H.B}%
9129 \fi
9130 }

```

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.

```

9131 \newtoks\pdf@toks
9132 \newtoks\pdf@defaulttoks
9133 \pdf@defaulttoks={}
9134 \def\pdf@addtoks#1#2{%
9135   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
9136   \@processme
9137 }
9138 \def\pdf@addtoksx#1{%
9139   \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
9140   \@processme
9141 }
9142 \def\PDFdefaults#1{%
9143   \pdf@defaulttoks={#1}%
9144 }

```

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

```

9145 % what is the type of pdfmark?
9146 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
9147 % what is the link type?
9148 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
9149 \def\pdf@linktype{link}
9150 % parameter is a stream of PDF
9151 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
9152 % parameter is a name
9153 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
9154 % parameter is a array
9155 \define@key{PDF}{Border}{%
9156   \edef\Hy@temp{#1}%
9157   \ifx\Hy@temp\@empty
9158   \else
9159     \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
9160   \fi
9161 }
9162 \let\Hy@BorderArrayPatch\@empty
9163 % parameter is a dictionary
9164 \define@key{PDF}{BorderStyle}{%
9165   \edef\Hy@temp{#1}%
9166   \ifx\Hy@temp\@empty
9167   \else
9168     \pdf@addtoks{<<#1>>}{BS}%

```

```

9169 \fi
9170 }
9171 % parameter is a array
9172 \define@key{PDF}{Color}{%
9173   \ifx\relax#1\relax
9174   \else
9175     \pdf@addtoks{[#1]}{Color}% hash-ok
9176   \fi
9177 }
9178 % parameter is a string
9179 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
9180 % parameter is a integer
9181 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
9182 % parameter is a array
9183 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
9184 % parameter is a string
9185 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
9186 % parameter is a string or file
9187 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
9188 % parameter is a destination
9189 \define@key{PDF}{Dest}{%
9190   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9191   \ifx\Hy@pstringDest\@empty
9192     \Hy@pdfmarkerrortrue
9193     \Hy@Warning{Destination with empty name ignored}%
9194   \else
9195     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9196   \fi
9197 }
9198 \define@key{PDF}{DestAnchor}{%
9199   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9200   \ifx\Hy@pstringDest\@empty
9201     \Hy@pdfmarkerrortrue
9202     \Hy@Warning{Destination with empty name ignored}%
9203   \else
9204     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9205   \fi
9206 }
9207 % parameter is a string
9208 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
9209 % parameter is a string
9210 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
9211 % parameter is a int
9212 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
9213 \define@key{PDF}{PDFAFlags}{%
9214   \ifHy@pdfa
9215     \pdf@addtoks{#1}{F}%
9216   \fi
9217 }
9218 % parameter is a name
9219 \define@key{PDF}{AcroHighlight}{%
9220   \begingroup
9221     \edef\x{#1}%
9222     \expandafter\endgroup\ifx\x\@empty
9223   \else
9224     \pdf@addtoks{#1}{H}%
9225   \fi

```

```

9226 }
9227 % parameter is a string
9228 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
9229 % parameter is a string
9230 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
9231 % parameter is a string
9232 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9233 % parameter is a string
9234 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
9235 % parameter is a Boolean
9236 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
9237 % parameter is a integer or name
9238 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
9239 % parameter is a name
9240 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
9241 % parameter is a string
9242 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
9243 % parameter is a array
9244 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
9245 % parameter is a integer
9246 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
9247 % parameter is a name
9248 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
9249 % parameter is a string
9250 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
9251 % parameter is a string
9252 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
9253 % parameter is a string
9254 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
9255 % parameter is an array
9256 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
9257 % parameter is a string
9258 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

9259 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
9260 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
9261 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
9262 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9263 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
9264 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
9265 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
9266 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9267 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
9268 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
9269 </pdfmarkbase>
9270 <*pdfmark>
9271 \def\Acrobatmenu#1#2{%
9272   \Hy@Acrobatmenu{#1}{#2}{%
9273     \pdfmark[{#2}]{%
9274       linktype=menu,%
9275       pdfmark=/ANN,%
9276       AcroHighlight=\pdfhighlight,%
9277       Border=\pdfborder,%
9278       BorderStyle=\pdfborderstyle,%
9279       Action={<< /Subtype /Named /N /#1 >>},%
9280       Subtype=/Link,%
9281       PDFANFlags=4%

```



```

9282    }%
9283  }%
9284 }

```

And now for some useful examples:

```

9285 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
9286 \def\PDFNextPage@[#1]#2{%
9287   \pdfmark[{#2}] {%
9288     #1,%
9289     Border=\@pdfborder,%
9290     BorderStyle=\@pdfborderstyle,%
9291     Color=.2 .1 .5,%
9292     pdfmark=/ANN,%
9293     Subtype=/Link,%
9294     PDFAFlags=4,%
9295     Page=/Next%
9296   }%
9297 }
9298 \def\PDFPreviousPage{%
9299   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
9300 }
9301 \def\PDFPreviousPage@[#1]#2{%
9302   \pdfmark[{#2}] {%
9303     #1,%
9304     Border=\@pdfborder,%
9305     BorderStyle=\@pdfborderstyle,%
9306     Color=.4 .4 .1,%
9307     pdfmark=/ANN,%
9308     Subtype=/Link,%
9309     PDFAFlags=4,%
9310     Page=/Prev%
9311   }%
9312 }
9313 \def\PDFOpen#1{%
9314   \pdfmark{#1,pdfmark=/DOCVIEW}%
9315 }

```

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

```

9316 \def\hyper@linkurl#1#2{%
9317   \begingroup
9318     \Hy@pstringdef\Hy@pstringURI{#2}%
9319     \hyper@chars
9320     \leavevmode
9321     \pdfmark[{#1}] {%
9322       pdfmark=/ANN,%
9323       linktype=url,%
9324       AcroHighlight=\@pdfhighlight,%
9325       Border=\@pdfborder,%
9326       BorderStyle=\@pdfborderstyle,%
9327       Color=\@urlbordercolor,%
9328       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
9329       Subtype=/Link,%
9330       PDFAFlags=4%
9331     }%
9332   \endgroup
9333 }
9334 \def\hyper@linkfile#1#2#3{%
9335   \begingroup

```

```

9336 \Hy@pstringdef\Hy@pstringF{#2}%
9337 \Hy@pstringdef\Hy@pstringD{#3}%
9338 \leavevmode
9339 \pdfmark[{#1}]{%
9340 pdfmark=/ANN,%
9341 Subtype=/Link,%
9342 PDFAFlags=4,%
9343 AcroHighlight=\@pdfhighlight,%
9344 Border=\@pdfborder,%
9345 BorderStyle=\@pdfborderstyle,%
9346 linktype=file,%
9347 Color=\@filebordercolor,%
9348 Action={%
9349 <<%
9350 /S/GoToR%
9351 \Hy@SetNewWindow
9352 /F(\Hy@pstringF)%
9353 /D\ifx\#3\ [0 \@pdfstartview]\else(\Hy@pstringD)cvn\fi
9354 >>%
9355 }%
9356 }%
9357 \endgroup
9358 }
9359 \def\@hyper@launch run:#1\#2#3{%
9360 \begingroup
9361 \Hy@pstringdef\Hy@pstringF{#1}%
9362 \Hy@pstringdef\Hy@pstringP{#3}%
9363 \leavevmode
9364 \pdfmark[{#2}]{%
9365 pdfmark=/ANN,%
9366 Subtype=/Link,%
9367 PDFAFlags=4,%
9368 AcroHighlight=\@pdfhighlight,%
9369 Border=\@pdfborder,%
9370 BorderStyle=\@pdfborderstyle,%
9371 linktype=run,%
9372 Color=\@runbordercolor,%
9373 Action={%
9374 <<%
9375 /S/Launch%
9376 \Hy@SetNewWindow
9377 /F(\Hy@pstringF)%
9378 \ifx\#3\%
9379 \else
9380 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9381 \fi
9382 >>%
9383 }%
9384 }%
9385 \endgroup
9386 }
9387 \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.

```
9388 <*dvips>
9389 \providecommand*{\XR@ext}{pdf}
9390 \def\Hy@raisedlink{}
9391 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
9392 \def\headerps@out#1{\special{! #1}}%
9393 \input{pdfmark.def}%
9394 \ifx\@pdfproducer\relax
9395   \def\@pdfproducer{dvips + Distiller}%
9396 \fi
9397 \providecommand*\@pdfborder{0 0 1}
9398 \providecommand*\@pdfborderstyle{}
9399 \providecommand*\@pdfview{XYZ}
9400 \providecommand*\@pdfviewparams{ H.V}
9401 \def\Hy@BorderArrayPatch{BorderArrayPatch}

9402 \g@addto@macro\Hy@FirstPageHook{%
9403   \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.

```
9404   /DvipsToPDF{72.27 mul Resolution div} def%
9405   /PDFToDvips{72.27 div Resolution mul} def%
9406   /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.

```
9407   /BorderArrayPatch{%
9408     [exch{%
9409       dup dup type/integertype eq exch type/realtype eq or%
9410       {BPToDvips}if%
9411     }forall]%
9412   }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.

```
9413   /HyperBorder {1 PDFToDvips} def%
9414   /H.V {pdf@hoff pdf@voff null} def%
9415   /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

```
9416   /H.S {%
```

```

9417     currentpoint %
9418     HyperBorder add /pdf@lly exch def %
9419     dup DvipsToPDF 72 add /pdf@hoff exch def %
9420     HyperBorder sub /pdf@llx exch def%
9421 } 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`

```

9422     /H.L {%
9423         2 sub dup%
9424         /HyperBasePt exch def %
9425         PDFToDvips /HyperBaseDvips exch def %
9426         currentpoint %
9427         HyperBaseDvips sub /pdf@ury exch def%
9428         /pdf@urx exch def%
9429     } def%
9430     /H.A {%
9431         H.L %
9432 % | /pdf@voff| = the distance from the top of the page to a point
9433 % | \baselineskip| above the current point in PDF coordinates
9434         currentpoint exch pop %
9435         vsize 72 sub exch DvipsToPDF %
9436         HyperBasePt sub % baseline skip
9437         sub /pdf@voff exch def%
9438     } def%
9439     /H.R {%
9440         currentpoint %
9441         HyperBorder sub /pdf@ury exch def %
9442         HyperBorder add /pdf@urx exch def %
9443 % | /pdf@voff| = the distance from the top of the page to the current point, in
9444 % PDF coordinates
9445         currentpoint exch pop vsize 72 sub %
9446         exch DvipsToPDF sub /pdf@voff exch def%
9447     } def%
9448 }%
9449 }
9450 \AfterBeginDocument{%
9451     \ifx\special@paper\@empty\else
9452         \ifHy@setpagesize
9453             \special{papersize=\special@paper}%
9454         \fi
9455     \fi
9456     \Hy@DisableOption{setpagesize}%
9457 }
9458 </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.

```

9459 <*vtxpdfmark>
9460 \providecommand*{\XR@ext}{pdf}
9461 \def\Hy@raisedlink{}
9462 \def\literalps@out#1{\special{pS:#1}}%
9463 \def\headerps@out#1{\immediate\special{pS:#1}}%
9464 \input{pdfmark.def}%
9465 \ifx\@pdfproducer\relax
9466   \ifnum\OpMode=\@ne
9467     \def\@pdfproducer{VTeX}%
9468   \else
9469     \def\@pdfproducer{VTeX + Distiller}%
9470   \fi
9471 \fi
9472 \providecommand*\@pdfborder{0 0 1}
9473 \providecommand*\@pdfborderstyle{}
9474 \providecommand*\@pdfview{XYZ}
9475 \providecommand*\@pdfviewparams{ H.V}
9476 \g@addto@macro\Hy@FirstPageHook{%
9477   \headerps@out{%
9478     /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.

```

9479   /HyperBorder {1} def%
9480   /H.V {pdf@hoff pdf@voff null} def%
9481   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

9482   /H.S {%
9483     currentpoint %
9484     HyperBorder sub%
9485     /pdf@lly exch def %
9486     dup 72 add /pdf@hoff exch def %
9487     HyperBorder sub%
9488     /pdf@llx exch def%
9489   } def%

```

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

```

9490   /H.L {%
9491     2 sub%
9492     /HyperBasePt exch def %
9493     currentpoint %
9494     HyperBasePt add HyperBorder add%
9495     /pdf@ury exch def %
9496     HyperBorder add%
9497     /pdf@urx exch def%
9498   } def%
9499   /H.A {%
9500     H.L %
9501     currentpoint exch pop %
9502     vsize 72 sub exch %
9503     HyperBasePt add add%
9504     /pdf@voff exch def%
9505   } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

9506 /H.R {%
9507     currentpoint %
9508     HyperBorder add%
9509     /pdf@ury exch def %
9510     HyperBorder add%
9511     /pdf@urx exch def %
9512     currentpoint exch pop vsize 72 sub add%
9513     /pdf@voff exch def%
9514 } def%
9515 }%
9516 }
9517 </vtexpdfmark>

```

46.11 Textures

```

9518 <*textures>
9519 \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.

```

9520 \begingroup
9521   \obeylines %
9522   \gdef\Hy@ps@CR{\noexpand
9523   }%
9524 \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`.

```

9525 \def\literalps@out#1{%
9526   \special{postscript 0 0 transform}%
9527   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
9528 }%
9529 %

```

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.

```

9530 \def\headerps@out#1{%
9531   \special{%
9532     prepostscript TeXdict begin\Hy@ps@CR
9533     #1\Hy@ps@CR
9534     end%

```

```

9535 }%
9536 }%
9537 %

```

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.

```

9538 \g@addto@macro\Hy@FirstPageHook{%
9539   \headerps@out{%
9540     /betterpdfmark {%
9541       systemdict begin %
9542         dup /BP eq%
9543         {cleartomark gsave nulldevice []}%
9544         {dup /EP eq%
9545           {cleartomark cleartomark grestore}%
9546           {cleartomark}%}
9547         ifelse%
9548       }ifelse %
9549     end%
9550   }def\Hy@ps@CR
9551   __pdfmark__ not{/pdfmark /betterpdfmark load def}if%
9552 }% end of \headerps@out
9553 }% end of \AtBeginShipoutFirst
9554 %
9555 \input{pdfmark.def}%
9556 %
9557 \ifx\@pdfproducer\relax
9558   \def\@pdfproducer{Textures + Distiller}%
9559 \fi
9560 \providecommand*\@pdfborder{0 0 1}
9561 \providecommand*\@pdfborderstyle{}
9562 \providecommand*\@pdfview{XYZ}
9563 \providecommand*\@pdfviewparams{ H.V}
9564 %

```

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 .

```

9565 \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

9566 /vsize {\Hy@pageheight} def%
9567 /DvipsToPDF {} def%
9568 /PDFToDvips {} def%
9569 /BPToDvips {} def%
9570 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
9571 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
9572 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
9573 /H.S {%
9574   currentpoint %
9575   HyperBorder add /pdf@lly exch def %
9576   dup DvipsToPDF 72 add /pdf@hoff exch def %
9577   HyperBorder sub /pdf@llx exch def%
9578 } def\Hy@ps@CR
9579 /H.L {%
9580   2 sub %

```

```

9581   PDFToDvips /HyperBase exch def %
9582   currentpoint %
9583   HyperBase sub /pdf@ury exch def%
9584   /pdf@urx exch def%
9585   } def\Hy@ps@CR
9586   /H.A {%
9587     H.L %
9588     currentpoint exch pop %
9589     vsize 72 sub exch DvipsToPDF %
9590     HyperBase sub % baseline skip
9591     sub /pdf@voff exch def%
9592   } def\Hy@ps@CR
9593   /H.R {%
9594     currentpoint %
9595     HyperBorder sub /pdf@ury exch def %
9596     HyperBorder add /pdf@urx exch def %
9597     currentpoint exch pop vsize 72 sub %
9598     exch DvipsToPDF sub /pdf@voff exch def%
9599   } def\Hy@ps@CR
9600 }

9601 \AfterBeginDocument{%
9602   \ifHy@colorlinks
9603     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
9604   \fi
9605 }

```

Textures provides built-in support for HyperTeX specials so this part combines code from `hypertext.def` with what is established by loading `pdfmark.def`, or any other driver.

```

9606 \expandafter\let\expandafter\keepPDF@SetupDoc
9607   \csname PDF@SetupDoc\endcsname
9608 \def\PDF@SetupDoc{%
9609   \ifx\@baseurl\@empty
9610   \else
9611     \special{html:<base href="\@baseurl">}%
9612   \fi
9613   \keepPDF@SetupDoc
9614 }
9615 \def\hyper@anchor#1{%
9616   \Hy@SaveLastskip
9617   \begingroup
9618     \let\protect=\string
9619     \special{html:<a name=%
9620       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9621   \endgroup
9622   \Hy@activeanchortrue
9623   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9624   \special{html:</a>}%
9625   \Hy@activeanchorfalse
9626   \Hy@RestoreLastskip
9627 }
9628 \def\hyper@anchorstart#1{%
9629   \Hy@SaveLastskip
9630   \begingroup
9631     \hyper@chars
9632     \special{html:<a name=%
9633       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9634   \endgroup

```



```

9635 \Hy@activeanchortrue
9636 }
9637 \def\hyper@anchorend{%
9638 \special{html:</a>}}%
9639 \Hy@activeanchorfalse
9640 \Hy@RestoreLastskip
9641 }
9642 \def\@urlltype{url}
9643 \def\hyper@linkstart#1#2{%
9644 \expandafter\Hy@colorlink\csname @#1color\endcsname
9645 \def\Hy@tempa{#1}%
9646 \ifx\Hy@tempa\@urlltype
9647 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9648 \else
9649 \begingroup
9650 \hyper@chars
9651 \special{html:<a href=%
9652 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}}%
9653 \endgroup
9654 \fi
9655 }
9656 \def\hyper@linkend{%
9657 \special{html:</a>}}%
9658 \Hy@endcolorlink
9659 }
9660 \def\hyper@linkfile#1#2#3{%
9661 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9662 }
9663 \def\hyper@linkurl#1#2{%
9664 \leavevmode
9665 \ifHy@raiselinks
9666 \setbox\@tempboxa=\color@hbox #1\color@endbox
9667 \@linkdim\dp\@tempboxa
9668 \lower\@linkdim\hbox{%
9669 \hyper@chars
9670 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9671 }%
9672 \Hy@colorlink\@urlcolor#1%
9673 \@linkdim\ht\@tempboxa
9674 \advance\@linkdim by -6.5\p@
9675 \raise\@linkdim\hbox{\special{html:</a>}}%
9676 \Hy@endcolorlink
9677 \else
9678 \begingroup
9679 \hyper@chars
9680 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9681 \Hy@colorlink\@urlcolor#1%
9682 \special{html:</a>}}%
9683 \Hy@endcolorlink
9684 \endgroup
9685 \fi
9686 }

```

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

```

9687 \def\hyper@link#1#2#3{%
9688 \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}}%
9689 }
9690 \def\hyper@image#1#2{%

```

```

9691 \begingroup
9692   \hyper@chars
9693   \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9694 \endgroup
9695 }
9696 </textures>

```

46.12 dvipsone

```

9697 % \subsection{dvipsone driver}
9698 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
9699 % |\special| commands.
9700 <*dvipsone>
9701 \providecommand*{\XR@ext}{pdf}
9702 \def\Hy@raisedlink{}
9703 \providecommand*\@pdfborder{0 0 1}
9704 \providecommand*\@pdfborderstyle{}
9705 \def\literalps@out#1{\special{ps:#1}}%
9706 \def\headerps@out#1{\special{headertext=#1}}%
9707 \input{pdfmark.def}%
9708 \ifx\@pdfproducer\relax
9709   \def\@pdfproducer{dvipsone + Distiller}%
9710 \fi
9711 \def\PDF@FinishDoc{%
9712   \Hy@UseMaketitleInfos
9713   \special{PDF: Keywords \@pdfkeywords}%
9714   \special{PDF: Title \@pdftitle}%
9715   \special{PDF: Creator \@pdfcreator}%
9716   \ifx\@pdfcreationdate\@empty
9717   \else
9718     \special{PDF: CreationDate \@pdfcreationdate}%
9719   \fi
9720   \ifx\@pdfmoddate\@empty
9721   \else
9722     \special{PDF: ModDate \@pdfmoddate}%
9723   \fi
9724   \special{PDF: Author \@pdfauthor}%
9725   \ifx\@pdfproducer\relax
9726   \else
9727     \special{PDF: Producer \@pdfproducer}%
9728   \fi
9729   \special{PDF: Subject \@pdfsubject}%
9730   \Hy@DisableOption{pdfauthor}%
9731   \Hy@DisableOption{pdftitle}%
9732   \Hy@DisableOption{pdfsubject}%
9733   \Hy@DisableOption{pdfcreator}%
9734   \Hy@DisableOption{pdfcreationdate}%
9735   \Hy@DisableOption{pdfmoddate}%
9736   \Hy@DisableOption{pdfproducer}%
9737   \Hy@DisableOption{pdfkeywords}%
9738 }
9739 \def\PDF@SetupDoc{%
9740   \def\Hy@temp{}%
9741   \ifx\@pdfstartpage\@empty
9742   \else
9743     \ifx\@pdfstartview\@empty
9744     \else

```

```

9745     \edef\Hy@temp{%
9746         ,Page=\@pdfstartpage
9747         ,View=\@pdfstartview
9748     }%
9749     \fi
9750 \fi
9751 \edef\Hy@temp{%
9752     \noexpand\pdfmark{%
9753         pdfmark=/DOCVIEW,%
9754         PageMode=/\@pdfpagemode
9755     }\Hy@temp
9756 }%
9757 }%
9758 \Hy@temp
9759 \ifx\@pdfpagescrop\@empty
9760 \else
9761     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9762 \fi
9763 \edef\Hy@temp{%
9764     \ifHy@toolbar\else /HideToolbar true\fi
9765     \ifHy@menubar\else /HideMenubar true\fi
9766     \ifHy>windowui\else /HideWindowUI true\fi
9767     \ifHy@fitwindow /FitWindow true\fi
9768     \ifHy@centerwindow /CenterWindow true\fi
9769     \ifHy@displaydoctitle /DisplayDocTitle true\fi
9770     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9771     \Hy@UseNameKey{Direction}\@pdfdirection
9772     \Hy@UseNameKey{ViewArea}\@pdfviewarea
9773     \Hy@UseNameKey{ViewClip}\@pdfviewclip
9774     \Hy@UseNameKey{PrintArea}\@pdfprintarea
9775     \Hy@UseNameKey{PrintClip}\@pdfprintclip
9776     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9777     \Hy@UseNameKey{Duplex}\@pdfduplex
9778     \ifx\@pdfpicktraybypdfsize\@empty
9779     \else
9780         /PickTrayByPDFSize \@pdfpicktraybypdfsize
9781     \fi
9782     \ifx\@pdfprintpagerange\@empty
9783     \else
9784         /PrintPageRange[\@pdfprintpagerange]%
9785     \fi
9786     \ifx\@pdfnumcopies\@empty
9787     \else
9788         /NumCopies \@pdfnumcopies
9789     \fi
9790 }%
9791 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9792 \pdfmark{%
9793     pdfmark=/PUT,%
9794     Raw={%
9795         \string{Catalog\string}<<%
9796         \ifx\Hy@temp\@empty
9797         \else
9798             /ViewerPreferences<<\Hy@temp>>%
9799         \fi
9800         \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9801         \ifx\@pdflang\@empty

```

```

9802         \else
9803             /Lang(\@pdflang)%
9804         \fi
9805         \ifx\@baseurl\@empty
9806         \else
9807             /URI<</Base(\Hy@pstringB)>>%
9808         \fi
9809     >>%
9810 }%
9811 }%
9812 }
9813 \providecommand*\@pdfview{XYZ}
9814 \providecommand*\@pdfviewparams{ %
9815     gsave revscl currentpoint grestore %
9816     72 add exch pop null exch null%
9817 }
9818 \def\Hy@BorderArrayPatch{BorderArrayPatch}

```

These are called at the start and end of unboxed links; their job is to leave available PS variables called pdf@llx pdf@lly pdf@urx pdf@ury, which are the coordinates of the bounding rectangle of the link, and pdf@hoff pdf@voff which are the PDF page offsets. These latter are currently not used in the dvipsone setup. The Rect pair are called at the LL and UR corners of a box known to \TeX .

```

9819 \g@addto@macro\Hy@FirstPageHook{%
9820     \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?

```

9821     /DvipsToPDF { 65781 div } def%
9822     /PDFToDvips { 65781 mul } def%
9823     /BPToDvips{65781 mul}def%
9824     /HyperBorder { 1 PDFToDvips } def%
9825     /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.

```

9826     /BorderArrayPatch{%
9827         [exch{%
9828             dup dup type/integertype eq exch type/realtype eq or%
9829             {BPToDvips}if%
9830         }forall]%
9831     }def%
9832     /H.S {%
9833         currentpoint %
9834         HyperBorder add /pdf@lly exch def %
9835         dup DvipsToPDF 72 add /pdf@hoff exch def %
9836         HyperBorder sub /pdf@llx exch def%
9837     } def%
9838     /H.L {%
9839         2 sub %
9840         PDFToDvips /HyperBase exch def %
9841         currentpoint %
9842         HyperBase sub /pdf@ury exch def%
9843         /pdf@urx exch def%
9844     } def%
9845     /H.A {%
9846         H.L %
9847         currentpoint exch pop %
9848         HyperBase sub % baseline skip

```

```

9849      DvipsToPDF /pdf@voff exch def%
9850    } def%
9851    /H.R {%
9852      currentpoint %
9853      HyperBorder sub /pdf@ury exch def %
9854      HyperBorder add /pdf@urx exch def %
9855      currentpoint exch pop DvipsToPDF /pdf@voff exch def%
9856    } def%
9857  }%
9858 }
9859 </dvipsone>

```

46.13 TeX4ht

```

9860 <*tex4ht>
9861 \providecommand*{\XR@ext}{html}
9862 \def\Hy@raisedlink{}
9863 \@ifpackageloaded{tex4ht}{%
9864   \typeout{hyperref tex4ht: tex4ht already loaded}%
9865 }{%
9866   \RequirePackage[hx4ht]{tex4ht}%
9867 }
9868 \hyperlinkfileprefix{}
9869 \def\PDF@FinishDoc{}
9870 \def\PDF@SetupDoc{%
9871   \ifx\@baseurl\@empty
9872   \else
9873     \special{t4ht=<base href="\@baseurl">}%
9874   \fi
9875 }
9876 \def\hyper@anchor#1{%
9877   \Hy@SaveLastskip
9878   \begingroup
9879     \let\protect=\string
9880     \special{t4ht=<a name=%
9881       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9882   \endgroup
9883   \Hy@activeanchortrue
9884   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9885   \special{t4ht=</a>}%
9886   \Hy@activeanchorfalse
9887   \Hy@RestoreLastskip
9888 }
9889 \def\hyper@anchorstart#1{%
9890   \Hy@SaveLastskip
9891   \begingroup
9892     \hyper@chars\special{t4ht=<a name=%
9893       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9894   \endgroup
9895   \Hy@activeanchortrue
9896 }
9897 \def\hyper@anchorend{%
9898   \special{t4ht=</a>}%
9899   \Hy@activeanchorfalse
9900   \Hy@RestoreLastskip
9901 }
9902 \def\@urltype{url}
9903 \def\hyper@linkstart#1#2{%

```

```

9904 \expandafter\Hy@colorlink\csname @#1color\endcsname
9905 \def\Hy@tempa{#1}%
9906 \ifx\Hy@tempa\@urltype
9907   \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
9908 \else
9909   \begingroup
9910     \hyper@chars
9911     \special{t4ht=<a href=%
9912       \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9913   \endgroup
9914 \fi
9915 }
9916 \def\hyper@linkend{%
9917   \special{t4ht=</a>}%
9918   \Hy@endcolorlink
9919 }
9920 \def\hyper@linkfile#1#2#3{%
9921   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
9922 }
9923 \def\hyper@linkurl#1#2{%
9924   \leavevmode
9925   \ifHy@raiselinks
9926     \setbox\@tempboxa=\color@hbox #1\color@endbox
9927     \@linkdim\dp\@tempboxa
9928     \lower\@linkdim\hbox{%
9929       \begingroup
9930         \hyper@chars\special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
9931       \endgroup
9932     }%
9933     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9934     \@linkdim\ht\@tempboxa
9935     \advance\@linkdim by -6.5\p@
9936     \raise\@linkdim\hbox{\special{t4ht=</a>}}%
9937   \else
9938     \begingroup
9939     \hyper@chars
9940     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
9941     \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9942     \special{t4ht=</a>}%
9943   \endgroup
9944 \fi
9945 }

```

Poor implementation of \hyper@link without considering #1.

```

9946 \def\hyper@link#1#2#3{%
9947   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}%
9948 }
9949 \def\hyper@image#1#2{%
9950   \begingroup
9951     \hyper@chars
9952     \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
9953   \endgroup
9954 }
9955 \let\autoref\ref
9956 \ifx \rEfLiNK \UnDef
9957   \def\rEfLiNK #1#2{#2}%
9958 \fi
9959 \def\backref#1{}

```

```

9960 </tex4ht>
9961 <*tex4htcfg>
9962 \IfFileExists{\jobname.cfg}{\endinput}{}
9963 \Preamble{html}
9964   \begin{document}%
9965 \EndPreamble
9966 \def\TeX{\TeX}
9967 \def\OMEGA{\Omega}
9968 \def\LaTeX{\LaTeX}
9969 \def\LaTeXe{\LaTeX2e}
9970 \def\eTeX{e-TeX}
9971 \def\MF{Metafont}
9972 \def\MP{MetaPost}
9973 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

9974 <*pdfmark>
9975 \long\def\@Form[#1]{%
9976 \g@addto@macro\Hy@FirstPageHook{%
9977   \headerps@out{%
9978 [%
9979   /_objdef{pdfDocEncoding}%
9980   /type/dict%
9981 /OBJ pdfmark%
9982 [%
9983   {pdfDocEncoding}%
9984   <<%
9985     /Type/Encoding%
9986     /Differences[%
9987       24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
9988       /tilde %
9989       39/quotesingle %
9990       96/grave %
9991       128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
9992       /fraction/guilsinglleft/guilsinglright/minus/perthousand%
9993       /quotedblbase/quotedblleft/quotedblright/quoteleft%
9994       /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
9995       /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
9996       164/currency %
9997       166/brokenbar %
9998       168/dieresis/copyright/ordfeminine %
9999       172/logicalnot/.notdef/registered/macron/degree/plusminus%
10000      /twosuperior/threesuperior/acute/mu %
10001      183/periodcentered/cedilla/onesuperior/ordmasculine %
10002      188/onequarter/onehalf/threequarters %
10003      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10004      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10005      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10006      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10007      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10008      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10009      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10010      /iacute/icircumflex/idieresis/eth/ntilde/ograve/oacute%
10011      /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
10012      /ucircumflex/udieresis/yacute/thorn/ydieresis%

```

```

10013    ]%
10014    >>%
10015 /PUT pdfmark%
10016 [%
10017    /_objdef{ZaDb}%
10018    /type/dict%
10019 /OBJ pdfmark%
10020 [%
10021    {ZaDb}%
10022    <<%
10023        /Type/Font%
10024        /Subtype/Type1%
10025        /Name/ZaDb%
10026        /BaseFont/ZapfDingbats%
10027    >>%
10028 /PUT pdfmark%
10029 [%
10030    /_objdef{Helv}%
10031    /type/dict%
10032 /OBJ pdfmark%
10033 [%
10034    {Helv}%
10035    <<%
10036        /Type/Font%
10037        /Subtype/Type1%
10038        /Name/Helv%
10039        /BaseFont/Helvetica%
10040        /Encoding{pdfDocEncoding}%
10041    >>%
10042 /PUT pdfmark%
10043 [%
10044    /_objdef{aform}%
10045    /type/dict%
10046 /OBJ pdfmark%
10047 [%
10048    /_objdef{afields}%
10049    /type/array%
10050 /OBJ pdfmark%
10051 {%
10052    [%
10053        /BBox[0 0 100 100]%
10054        /_objdef{Check}%
10055    /BP pdfmark %
10056    1 0 0 setrgbcolor%
10057    /ZapfDingbats 80 selectfont %
10058    20 20 moveto%
10059    (4)show%
10060    [/EP pdfmark%
10061    [%
10062        /BBox[0 0 100 100]%
10063        /_objdef{Cross}%
10064    /BP pdfmark %
10065    1 0 0 setrgbcolor%
10066    /ZapfDingbats 80 selectfont %
10067    20 20 moveto%
10068    (8)show%
10069    [/EP pdfmark%

```



```

10070 [%
10071   /BBox[0 0 250 100]%
10072   /_objdef{Submit}%
10073 /BP pdfmark %
10074 0.6 setgray %
10075 0 0 250 100 rectfill %
10076 1 setgray %
10077 2 2 moveto %
10078 2 98 lineto %
10079 248 98 lineto %
10080 246 96 lineto %
10081 4 96 lineto %
10082 4 4 lineto %
10083 fill %
10084 0.34 setgray %
10085 248 98 moveto %
10086 248 2 lineto %
10087 2 2 lineto %
10088 4 4 lineto %
10089 246 4 lineto %
10090 246 96 lineto %
10091 fill%
10092 /Helvetica 76 selectfont %
10093 0 setgray %
10094 8 22.5 moveto%
10095 (Submit)show%
10096 [/EP pdfmark%
10097 [%
10098   /BBox[0 0 250 100]%
10099   /_objdef{SubmitP}%
10100 /BP pdfmark %
10101 0.6 setgray %
10102 0 0 250 100 rectfill %
10103 0.34 setgray %
10104 2 2 moveto %
10105 2 98 lineto %
10106 248 98 lineto %
10107 246 96 lineto %
10108 4 96 lineto %
10109 4 4 lineto %
10110 fill %
10111 1 setgray %
10112 248 98 moveto %
10113 248 2 lineto %
10114 2 2 lineto %
10115 4 4 lineto %
10116 246 4 lineto %
10117 246 96 lineto %
10118 fill%
10119 /Helvetica 76 selectfont %
10120 0 setgray %
10121 10 20.5 moveto%
10122 (Submit)show%
10123 [/EP pdfmark%
10124 } ?pdfmark%
10125 [%
10126 {aform}%

```

```

10127 <<%
10128   /Fields{afields}%
10129   /DR<<%
10130     /Font<<%
10131       /ZaDb{ZaDb}%
10132       /Helv{Helv}%
10133     >>%
10134   >>%
10135   /DA(/Helv 10 Tf 0 g)%
10136   /CO{corder}%
10137   \ifHy@pdfa
10138   \else
10139     /NeedAppearances true%
10140   \fi
10141 >>%
10142 /PUT pdfmark%
10143 [%
10144   {Catalog}%
10145 <<%
10146   /AcroForm{aform}%
10147 >>%
10148 /PUT pdfmark%
10149 [%
10150   /_objdef{corder}%
10151   /type/array%
10152 /OBJ pdfmark% dps
10153 }}%
10154 \setkeys{Form}{#1}%
10155 }
10156 \def\@endForm{}
10157 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10158   \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
10159 }
10160 \def\@TextField[#1]#2{% parameters, label
10161   \def\Fld@name{#2}%
10162   \def\Fld@default{}%
10163   \let\Fld@value\@empty
10164   \def\Fld@width{\DefaultWidthofText}%
10165   \def\Fld@height{%
10166     \ifFld@multiline
10167       \DefaultHeightofTextMultiline
10168     \else
10169       \DefaultHeightofText
10170   \fi
10171 }%
10172 \begingroup
10173   \Field@toks={ }%
10174   \expandafter\HyField@SetKeys\expandafter{%
10175     \DefaultOptionsofText,#1%
10176   }%
10177   \HyField@FlagsText
10178   \ifFld@hidden\def\Fld@width{1sp}\fi
10179   \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10180   \LayoutTextField{#2}{%
10181     \Hy@escapeform\PDFForm@Text
10182     \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
10183       pdfmark=/ANN,Raw={\PDFForm@Text}%

```

```

10184     }%
10185     }%
10186 \endgroup
10187 }
10188 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10189 \def\Fld@name{#2}%
10190 \let\Fld@default\relax
10191 \let\Fld@value\relax
10192 \def\Fld@width{\DefaultWidthofChoiceMenu}%
10193 \def\Fld@height{\DefaultHeightofChoiceMenu}%
10194 \begingroup
10195 \Fld@menulength=0 %
10196 \@tempdima\z@
10197 \@for\@curropt:=#3\do{%
10198 \expandafter\Fld@checkequals\@curropt==\%
10199 \Hy@StepCount\Fld@menulength
10200 \settowidth{\@tempdimb}{\@currDisplay}%
10201 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10202 }%
10203 \advance\@tempdima by 15\p@
10204 \Field@toks={ }%
10205 \begingroup
10206 \HyField@SetKeys{#1}%
10207 \edef\x{\endgroup
10208 \noexpand\expandafter
10209 \noexpand\HyField@SetKeys
10210 \noexpand\expandafter{%
10211 \expandafter\noexpand\csname DefaultOptionsof%
10212 \ifFld@radio
10213 Radio%
10214 \else
10215 \ifFld@combo
10216 \ifFld@popdown
10217 PopdownBox%
10218 \else
10219 ComboBox%
10220 \fi
10221 \else
10222 ListBox%
10223 \fi
10224 \fi
10225 \endcsname
10226 }%
10227 }\x
10228 \HyField@SetKeys{#1}%
10229 \ifFld@hidden\def\Fld@width{1sp}\fi
10230 \ifx\Fld@value\relax
10231 \let\Fld@value\Fld@default
10232 \fi
10233 \LayoutChoiceField{#2}{%
10234 \ifFld@radio
10235 \HyField@FlagsRadioButton
10236 @@Radio{#3}%
10237 \else
10238 \begingroup
10239 \HyField@FlagsChoice
10240 \ifdim\Fld@width<\@tempdima

```

```

10241         \ifdim\@tempdima<1cm\@tempdima1cm\fi
10242         \edef\Fld@width{\the\@tempdima}%
10243     \fi
10244     \ifFld@combo
10245     \else
10246         \@tempdima=\the\Fld@menulength\Fld@charsize
10247         \advance\@tempdima by \Fld@borderwidth bp %
10248         \advance\@tempdima by \Fld@borderwidth bp %
10249         \edef\Fld@height{\the\@tempdima}%
10250     \fi
10251     \@@ListBox{#3}%
10252 \endgroup
10253 \fi
10254 }%
10255 \endgroup
10256 }
10257 \def\@@Radio#1{%
10258     \Fld@listcount=0 %
10259     \@for\@curropt:=#1\do{%
10260         \expandafter\Fld@checkequals\@curropt==\%
10261         \Hy@StepCount\Fld@listcount
10262         \@currDisplay\space
10263         \Hy@escapeform\PDFForm@Radio
10264         \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
10265             pdfmark=/ANN,%
10266             Raw={\PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>}%
10267         } % deliberate space between radio buttons
10268     }%
10269 }
10270 \newcount\Fld@listcount
10271 \def\@@ListBox#1{%
10272     \HyField@PDFChoices{#1}%
10273     \Hy@escapeform\PDFForm@List
10274     \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
10275         pdfmark=/ANN,Raw={\PDFForm@List}%
10276     }%
10277 }
10278 \def\@PushButton[#1]#2{% parameters, label
10279     \def\Fld@name{#2}%
10280     \begingroup
10281         \Field@toks={ }%
10282         \expandafter\HyField@SetKeys\expandafter{%
10283             \DefaultOptionsofPushButton,#1%
10284         }%
10285         \ifHy@pdfa
10286             \PackageError{hyperref}{%
10287                 PDF/A: Push button with JavaScript is prohibited%
10288             }\@ehc
10289             \LayoutPushButtonField{%
10290                 \leavevmode
10291                 \MakeButtonField{#2}%
10292             }%
10293         \else
10294             \HyField@FlagsPushButton
10295             \ifFld@hidden\def\Fld@width{1sp}\fi
10296             \LayoutPushButtonField{%
10297                 \leavevmode

```

```

10298      \Hy@escapeform\PDFForm@Push
10299      \pdfmark[\MakeButtonField{#2}]{%
10300      pdfmark=/ANN,Raw={\PDFForm@Push}%
10301      }%
10302  }%
10303  \fi
10304  \endgroup
10305 }
10306 \def\@Submit[#1]#2{%
10307   \Field@toks={ }%
10308   \def\Fld@width{\DefaultWidthofSubmit}%
10309   \def\Fld@height{\DefaultHeightofSubmit}%
10310   \begingroup
10311     \expandafter\HyField@SetKeys\expandafter{%
10312       \DefaultOptionsofSubmit,#1%
10313     }%
10314     \HyField@FlagsPushButton
10315     \HyField@FlagsSubmit
10316     \ifFld@hidden\def\Fld@width{1sp}\fi
10317     \Hy@escapeform\PDFForm@Submit
10318     \pdfmark[\MakeButtonField{#2}]{%
10319       pdfmark=/ANN,%
10320       Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
10321     }%
10322   \endgroup
10323 }
10324 \def\@Reset[#1]#2{%
10325   \Field@toks={ }%
10326   \def\Fld@width{\DefaultWidthofReset}%
10327   \def\Fld@height{\DefaultHeightofReset}%
10328   \begingroup
10329     \expandafter\HyField@SetKeys\expandafter{%
10330       \DefaultOptionsofReset,#1%
10331     }%
10332     \leavevmode
10333     \ifHy@pdfa
10334       \PackageError{hyperref}{%
10335         PDF/A: Reset action is prohibited%
10336       }\@ehc
10337       \MakeButtonField{#2}%
10338     \else
10339       \HyField@FlagsPushButton
10340       \ifFld@hidden\def\Fld@width{1sp}\fi
10341       \Hy@escapeform\PDFForm@Reset
10342       \pdfmark[\MakeButtonField{#2}]{%
10343         pdfmark=/ANN,Raw={\PDFForm@Reset}%
10344       }%
10345     \fi
10346   \endgroup
10347 }%
10348 \def\@CheckBox[#1]#2{% parameters, label
10349   \def\Fld@name{#2}%
10350   \def\Fld@default{0}%
10351   \begingroup
10352     \def\Fld@width{\DefaultWidthofCheckBox}%
10353     \def\Fld@height{\DefaultHeightofCheckBox}%
10354     \Field@toks={ }%

```

```

10355 \expandafter\HyField@SetKeys\expandafter{%
10356 \DefaultOptionsofCheckBox,#1%
10357 }%
10358 \HyField@FlagsCheckBox
10359 \ifFld@hidden\def\Fld@width{1sp}\fi
10360 \LayoutCheckField{#2}{%
10361 \Hy@escapeform\PDFForm@Check
10362 \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
10363 pdfmark=/ANN,Raw={\PDFForm@Check}%
10364 }%
10365 }%
10366 \endgroup
10367 }
10368 \pdfmark

```

47.2 HyperTeX

```

10369 <*hypertex>
10370 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
10371 \def\@endForm{}
10372 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10373 \typeout{Sorry, HyperTeX does not support FORM gauges}%
10374 }
10375 \def\@TextField[#1]#2{% parameters, label
10376 \typeout{Sorry, HyperTeX does not support FORM text fields}%
10377 }
10378 \def\@CheckBox[#1]#2{% parameters, label
10379 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
10380 }
10381 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10382 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
10383 }
10384 \def\@PushButton[#1]#2{% parameters, label
10385 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
10386 }
10387 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10388 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10389 </hypertex>

```

47.3 TeX4ht

```

10390 <*tex4ht>
10391 \def\@Form[#1]{%
10392 \setkeys{Form}{#1}%
10393 \HCode{<form action="\Form@action" method="\Form@method">}%
10394 }
10395 \def\@endForm{\HCode{</form>}}
10396 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10397 \typeout{Sorry, TeX4ht does not support gauges}%
10398 }
10399 \def\@TextField[#1]#2{% parameters, label
10400 \let\Hy@reserved@a\@empty
10401 \def\Fld@name{#2}%
10402 \def\Fld@default{}%
10403 \bgroup
10404 \Field@toks={ }%
10405 \setkeys{Field}{#1}%
10406 \HCode{<label for="\Fld@name">#2</label>}%
10407 \ifFld@password

```

```

10408     \@@PasswordField
10409     \else
10410     \@@TextField
10411     \fi
10412 \egroup
10413 }
10414 \def\@@PasswordField{%
10415     \HCode{%
10416         <input type="password" %
10417         id="\Fld@name" %
10418         name="\Fld@name" %
10419         \ifFld@hidden type="hidden" \fi
10420         value="\Fld@default" %
10421         \the\Field@toks
10422     >%
10423 }%
10424 }
10425 \def\@@TextField{%
10426     \ifFld@multiline
10427     \HCode{<textarea %
10428         \ifFld@readonly readonly \fi
10429         id="\Fld@name" %
10430         name="\Fld@name" %
10431         \ifFld@hidden type="hidden" \fi
10432         \the\Field@toks>%
10433     }%
10434     \Fld@default
10435     \HCode{</textarea>}%
10436 \else
10437     \HCode{<input type="text" %
10438         \ifFld@readonly readonly \fi
10439         id="\Fld@name" %
10440         name="\Fld@name" %
10441         \ifFld@hidden type="hidden" \fi
10442         value="\Fld@default" %
10443         \the\Field@toks>%
10444     }%
10445 \fi
10446 }
10447 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10448     \def\Fld@name{#2}%
10449     \def\Fld@default{}%
10450     \let\Hy@reserved@a\relax
10451     \begin{group}
10452         \expandafter\Fld@findlength#3\\%
10453         \Field@toks={ }%
10454         \setkeys{Field}{#1}%
10455         #2%
10456         \ifFld@radio
10457             \expandafter\@@Radio#3\\%
10458         \else
10459             \expandafter\@@Menu#3\\%
10460         \fi
10461     \end{group}
10462 }
10463 \def\Fld@findlength#1\\{%
10464     \Fld@menulength=0 %

```

```

10465 \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
10466 }
10467 \def\@@Menu#1\{\%
10468 \HCode{<select size="\the\Fld@menulength" %
10469     name="\Fld@name" %
10470     \the\Field@toks>%
10471 }%
10472 \@for\@curropt:=#1\do{%
10473     \expandafter\Fld@checkequals\@curropt==\%
10474     \HCode{<option %
10475         \ifx\@curropt\Fld@default selected \fi
10476         value="\@currValue">\@currDisplay</option>%
10477     }%
10478 }%
10479 \HCode{</select>}%
10480 }
10481 \def\@@Radio#1\{\%
10482 \@for\@curropt:=#1\do{%
10483     \expandafter\Fld@checkequals\@curropt==\%
10484     \HCode{<input type="radio" %
10485         \ifx\@curropt\Fld@default checked \fi
10486         name="\Fld@name" %
10487         value="\@currValue" %
10488         \the\Field@toks>%
10489     }%
10490     \@currDisplay
10491 }%
10492 }
10493 \def\@PushButton[#1]#2{% parameters, label
10494 \def\Fld@name{#2}%
10495 \bgroup
10496 \Field@toks={ }%
10497 \setkeys{Field}{#1}%
10498 \HCode{<input type="button" %
10499     name="\Fld@name" %
10500     value="#2" %
10501     \the\Field@toks>%
10502 }%
10503 \HCode{</button>}%
10504 \egroup
10505 }
10506 \def\@Submit[#1]#2{%
10507 \HCode{<button type="submit">#2</button>}%
10508 }
10509 \def\@Reset[#1]#2{%
10510 \HCode{<button type="reset">#2</button>}%
10511 }
10512 \def\@CheckBox[#1]#2{% parameters, label
10513 \let\Hy@reserved@a\@empty
10514 \def\Fld@name{#2}%
10515 \def\Fld@default{0}%
10516 \bgroup
10517 \Field@toks={ }%
10518 \setkeys{Field}{#1}%
10519 \HCode{<input type="checkbox" %
10520     \ifFld@checked checked \fi
10521     \ifFld@disabled disabled \fi

```



```

10522     \ifFld@readonly readonly \fi
10523     name="\Fld@name" %
10524     \ifFld@hidden type="hidden" \fi
10525     value="\Fld@default" %
10526     \the\Field@toks>%
10527     #2%
10528   }%
10529 \egroup
10530 }
10531 </tex4ht>

```

47.4 pdfTeX

```

10532 <*pdfTeX>
10533 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10534   \typeout{Sorry, pdfTeX does not support FORM gauges}%
10535 }
10536 \def\MakeFieldObject#1#2{\sbox0{#1}%
10537   \immediate\pdfxform0 %
10538   \expandafter\edef\csname #2Object\endcsname{%
10539     \the\pdflastxform\space 0 R%
10540   }%
10541   % \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
10542 }%
10543 \def\HyField@afields{}
10544 \begingroup\expandafter\expandafter\expandafter\endgroup
10545 \expandafter\ifx\csname pdflastlink\endcsname\relax
10546   \let\HyField@AddToFields\relax
10547   \PackageInfo{hyperref}{%
10548     You need pdfTeX 1.40.0 for setting the /Fields entry.\MessageBreak
10549     Adobe Reader/Acrobat accepts an empty /Field array,\MessageBreak
10550     but other PDF viewers might complain%
10551   }%
10552 \else
10553   \def\HyField@AddToFields{%
10554     \xdef\HyField@afields{%
10555       \ifx\HyField@afields\@empty
10556         \else
10557           \HyField@afields
10558         \space
10559       \fi
10560       \the\pdflastlink\space 0 R%
10561     }%
10562   }%
10563 \fi
10564 \def\@Form[#1]{%
10565   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
10566   \setkeys{Form}{#1}%
10567   \ifnum\pdfTeXversion>13 %
10568     \pdfrefobj\OBJ@pdfdocencoding
10569     \pdfrefobj\OBJ@ZaDb
10570     \pdfrefobj\OBJ@Helv
10571   \fi
10572   \AtEndDocument{%
10573     \immediate\pdfobj{%
10574       <<%
10575         /Fields[\HyField@afields]%
10576         /DR<<%

```

```

10577         /Font<<%
10578             /ZaDb \OBJ@ZaDb\space 0 R%
10579             /Helv \OBJ@Helv\space 0 R%
10580         >>%
10581     >>%
10582     /DA(/Helv 10 Tf 0 g)%
10583     \ifHy@pdfa
10584     \else
10585         /NeedAppearances true%
10586     \fi
10587 >>%
10588 }%
10589 \edef\OBJ@acroform{\the\pdflastobj}%
10590 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
10591 }%
10592 \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

10593     \begingroup
10594     \fontfamily{pzd}%
10595     \fontencoding{U}%
10596     \fontseries{m}%
10597     \fontshape{n}%
10598     \selectfont
10599     \char123 %
10600 \endgroup
10601 }{Ding}%
10602 \MakeFieldObject{%
10603     \fbox{\textcolor{yellow}{\textsf{Submit}}}%
10604 }{Submit}%
10605 \MakeFieldObject{%
10606     \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
10607 }{SubmitP}%
10608 }
10609 \def\@endForm{}
10610 \def\@TextField[#1]#2{% parameters, label
10611     \def\Fld@name{#2}%
10612     \def\Fld@default{}%
10613     \let\Fld@value\@empty
10614     \def\Fld@width{\DefaultWidthofText}%
10615     \def\Fld@height{%
10616         \ifFld@multiline
10617             \DefaultHeightofTextMultiline
10618         \else
10619             \DefaultHeightofText
10620         \fi
10621     }%
10622     \begingroup
10623     \Field@toks={ }%
10624     \expandafter\HyField@SetKeys\expandafter{%
10625         \DefaultOptionsofText,#1%
10626     }%
10627     \PDFForm@Name
10628     \HyField@FlagsText
10629     \ifFld@hidden\def\Fld@width{1sp}\fi
10630     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10631     \LayoutTextField{#2}{%
10632         \Hy@escapeform\PDFForm@Text

```

```

10633     \pdfstartlink user {\PDFForm@Text}\relax
10634     \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
10635     \HyField@AddToFields
10636   }%
10637 \endgroup
10638 }
10639 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10640   \def\Fld@name{#2}%
10641   \let\Fld@default\relax
10642   \let\Fld@value\relax
10643   \def\Fld@width{\DefaultWidthofChoiceMenu}%
10644   \def\Fld@height{\DefaultHeightofChoiceMenu}%
10645   \begingroup
10646     \Fld@menulength=0 %
10647     \@tempdima\z@
10648     \@for\@curropt:=#3\do{%
10649       \expandafter\Fld@checkequals\@curropt==\%
10650       \Hy@StepCount\Fld@menulength
10651       \settowidth{\@tempdimb}{\@currDisplay}%
10652       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10653     }%
10654     \advance\@tempdima by 15\p@
10655     \Field@toks={ }%
10656     \begingroup
10657       \HyField@SetKeys{#1}%
10658     \edef\x{\endgroup
10659       \noexpand\expandafter
10660       \noexpand\HyField@SetKeys
10661       \noexpand\expandafter{%
10662         \expandafter\noexpand\cname DefaultOptionsof%
10663         \ifFld@radio
10664           Radio%
10665         \else
10666           \ifFld@combo
10667             \ifFld@popdown
10668               PopdownBox%
10669             \else
10670               ComboBox%
10671             \fi
10672           \else
10673             ListBox%
10674           \fi
10675         \fi
10676       \endcname
10677     }%
10678   }\x
10679   \HyField@SetKeys{#1}%
10680   \PDFForm@Name
10681   \ifFld@hidden\def\Fld@width{1sp}\fi
10682   \ifx\Fld@value\relax
10683     \let\Fld@value\Fld@default
10684   \fi
10685   \LayoutChoiceField{#2}{%
10686     \ifFld@radio
10687       \HyField@FlagsRadioButton
10688       \@@Radio{#3}%
10689     \else

```

```

10690      \begingroup
10691      \HyField@FlagsChoice
10692      \ifdim\Fld@width<\@tempdima
10693        \ifdim\@tempdima<1cm\@tempdima1cm\fi
10694        \edef\Fld@width{\the\@tempdima}%
10695      \fi
10696      \ifFld@combo
10697      \else
10698        \@tempdima=\the\Fld@menulength\Fld@charsize
10699        \advance\@tempdima by \Fld@borderwidth bp %
10700        \advance\@tempdima by \Fld@borderwidth bp %
10701        \edef\Fld@height{\the\@tempdima}%
10702      \fi
10703      \@@ListBox{#3}%
10704    \endgroup
10705  \fi
10706  }%
10707 \endgroup
10708 }
10709 \def\@@Radio#1{%
10710   \Fld@listcount=0 %
10711   \@for\@curropt:=#1\do{%
10712     \expandafter\Fld@checkequals\@curropt==\\%
10713     \Hy@StepCount\Fld@listcount
10714     \@currDisplay\space
10715     \leavevmode
10716     \Hy@escapeform\PDFForm@Radio
10717     \pdfstartlink user {%
10718       \PDFForm@Radio
10719       /AP<<%
10720       /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.

```

10721       /\@currValue\space \DingObject
10722       >>%
10723     >>%
10724   }%
10725   \relax
10726   \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
10727   \ifnum\Fld@listcount=1 %
10728     \HyField@AddToFields
10729   \fi
10730   \space % deliberate space between radio buttons
10731 }%
10732 }
10733 \newcount\Fld@listcount
10734 \def\@@ListBox#1{%
10735   \HyField@PDFChoices{#1}%
10736   \leavevmode
10737   \Hy@escapeform\PDFForm@List
10738   \pdfstartlink user {\PDFForm@List}\relax
10739   \MakeChoiceField{\Fld@width}{\Fld@height}%
10740   \pdfendlink
10741   \HyField@AddToFields
10742 }
10743 \def\@PushButton[#1]#2{% parameters, label

```

```

10744 \def\Fld@name{#2}%
10745 \begingroup
10746 \Field@toks={ }%
10747 \expandafter\HyField@SetKeys\expandafter{%
10748 \DefaultOptionsofPushButton,#1%
10749 }%
10750 \PDFForm@Name
10751 \ifHy@pdfa
10752 \PackageError{hyperref}{%
10753 PDF/A: Push button with JavaScript is prohibited%
10754 }{@ehc
10755 \LayoutPushButtonField{%
10756 \leavevmode
10757 \MakeButtonField{#2}%
10758 }%
10759 \else
10760 \HyField@FlagsPushButton
10761 \ifFld@hidden\def\Fld@width{1sp}\fi
10762 \LayoutPushButtonField{%
10763 \leavevmode
10764 \Hy@escapeform\PDFForm@Push
10765 \pdfstartlink user {\PDFForm@Push}\relax
10766 \MakeButtonField{#2}%
10767 \pdfendlink
10768 \HyField@AddToFields
10769 }%
10770 \fi
10771 \endgroup
10772 }
10773 \def\@Submit[#1]#2{%
10774 \Field@toks={ }%
10775 \def\Fld@width{\DefaultWidthofSubmit}%
10776 \def\Fld@height{\DefaultHeightofSubmit}%
10777 \begingroup
10778 \expandafter\HyField@SetKeys\expandafter{%
10779 \DefaultOptionsofSubmit,#1%
10780 }%
10781 \HyField@FlagsPushButton
10782 \HyField@FlagsSubmit
10783 \ifFld@hidden\def\Fld@width{1sp}\fi
10784 \leavevmode
10785 \Hy@escapeform\PDFForm@Submit
10786 \pdfstartlink user {%
10787 \PDFForm@Submit
10788 /AP<</N \SubmitObject/D \SubmitPObject>>%
10789 }%
10790 \relax
10791 \MakeButtonField{#2}%
10792 \pdfendlink
10793 \HyField@AddToFields
10794 \endgroup
10795 }
10796 \def\@Reset[#1]#2{%
10797 \Field@toks={ }%
10798 \def\Fld@width{\DefaultWidthofReset}%
10799 \def\Fld@height{\DefaultHeightofReset}%
10800 \begingroup

```

```

10801 \expandafter\HyField@SetKeys\expandafter{%
10802 \DefaultOptionsofReset,#1%
10803 }%
10804 \leavevmode
10805 \ifHy@pdfa
10806 \PackageError{hyperref}{%
10807 PDF/A: Reset action is prohibited%
10808 }\@ehc
10809 \MakeButtonField{#2}%
10810 \else
10811 \HyField@FlagsPushButton
10812 \ifFld@hidden\def\Fld@width{1sp}\fi
10813 \Hy@escapeform\PDFForm@Reset
10814 \pdfstartlink user {\PDFForm@Reset}\relax
10815 \MakeButtonField{#2}%
10816 \pdfendlink
10817 \HyField@AddToFields
10818 \fi
10819 \endgroup
10820 }
10821 \def\@CheckBox[#1]#2{% parameters, label
10822 \def\Fld@name{#2}%
10823 \def\Fld@default{0}%
10824 \begingroup
10825 \def\Fld@width{\DefaultWidthofCheckBox}%
10826 \def\Fld@height{\DefaultHeightofCheckBox}%
10827 \Field@toks={ }%
10828 \expandafter\HyField@SetKeys\expandafter{%
10829 \DefaultOptionsofCheckBox,#1%
10830 }%
10831 \PDFForm@Name
10832 \HyField@FlagsCheckBox
10833 \ifFld@hidden\def\Fld@width{1sp}\fi
10834 \LayoutCheckField{#2}{%
10835 \Hy@escapeform\PDFForm@Check
10836 \pdfstartlink user {\PDFForm@Check}\relax
10837 \MakeCheckField{\Fld@width}{\Fld@height}%
10838 \pdfendlink
10839 \HyField@AddToFields
10840 }%
10841 \endgroup
10842 }
10843 \pdfobj {%
10844 <<%
10845 /Type/Encoding%
10846 /Differences[%
10847 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
10848 /ring/tilde %
10849 39/quotesingle %
10850 96/grave %
10851 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10852 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10853 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10854 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
10855 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10856 164/currency %
10857 166/brokenbar %

```

```

10858      168/dieresis/copyright/ordfeminine %
10859      172/logicalnot/.notdef/registered/macron/degree/plusminus%
10860      /twosuperior/threesuperior/acute/mu %
10861      183/periodcentered/cedilla/onesuperior/ordmasculine %
10862      188/onequarter/onehalf/threequarters %
10863      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10864      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10865      /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10866      /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10867      /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10868      /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10869      /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10870      /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
10871      /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
10872      /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
10873      ]%
10874      >>%
10875 }
10876 \edef\OBJ@pdfdocencoding{\the\pdflastobj}
10877 \pdfobj{%
10878   <<%
10879     /Type/Font%
10880     /Subtype/Type1%
10881     /Name/ZaDb%
10882     /BaseFont/ZapfDingbats%
10883   >>%
10884 }
10885 \edef\OBJ@ZaDb{\the\pdflastobj}
10886 \pdfobj{%
10887   <<%
10888     /Type/Font%
10889     /Subtype/Type1%
10890     /Name/Helv%
10891     /BaseFont/Helvetica%
10892     /Encoding \OBJ@pdfdocencoding\space 0 R%
10893   >>%
10894 }
10895 \edef\OBJ@Helv{\the\pdflastobj}
10896 </pdfTeX>

```

47.5 dvipdfm

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.

```
10897 < *dvipdfm >
```

\@Gauge

```

10898 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10899   \typeout{Sorry, dvipdfm does not support FORM gauges}%
10900 }

```

\@Form

```

10901 \def\@Form[#1]{%
10902   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
10903   \setkeys{Form}{#1}%
10904   \@pdfm@mark{obj @afields []}%
10905   \@pdfm@mark{obj @corder []}%

```

```

10906 \pdfmark{%
10907   obj @aform <<%
10908     /Fields @afields%
10909     /DR<<%
10910       /Font<<%
10911         /ZaDb @OBJZaDb%
10912         /Helv @OBJHelv%
10913       >>%
10914     >>%
10915     /DA(/Helv 10 Tf 0 g)%
10916     /CO @corder%
10917     \ifHy@pdfa
10918     \else
10919       /NeedAppearances true%
10920     \fi
10921   >>%
10922 }%
10923 \pdfmark{put @catalog <</AcroForm @aform>>}%
10924 }

\@endForm

10925 \def\@endForm{}

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.
10926 \def\dvipdfm@setdim{%
10927   height \the\ht\pdfm@box\space
10928   width \the\wd\pdfm@box\space
10929   depth \the\dp\pdfm@box\space
10930 }

\HyField@AnnotCount
10931 \newcount\HyField@AnnotCount
10932 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount
10933 \def\HyField@AdvanceAnnotCount{%
10934   \global\advance\HyField@AnnotCount\@ne
10935 }

\HyField@TheAnnotCount
10936 \def\HyField@TheAnnotCount{%
10937   \the\HyField@AnnotCount
10938 }

\@TextField
10939 \def\@TextField[#1]#2{% parameters, label
10940   \def\Fld@name{#2}%
10941   \def\Fld@default{}%
10942   \let\Fld@value\@empty
10943   \def\Fld@width{\DefaultWidthofText}%
10944   \def\Fld@height{%
10945     \ifFld@multiline
10946       \DefaultHeightofTextMultiline
10947     \else
10948       \DefaultHeightofText
10949     \fi

```



```

10950 }%
10951 \begingroup
10952   \Field@toks={ }%
10953   \expandafter\HyField@SetKeys\expandafter{%
10954     \DefaultOptionsofText,#1%
10955   }%
10956   \PDFForm@Name
10957   \HyField@FlagsText
10958   \ifFld@hidden\def\Fld@width{1sp}\fi
10959   \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
10960   \setbox\pdfm@box=\hbox{%
10961     \MakeTextField{\Fld@width}{\Fld@height}%
10962   }%
10963   \HyField@AdvanceAnnotCount
10964   \LayoutTextField{#2}{%
10965     \Hy@escapeform\PDFForm@Text
10966     \@pdfm@mark{%
10967       ann @text\HyField@TheAnnotCount\space
10968       \dvipdfm@setdim << \PDFForm@Text >>%
10969     }%
10970   }%
10971   \unhbox\pdfm@box
10972   \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
10973   % record in @afields array
10974 \endgroup
10975 }

```

\@ChoiceMenu

```

10976 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10977   \def\Fld@name{#2}%
10978   \let\Fld@default\relax
10979   \let\Fld@value\relax
10980   \def\Fld@width{\DefaultWidthofChoiceMenu}%
10981   \def\Fld@height{\DefaultHeightofChoiceMenu}%
10982   \begingroup
10983     \Fld@menulength=0 %
10984     \@tempdima\z@
10985     \@for\@curropt:=#3\do{%
10986       \expandafter\Fld@checkequals\@curropt==\%
10987       \Hy@StepCount\Fld@menulength
10988       \settowidth{\@tempdimb}{\@currDisplay}%
10989       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10990     }%
10991     \advance\@tempdima by 15\p@
10992     \Field@toks={ }%
10993     \begingroup
10994       \HyField@SetKeys{#1}%
10995     \edef\x{\endgroup
10996       \noexpand\expandafter
10997       \noexpand\HyField@SetKeys
10998       \noexpand\expandafter{%
10999         \expandafter\noexpand\csname DefaultOptionsof%
11000           \ifFld@radio
11001             Radio%
11002           \else
11003             \ifFld@combo
11004               \ifFld@popdown

```

```

11005         PopdownBox%
11006         \else
11007         ComboBox%
11008         \fi
11009         \else
11010         ListBox%
11011         \fi
11012         \fi
11013     \endcsname
11014 }%
11015 }\x
11016 \HyField@SetKeys{#1}%
11017 \PDFForm@Name
11018 \ifFld@hidden\def\Fld@width{1sp}\fi
11019 \ifx\Fld@value\relax
11020     \let\Fld@value\Fld@default
11021 \fi
11022 \LayoutChoiceField{#2}{%
11023     \ifFld@radio
11024         \HyField@FlagsRadioButton
11025         \@@Radio{#3}%
11026     \else
11027         \begingroup
11028         \HyField@FlagsChoice
11029         \ifdim\Fld@width<\@tempdima
11030             \ifdim\@tempdima<1cm\@tempdima1cm\fi
11031             \edef\Fld@width{\the\@tempdima}%
11032         \fi
11033         \ifFld@combo
11034         \else
11035             \@tempdima=\the\Fld@menulength\Fld@charsize
11036             \advance\@tempdima by \Fld@borderwidth bp %
11037             \advance\@tempdima by \Fld@borderwidth bp %
11038             \edef\Fld@height{\the\@tempdima}%
11039         \fi
11040         \@@Listbox{#3}%
11041     \endgroup
11042 \fi
11043 }%
11044 \endgroup
11045 }

```

\@@Radio

```

11046 \def\@@Radio#1{%
11047     \Fld@listcount=0 %
11048     \setbox\pdfm@box=\hbox{\MakeRadioField{\Fld@width}{\Fld@height}}%
11049     \@for\@curropt:=#1\do{%
11050         \expandafter\Fld@checkequals\@curropt==\%
11051         \Hy@StepCount\Fld@listcount
11052         \@currDisplay\space
11053         \leavevmode
11054         \Hy@escapeform\PDFForm@Radio
11055         \ifnum\Fld@listcount=1 %
11056             \HyField@AdvanceAnnotCount
11057         \fi
11058         \@pdfm@mark{%
11059             ann \ifnum\Fld@listcount=1 @radio\HyField@TheAnnotCount\space\fi

```

```

11060     \dviPDFm@setdim
11061     <<%
11062     \PDFForm@Radio
11063     /AP<</N<</\@currValue /null>>>>%
11064     >>%
11065     }%
11066     \unhcopy\pdfm@box\space% deliberate space between radio buttons
11067     \ifnum\Fld@listcount=1 %
11068     \@pdfm@mark{put @afields @radio\HyField@TheAnnotCount}%
11069     \fi
11070     }%
11071 }

\Fld@listcount

11072 \newcount\Fld@listcount

@@@Listbox

11073 \def\@@Listbox#1{%
11074     \HyField@PDFChoices{#1}%
11075     \setbox\pdfm@box=\hbox{\MakeChoiceField{\Fld@width}{\Fld@height}}%
11076     \leavevmode
11077     \Hy@escapeform\PDFForm@List
11078     \HyField@AdvanceAnnotCount
11079     \@pdfm@mark{%
11080         ann @list\HyField@TheAnnotCount\space
11081         \dviPDFm@setdim
11082         <<\PDFForm@List>>%
11083     }%
11084     \unhbox\pdfm@box
11085     \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
11086 }

\@PushButton

11087 \def\@PushButton[#1]#2{% parameters, label
11088     \def\Fld@name{#2}%
11089     \begin{group}
11090         \Field@toks={ }%
11091         \expandafter\HyField@SetKeys\expandafter{%
11092             \DefaultOptionsofPushButton,#1%
11093         }%
11094         \PDFForm@Name
11095         \ifHy@pdfa
11096             \PackageError{hyperref}{%
11097                 PDF/A: Push button with JavaScript is prohibited%
11098             }\@ehc
11099             \LayoutPushButtonField{%
11100                 \leavevmode
11101                 \MakeButtonField{#2}%
11102             }%
11103         \else
11104             \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11105             \HyField@FlagsPushButton
11106             \ifFld@hidden\def\Fld@width{1sp}\fi
11107             \HyField@AdvanceAnnotCount
11108             \LayoutPushButtonField{%
11109                 \leavevmode
11110                 \Hy@escapeform\PDFForm@Push

```

```

11111      \@pdfm@mark{%
11112          ann @push\HyField@TheAnnotCount\space
11113          \dvipdfm@setdim
11114          <<\PDFForm@Push>>%
11115      }%
11116  }%
11117  \unhbox\pdfm@box
11118  \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
11119  \fi
11120  \endgroup
11121 }

\@Submit

11122 \def\@Submit[#1]#2{%
11123   \Field@toks={ }%
11124   \def\Fld@width{\DefaultWidthofSubmit}%
11125   \def\Fld@height{\DefaultHeightofSubmit}%
11126   \begingroup
11127     \expandafter\HyField@SetKeys\expandafter{%
11128       \DefaultOptionsofSubmit,#1%
11129     }%
11130     \HyField@FlagsPushButton
11131     \HyField@FlagsSubmit
11132     \ifFld@hidden\def\Fld@width{1sp}\fi
11133     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11134     \leavevmode
11135     \Hy@escapeform\PDFForm@Submit
11136     \HyField@AdvanceAnnotCount
11137     \@pdfm@mark{%
11138         ann @submit\HyField@TheAnnotCount\space
11139         \dvipdfm@setdim
11140         <<\PDFForm@Submit>>%
11141     }%
11142     \unhbox\pdfm@box%
11143     \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
11144   \endgroup
11145 }

\@Reset

11146 \def\@Reset[#1]#2{%
11147   \Field@toks={ }%
11148   \def\Fld@width{\DefaultWidthofReset}%
11149   \def\Fld@height{\DefaultHeightofReset}%
11150   \begingroup
11151     \expandafter\HyField@SetKeys\expandafter{%
11152       \DefaultOptionsofReset,#1%
11153     }%
11154     \leavevmode
11155     \ifHy@pdfa
11156       \PackageError{hyperref}{%
11157         PDF/A: Reset action is prohibited%
11158       }\@ehc
11159       \MakeButtonField{#2}%
11160     \else
11161       \HyField@FlagsPushButton
11162       \ifFld@hidden\def\Fld@width{1sp}\fi
11163       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%

```

```

11164 \Hy@escapeform\PDFForm@Reset
11165 \HyField@AdvanceAnnotCount
11166 \@pdfm@mark{%
11167     ann @reset\HyField@TheAnnotCount\space
11168     \dvipdfm@setdim
11169     <<\PDFForm@Reset>>%
11170 }%
11171 \unhbox\pdfm@box
11172 \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
11173 \fi
11174 \endgroup
11175 }

```

\@CheckBox

```

11176 \def\@CheckBox[#1]#2{% parameters, label
11177 \def\Fld@name{#2}%
11178 \def\Fld@default{0}%
11179 \begingroup
11180 \def\Fld@width{\DefaultWidthofCheckBox}%
11181 \def\Fld@height{\DefaultHeightofCheckBox}%
11182 \Field@toks={ }%
11183 \expandafter\HyField@SetKeys\expandafter{%
11184 \DefaultOptionsofCheckBox,#1%
11185 }%
11186 \PDFForm@Name
11187 \HyField@FlagsCheckBox
11188 \ifFld@hidden\def\Fld@width{1sp}\fi
11189 \setbox\pdfm@box=\hbox{\MakeCheckField{\Fld@width}{\Fld@height}}%
11190 \HyField@AdvanceAnnotCount
11191 \LayoutCheckField{#2}{%
11192 \Hy@escapeform\PDFForm@Check
11193 \@pdfm@mark{%
11194     ann @check\HyField@TheAnnotCount\space
11195     \dvipdfm@setdim
11196     <<\PDFForm@Check>>%
11197 }%
11198 \unhbox\pdfm@box
11199 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
11200 }%
11201 \endgroup
11202 }

11203 \@pdfm@mark{obj @OBJpdfdocencoding%
11204 <<%
11205 /Type/Encoding%
11206 /Differences[%
11207     24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
11208     39/quotesingle %
11209     96/grave %
11210     128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11211     /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11212     /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
11213     /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
11214     /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11215     164/currency %
11216     166/brokenbar %
11217     168/dieresis/copyright/ordfeminine %
11218     172/logicalnot/.notdef/registered/macron/degree/plusminus%

```

```

11219      /twosuperior/threesuperior/acute/mu %
11220      183/periodcentered/cedilla/onesuperior/ordmasculine %
11221      188/onequarter/onehalf/threequarters %
11222      192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11223      /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
11224      /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
11225      /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
11226      /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
11227      /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
11228      /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
11229      /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
11230      /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
11231      /thorn/ydieresis%
11232    ]%
11233  >>%
11234 }
11235 \pdfmark{obj @OBJZaDb%
11236 <<%
11237   /Type/Font%
11238   /Subtype/Type1%
11239   /Name/ZaDb%
11240   /BaseFont/ZapfDingbats%
11241   >>%
11242 }
11243 \pdfmark{obj @OBJHelv%
11244 <<%
11245   /Type/Font%
11246   /Subtype/Type1%
11247   /Name/Helv%
11248   /BaseFont/Helvetica%
11249   /Encoding @OBJpdfdocencoding%
11250   >>%
11251 }
11252 \dvipdfm)

```

47.6 Common forms part

```
11253 (*pdfform)
```

\Hy@escapestring

```

11254 \begingroup\expandafter\expandafter\expandafter\endgroup
11255 \expandafter\ifx\csname pdfescapestring\endcsname\relax
11256   \let\Hy@escapestring\@firstofone
11257   \def\Hy@escapeform#1{%
11258     \ifHy@escapeform
11259       \def\Hy@escapestring##1{%
11260         \noexpand\Hy@escapestring{\noexpand##1}%
11261       }%
11262     \edef\Hy@temp{#1}%
11263     \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
11264     \def\Hy@escapestring##1{%
11265       \@ifundefined{Hy@esc@\string##1}{%
11266         ##1%
11267         \ThisShouldNotHappen
11268       }{%
11269         \csname Hy@esc@\string##1\endcsname
11270       }%

```

```

11271     }%
11272     \else
11273         \let\Hy@escapestring\@firstofone
11274     \fi
11275 }%
11276 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
11277     \ifx\#3\%
11278     \else
11279         \expandafter\Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
11280         \Hy@ReturnAfterFi{%
11281             \Hy@@escapeform#3\@nil
11282         }%
11283     \fi
11284 }%
11285 \else
11286 \def\Hy@escapeform#1{%
11287     \ifHy@escapeform
11288         \let\Hy@escapestring\pdfescapestring
11289     \else
11290         \let\Hy@escapestring\@firstofone
11291     \fi
11292 }%
11293 \Hy@escapeform{}%
11294 \fi

```

\PDFForm@Name

```

11295 \def\PDFForm@Name{%
11296     \begingroup
11297         \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
11298             \ifHy@unicode
11299                 \Hy@unicodedefalse
11300             \fi
11301         \fi
11302         \pdfstringdef\Hy@gtemp\Fld@name
11303     \endgroup
11304     \let\Fld@name\Hy@gtemp
11305 }

```

\PDFForm@Check

```

11306 \def\PDFForm@Check{%
11307     /Subtype/Widget%
11308     \Fld@annotflags
11309     /T(\Fld@name)%
11310     /FT/Btn%
11311     \Fld@flags
11312     /Q \Fld@align
11313     /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
11314     /MK<<%
11315         \ifnum\Fld@rotation=\z@
11316         \else
11317             /R \Fld@rotation
11318         \fi
11319         \ifx\Fld@bordercolor\relax
11320         \else
11321             /BC[\Fld@bordercolor]%
11322         \fi
11323         \ifx\Fld@bcolor\relax

```

```

11324     \else
11325         /BG[\Fld@bcolor]%
11326     \fi
11327     /CA(\Hy@escapestring{\Fld@cbsymbol})%
11328 >>%
11329 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11330     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11331 /H/P%
11332 \ifFld@checked /V/Yes\else /V/Off\fi
11333 }

```

\PDFForm@Push

```

11334 \ifHy@pdfa
11335 \else
11336 \def\PDFForm@Push{%
11337     /Subtype/Widget%
11338     \Fld@annotflags
11339     /T(\Fld@name)%
11340     /FT/Btn%
11341     \Fld@flags
11342     /H/P%
11343     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11344     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11345         \ifx\Fld@bordercolor\relax\else 1\fi
11346         \space
11347     \else
11348         /MK<<%
11349         \ifnum\Fld@rotation=\z@
11350         \else
11351             /R \Fld@rotation
11352         \fi
11353         \ifx\Fld@bordercolor\relax
11354         \else
11355             /BC[\Fld@bordercolor]%
11356         \fi
11357     >>%
11358     \fi
11359     /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick})>>%
11360 }%
11361 \fi

```

\Fld@additionalactions

```

11362 \def\Fld@@additionalactions{%
K input (keystroke) format
11363 \ifx\Fld@keystroke@code\@empty
11364 \else
11365     /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
11366 \fi
F display format
11367 \ifx\Fld@format@code\@empty
11368 \else
11369     /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
11370 \fi
V validation
11371 \ifx\Fld@validate@code\@empty

```



```

11372 \else
11373     /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
11374 \fi

C calculation
11375 \ifx\Fld@calculate@code\@empty
11376 \else
11377     /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
11378 \fi

Fo receiving the input focus
11379 \ifx\Fld@onfocus@code\@empty
11380 \else
11381     /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
11382 \fi

Bl loosing the input focus (blurred)
11383 \ifx\Fld@onblur@code\@empty
11384 \else
11385     /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
11386 \fi

D pressing the mouse button (down)
11387 \ifx\Fld@onmousedown@code\@empty
11388 \else
11389     /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
11390 \fi

U releasing the mouse button (up)
11391 \ifx\Fld@onmouseup@code\@empty
11392 \else
11393     /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
11394 \fi

E cursor enters the annotation's active area.
11395 \ifx\Fld@onenter@code\@empty
11396 \else
11397     /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
11398 \fi

X cursor exits the annotation's active area.
11399 \ifx\Fld@onexit@code\@empty
11400 \else
11401     /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
11402 \fi
11403 }
11404 \def\Fld@additionalactions{%
11405 \if-\Fld@@additionalactions-%
11406 \else
11407     \ifHy@pdfa
11408     \else
11409         /AA<<\Fld@@additionalactions>>%
11410     \fi
11411 \fi
11412 }

\PDFForm@List
11413 \def\PDFForm@List{%
11414 /Subtype/Widget%
11415 \Fld@annotflags

```

```

11416 /T(\Fld@name)%
11417 /FT/Ch%
11418 \Fld@flags
11419 /Q \Fld@align
11420 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11421 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11422 \ifx\Fld@bordercolor\relax\else 1\fi
11423 \ifx\Fld@bcolor\relax \else 1\fi
11424 \space
11425 \else
11426 /MK<<%
11427 \ifnum\Fld@rotation=\z@
11428 \else
11429 /R \Fld@rotation
11430 \fi
11431 \ifx\Fld@bordercolor\relax
11432 \else
11433 /BC[\Fld@bordercolor]%
11434 \fi
11435 \ifx\Fld@bcolor\relax
11436 \else
11437 /BG[\Fld@bcolor]%
11438 \fi
11439 >>%
11440 \fi
11441 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11442 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11443 \Fld@choices
11444 \Fld@additionalactions
11445 }

```

\PDFForm@Radio

```

11446 \def\PDFForm@Radio{%
11447 /Subtype/Widget%
11448 \Fld@annotflags
11449 /T(\Fld@name)%
11450 /FT/Btn%
11451 \Fld@flags
11452 /H/P%
11453 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11454 /MK<<%
11455 \ifnum\Fld@rotation=\z@
11456 \else
11457 /R \Fld@rotation
11458 \fi
11459 \ifx\Fld@bordercolor\relax
11460 \else
11461 /BC[\Fld@bordercolor]%
11462 \fi
11463 \ifx\Fld@bcolor\relax
11464 \else
11465 /BG[\Fld@bcolor]%
11466 \fi
11467 /CA(H)%
11468 >>%
11469 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11470 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%

```

```

11471 \ifx\@currValue\Fld@default
11472 /V/\Fld@default
11473 \else
11474 /V/Off%
11475 \fi
11476 \Fld@additionalactions
11477 }

```

\PDFForm@Text

```

11478 \def\PDFForm@Text{%
11479 /Subtype/Widget%
11480 \Fld@annotflags
11481 /T(\Fld@name)%
11482 /FT/Tx%
11483 \Fld@flags
11484 /Q \Fld@align
11485 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
11486 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11487 \ifx\Fld@bordercolor\relax\else 1\fi
11488 \ifx\Fld@bcolor\relax \else 1\fi
11489 \space
11490 \else
11491 /MK<<%
11492 \ifnum\Fld@rotation=\z@
11493 \else
11494 /R \Fld@rotation
11495 \fi
11496 \ifx\Fld@bordercolor\relax
11497 \else
11498 /BC[\Fld@bordercolor]%
11499 \fi
11500 \ifx\Fld@bcolor\relax
11501 \else
11502 /BG[\Fld@bcolor]%
11503 \fi
11504 >>%
11505 \fi
11506 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11507 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11508 /DV(\Hy@escapestring{\Fld@default})%
11509 /V(\Hy@escapestring{\Fld@value})%
11510 \Fld@additionalactions
11511 \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
11512 }

```

\PDFForm@Submit

```

11513 \def\PDFForm@Submit{%
11514 /Subtype/Widget%
11515 \Fld@annotflags
11516 /T(\Fld@name)%
11517 /FT/Btn%
11518 \Fld@flags
11519 /H/P%
11520 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11521 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11522 \ifx\Fld@bordercolor\relax\else 1\fi
11523 \space

```

```

11524 \else
11525   /MK<<%
11526   \ifnum\Fld@rotation=\z@
11527   \else
11528     /R \Fld@rotation
11529   \fi
11530   \ifx\Fld@bordercolor\relax
11531   \else
11532     /BC[\Fld@bordercolor]%
11533   \fi
11534   >>%
11535 \fi
11536 /A<<%
11537   /S/SubmitForm%
11538   /F<<%
11539   /FS/URL%
11540   /F(\Hy@escapestring{\Form@action})%
11541   >>%
11542   \Fld@submitflags
11543   >>%
11544 }

```

\PDFForm@Reset

```

11545 \ifHy@pdfa
11546 \else
11547   \def\PDFForm@Reset{%
11548     /Subtype/Widget%
11549     \Fld@annotflags
11550     /T(\Fld@name)%
11551     /FT/Btn%
11552     \Fld@flags
11553     /H/P%
11554     /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
11555     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11556       \ifx\Fld@bordercolor\relax\else 1\fi
11557       \space
11558     \else
11559       /MK<<%
11560       \ifnum\Fld@rotation=\z@
11561       \else
11562         /R \Fld@rotation
11563       \fi
11564       \ifx\Fld@bordercolor\relax
11565       \else
11566         /BC[\Fld@bordercolor]%
11567       \fi
11568     % /CA (Clear)
11569     % /AC (Done)
11570     >>%
11571   \fi
11572   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11573   /A<</S/ResetForm>>%
11574 }%
11575 \fi

11576 </pdfform>
11577 <*package>

```

48 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `reper.sty`); it needed the `reper` 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`

```
11578 \def\phantomsection{%
11579   \Hy@GlobalStepCount\Hy@linkcounter
11580   \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11581   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
11582 }
11583 \</package>
```

48.1 Bookmarks

```
11584 \<*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`.

```
11585 \def\Hy@writebookmark#1#2#3#4#5{%
11586   % section number, text, label, level, file
11587   \ifx\WriteBookmarks\relax%
11588   \else
11589     \ifnum#4>\Hy@bookmarksdepth\relax
11590     \else
11591       \@writetorep{#1}{#2}{#3}{#4}{#5}%
11592     \fi
11593   \fi
11594 }
11595 \def\Hy@currentbookmarklevel{0}
11596 \def\Hy@numberline#1{#1 }
11597 \def\@writetorep#1#2#3#4#5{%
11598   \begingroup
11599     \edef\Hy@tempa{#5}%
11600     \ifx\Hy@tempa\Hy@bookmarkstype
11601       \edef\Hy@level{#4}%
11602       \ifx\Hy@levelcheck Y%
11603         \@tempcnta\Hy@level\relax
11604         \advance\@tempcnta by -1 %
11605         \ifnum\Hy@currentbookmarklevel<\@tempcnta
11606           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
11607           \advance\@tempcnta by 1 %
11608           \Hy@Warning{%
11609             Difference (\the\@tempcnta) between bookmark levels is %
11610             greater \MessageBreak than one, level fixed%
11611           }%
11612           \@tempcnta\Hy@currentbookmarklevel
11613           \advance\@tempcnta by 1 %
11614           \edef\Hy@level{\the\@tempcnta}%

```

```

11615     \fi
11616     \else
11617         \global\let\Hy@levelcheck Y%
11618     \fi
11619     \global\let\Hy@currentbookmarklevel\Hy@level
11620     \@tempcnta\Hy@level\relax
11621     \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
11622     \advance\@tempcnta by -1 %
11623     \edef\Hy@tempa{#3}%
11624     \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
11625     \ifx\Hy@tempa\Hy@tempb
11626         \Hy@Warning{%
11627             The anchor of a bookmark and its parent's must not%
11628             \MessageBreak be the same. Added a new anchor%
11629         }%
11630     \phantomsection
11631     \fi
11632     \ifHy@bookmarksnumbered
11633         \let\numberline\Hy@numberline
11634         \let\partnumberline\Hy@numberline
11635         \let\chapternumberline\Hy@numberline
11636     \else
11637         \let\numberline\@gobble
11638         \let\partnumberline\@gobble
11639         \let\chapternumberline\@gobble
11640     \fi
11641     \pdfstringdef\Hy@tempa{#2}%
11642     \if@filesw
11643         \protected@write\@outlinefile{}{%
11644             \protect\BOOKMARK
11645             [\Hy@level] [\@bookmarkopenstatus{\Hy@level}]{#3}%
11646             {\Hy@tempa}{\Hy@tempb}%
11647         }%
11648     \fi
11649     \fi
11650 \endgroup
11651 }

```

In the call of `\BOOKMARK` the braces around #4 are omitted, because it is not likely, that the level number contains] .

```

11652 \newcommand{\currentpdfbookmark}{%
11653     \pdfbookmark[\Hy@currentbookmarklevel]%
11654 }
11655 \newcommand{\subpdfbookmark}{%
11656     \@tempcnta\Hy@currentbookmarklevel
11657     \Hy@StepCount\@tempcnta
11658     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
11659 }
11660 \newcommand{\belowpdfbookmark}[2]{%
11661     \@tempcnta\Hy@currentbookmarklevel
11662     \Hy@StepCount\@tempcnta
11663     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
11664     \advance\@tempcnta by -1 %
11665     \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
11666 }

```

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.

```

11667 \renewcommand\pdfbookmark[3][0]{%
11668   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
11669   \hyper@anchorstart{#3.#1}\hyper@anchorend
11670 }
11671 \def\BOOKMARK{\ifnextchar[{\@BOOKMARK}{\@BOOKMARK[1][-]}}
11672 \def\@BOOKMARK[#1]{\ifnextchar[{\@BOOKMARK[#1]}{\@BOOKMARK[#1][-]}}
```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the texinfo pdf macros.

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping \ and the like.

```
11673 <*vtex>
```

```
11674 \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.

```

11675 \begingroup
11676   \catcode'\'=12 %
11677   \ifnum\Hy@VTeXversion<650 %
11678     \catcode'\=12 %
11679     \gdef\hv@pdf@char#1#2#3{%
11680       \char
11681       \ifcase'#1#2#3 %
11682         "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
11683         \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
11684         \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
11685         \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
11686         \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
11687         \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
11688         \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
11689         \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
11690         \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
11691         \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
11692         \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
11693         \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
11694         \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
11695         \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
11696         \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
11697         \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
11698         \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
11699         \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
11700         \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
11701         \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
11702         \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
11703         \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
11704         \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
11705         \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
11706         \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
11707         \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
11708         \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
11709         \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
11710         \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
11711         \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
11712         \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
```

```

11713      \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
11714      \fi
11715      }%
11716      \else
11717      \gdef\hv@pdf@char{\char'}%
11718      \fi
11719      \endgroup

```

\@@BOOKMARK

```

11720 \def\@@BOOKMARK[#1][#2]#3#4#5{%
11721   \expandafter\edef\csname @count@#3\endcsname{\the\@serial@counter}%
11722   \edef\@mycount{\the\@serial@counter}%
11723   \Hy@StepCount\@serial@counter
11724   \edef\@parcount{%
11725     \expandafter\ifx\csname @count@#5\endcsname\relax
11726     0%
11727     \else
11728     \csname @count@#5\endcsname
11729     \fi
11730   }%
11731   \immediate\special{%
11732     !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
11733     s=\ifx#2-c\else o\fi,t=#4%
11734   }%
11735 }%

```

\ReadBookmarks

```

11736 \def\ReadBookmarks{%
11737   \begingroup
11738   \def\0{\hv@pdf@char 0}%
11739   \def\1{\hv@pdf@char 1}%
11740   \def\2{\hv@pdf@char 2}%
11741   \def\3{\hv@pdf@char 3}%
11742   \def\({}%
11743   \def\)}%
11744   \def\do##1{%
11745     \ifnum\the\catcode'##1=\active
11746     \@makeother##1%
11747     \fi
11748   }%
11749   \dospecials
11750   \InputIfFileExists{\jobname.out}{-}{-}%
11751   \endgroup
11752   \ifx\WriteBookmarks\relax
11753   \else
11754     \if@filesw
11755       \newwrite\@outlinefile
11756       \immediate\openout\@outlinefile=\jobname.out\relax
11757       \ifHy@typexml
11758         \immediate\write\@outlinefile{<relaxxml>\relax}%
11759       \fi
11760     \fi
11761     \fi
11762 }

11763 </vtex>
11764 <!*vtex>

```



```

11765 \def\ReadBookmarks{%
11766   \begingroup
11767   \escapechar='\'%
11768   \let\escapechar\@gobble %
11769   \def\@@BOOKMARK[##1][##2]##3##4##5{\calc@bm@number{##5}}%
11770   \InputIfFileExists{\jobname.out}{\relax}%
11771   \ifx\WriteBookmarks\relax
11772     \global\let\WriteBookmarks\relax
11773   \fi
11774   \def\@@BOOKMARK[##1][##2]##3##4##5{%
11775     \def\Hy@temp{##4}%
11776 \<pdfTex>
11777   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11778   \Hy@OutlineName{\Hy@pstringName{%
11779     ##2\check@bm@number{##3}}%
11780   }{%
11781     \expandafter\strip@prefix\meaning\Hy@temp
11782   }%
11783 \</pdfTex>
11784 \<pdfmark>
11785   \pdfmark{%
11786     pdfmark=/OUT,%
11787     Count={##2\check@bm@number{##3}},%
11788     Dest={##3},%
11789     Title=\expandafter\strip@prefix\meaning\Hy@temp
11790   }%
11791 \</pdfmark>
11792 \<dvipdfm>
11793   \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11794   \@pdfm@mark{%
11795     outline \ifHy@DvipdfmxOutlineOpen
11796       [%
11797       \ifnum##21>\z@
11798       \else
11799       -%
11800       \fi
11801       ] %
11802       \fi
11803       ##1<<%
11804       /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
11805       /A<<%
11806       /S/GoTo%
11807       /D(\Hy@pstringName)%
11808       >>%
11809       >>%
11810     }%
11811 \</dvipdfm>
11812   }%
11813   {%
11814     \def\WriteBookmarks{0}%
11815     \InputIfFileExists{\jobname.out}{\relax}%
11816   }%
11817   {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}}%
11818   \ifx\WriteBookmarks\relax
11819   \else
11820     \if@filesW
11821       \newwrite\@outlinefile

```

```

11822 \immediate\openout\@outlinefile=\jobname.out\relax
11823 \ifHy@typexml
11824 \immediate\write\@outlinefile{<relaxxml>\relax}%
11825 \fi
11826 \fi
11827 \fi
11828 \endgroup
11829 }
11830 <*pdfTex>
11831 \def\Hy@OutlineName#1#2#3#4{%
11832 \pdfoutline goto name{#2}count#3{#4}%
11833 }
11834 </pdfTex>
11835 \def\check@bm@number#1{%
11836 \expandafter\ifx\csname B_#1\endcsname\relax
11837 0%
11838 \else
11839 \csname B_#1\endcsname
11840 \fi
11841 }
11842 \def\calc@bm@number#1{%
11843 \@tempcnta=\check@bm@number{#1}\relax
11844 \advance\@tempcnta by 1 %
11845 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
11846 }
11847 </!vTex>
11848 \ifHy@implicit
11849 \else
11850 \expandafter\endinput
11851 \fi
11852 </outlines>
11853 <*outlines | hypertex>
11854 \let\H@old@ssect\@ssect
11855 \def\@ssect#1#2#3#4#5{%
11856 \H@old@ssect{#1}{#2}{#3}{#4}{#5}%
11857 \phantomsection
11858 }
11859 \let\H@old@schapter\@schapter
11860 \def\@schapter#1{%
11861 \H@old@schapter{#1}%
11862 \begingroup
11863 \let\@mkboth\@gobbletwo
11864 \Hy@GlobalStepCount\Hy@linkcounter
11865 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11866 \Hy@raisedlink{%
11867 \hyper@anchorstart{\@currentHref}\hyper@anchorend
11868 }%
11869 \endgroup
11870 }

```

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:

```

11871 \@ifundefined{@chapter}{-}{%
11872 \let\Hy@org@chapter\@chapter
11873 \def\@chapter{%

```

```

11874 \def\Hy@next{%
11875 \Hy@GlobalStepCount\Hy@linkcounter
11876 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11877 \Hy@raisedlink{%
11878 \hyper@anchorstart{\@currentHref}\hyper@anchorend
11879 }%
11880 }%
11881 \ifnum\c@secnumdepth>\m@ne
11882 \@ifundefined{if@mainmatter}%
11883 \iftrue{\csname if@mainmatter\endcsname}%
11884 \let\Hy@next\relax
11885 \fi
11886 \fi
11887 \Hy@next
11888 \Hy@org@chapter
11889 }%
11890 }

11891 \let\H@old@part\@part
11892 \begingroup\expandafter\expandafter\expandafter\endgroup
11893 \expandafter\ifx\csname chapter\endcsname\relax
11894 \let\Hy@secnum@part\z@
11895 \else
11896 \let\Hy@secnum@part\m@ne
11897 \fi
11898 \def\@part{%
11899 \ifnum\Hy@secnum@part>\c@secnumdepth
11900 \phantomsection
11901 \fi
11902 \H@old@part
11903 }

11904 \let\H@old@spart\@spart
11905 \def\@spart#1{%
11906 \H@old@spart{#1}%
11907 \Hy@GlobalStepCount\Hy@linkcounter
11908 \xdef\@currentHref{part*.\the\Hy@linkcounter}%
11909 \Hy@raisedlink{%
11910 \hyper@anchorstart{\@currentHref}\hyper@anchorend
11911 }%
11912 }

11913 \let\H@old@sect\@sect
11914 \def\@sect#1#2#3#4#5#6[#7]#8{%
11915 \ifnum #2>\c@secnumdepth
11916 \Hy@GlobalStepCount\Hy@linkcounter
11917 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11918 \fi
11919 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[#7]{#8}%
11920 \ifnum #2>\c@secnumdepth
11921 \Hy@raisedlink{%
11922 \hyper@anchorstart{\@currentHref}\hyper@anchorend
11923 }%
11924 \fi
11925 }

11926 </outlines | hypertex>
11927 <*outlines>

11928 \expandafter\def\csname Parent-4\endcsname{}
11929 \expandafter\def\csname Parent-3\endcsname{}

```

```

11930 \expandafter\def\csname Parent-2\endcsname{}
11931 \expandafter\def\csname Parent-1\endcsname{}
11932 \expandafter\def\csname Parent0\endcsname{}
11933 \expandafter\def\csname Parent1\endcsname{}
11934 \expandafter\def\csname Parent2\endcsname{}
11935 \expandafter\def\csname Parent3\endcsname{}
11936 \expandafter\def\csname Parent4\endcsname{}
11937 </outlines>

```

49 Compatibility with koma-script classes

```
11938 <*outlines | hypertex>
```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for 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.

```

11939 \def\Hy@tempa{%
11940   \def\@addchap[##1]##2{%
11941     \typeout{##2}%
11942     \if@twoside
11943       \@mkboth{##1}{}%
11944     \else
11945       \@mkboth{}{##1}%
11946     \fi
11947     \addtocontents{lof}{\protect\addvspace{10\p@}}%
11948     \addtocontents{lot}{\protect\addvspace{10\p@}}%
11949     \Hy@GlobalStepCount\Hy@linkcounter
11950     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11951     \Hy@raisedlink{%
11952       \hyper@anchorstart{\@currentHref}\hyper@anchorend
11953     }%
11954     \if@twocolumn
11955       \topnewpage[\@makeschapterhead{##2}]%
11956     \else
11957       \@makeschapterhead{##2}%
11958       \@afterheading
11959     \fi
11960     \addcontentsline{toc}{chapter}{##1}%
11961   }%
11962 }
11963 \@ifclassloaded{scrbook}{%
11964   \@ifclasslater{scrbook}{2001/01/01}{%
11965     \let\Hy@tempa\@empty
11966   }{}%
11967 }{%
11968   \@ifclassloaded{scrreprt}{%
11969     \@ifclasslater{scrreprt}{2001/01/01}{%
11970       \let\Hy@tempa\@empty
11971     }{}%
11972   }{%
11973     \let\Hy@tempa\@empty
11974   }%
11975 }%
11976 \Hy@tempa
11977 </outlines | hypertex>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek oberdiek@ruf.uni-freiburg.de

50.1 PD1 encoding

```
11978 <*pd1enc>
11979 \DeclareFontEncoding{PD1}{-}{-}

Accents
11980 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
11981 \DeclareTextAccent{\'}{PD1}{\textacute}
11982 \DeclareTextAccent{\^}{PD1}{\textasciicircum}
11983 \DeclareTextAccent{\~}{PD1}{\texttilde}
11984 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
11985 \DeclareTextAccent{\r}{PD1}{\textring}
11986 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
11987 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
11988 \DeclareTextAccent{\c}{PD1}{\textcedilla}
11989 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
11990 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
11991 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
11992 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
11993 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
11994 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
11995 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
11996 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
11997 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
11998 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
11999 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
12000 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
12001 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
12002 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
12003 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
12004 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textasciigrave}
12005 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
12006 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
12007 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
12008 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
12009 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
12010 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
12011 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
12012 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
12013 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
12014 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
12015 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
12016 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
12017 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
12018 \DeclareTextCommand{\newtie}{PD1}[1]{\TextSymbolUnavailable{\newtie{#1}}#1}

Special white space escape characters not for use in bookmarks but for other PDF strings.
12019 % U+0009 (CHARACTER TABULATION)
12020 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
12021 % U+000A (LINE FEED)
12022 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
12023 % U+000D (CARRIAGE RETURN)
12024 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

Accent glyph names
```

12025 % U+02D8 BREVE; breve
 12026 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
 12027 % U+02C7 CARON; caron
 12028 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
 12029 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
 12030 \DeclareTextCommand{\textcirc{circumflex}}{PD1}{\032}% U+02C6
 12031 % U+02D9 DOT ABOVE; dotaccent
 12032 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
 12033 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 12034 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
 12035 % U+02DB OGONEK; ogonek
 12036 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
 12037 % U+02DA RING ABOVE; ring
 12038 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
 12039 % U+02DC SMALL TILDE; ilde, *tilde
 12040 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
 \040: U+0020 SPACE; *space, spacehackarabic
 \041: U+0021 EXCLAMATION MARK; exclam
 12041 % U+0022 QUOTATION MARK; quotedbl
 12042 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
 12043 % U+0023 NUMBER SIGN; numbersign
 12044 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
 12045 % U+0024 DOLLAR SIGN; dollar
 12046 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 12047 % U+0025 PERCENT SIGN; percent
 12048 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 12049 % U+0026 AMPERSAND; ampersand
 12050 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 12051 % U+0028 LEFT PARENTHESIS; parenleft
 12052 \DeclareTextCommand{\textparenleft}{PD1}{\string\(% \050 U+0028
 12053 % U+0029 RIGHT PARENTHESIS; parenright
 12054 \DeclareTextCommand{\textparenright}{PD1}{\string\)% \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
 12055 % U+002E FULL STOP; period
 12056 \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
 12057 % U+003C LESS-THAN SIGN; less
 12058 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 12059 % U+003E GREATER-THAN SIGN; greater
 12060 \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
 12061 % U+005C REVERSE SOLIDUS; backslash
 12062 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 12063 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12064 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 12065 % U+005F LOW LINE; underscore
 12066 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 12067 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 12068 % U+0060 GRAVE ACCENT; grave
 12069 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 12070 % U+0069 LATIN SMALL LETTER I; i
 12071 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 12072 % U+007B LEFT CURLY BRACKET; braceleft
 12073 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 12074 % U+007C VERTICAL LINE; *bar, verticalbar
 12075 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 12076 % U+007D RIGHT CURLY BRACKET; braceright
 12077 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 12078 % U+007E TILDE; asciitilde
 12079 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 12080 % U+2022 BULLET; bullet
 12081 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 12082 % U+2020 DAGGER; dagger
 12083 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 12084 % U+2021 DOUBLE DAGGER; daggerdbl
 12085 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 12086 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 12087 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 12088 % U+2014 EM DASH; emdash
 12089 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 12090 % U+2013 EN DASH; endash
 12091 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 12092 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 12093 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 12094 % U+2044 FRACTION SLASH; fraction
 12095 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 12096 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 12097 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 12098 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 12099 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 12100 % U+2212 MINUS SIGN; minus
 12101 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 12102 % U+2030 PER MILLE SIGN; perthousand
 12103 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030

12104 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
12105 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
12106 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
12107 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
12108 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
12109 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
12110 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
12111 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
12112 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
12113 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
12114 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
12115 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
12116 % U+2122 TRADE MARK SIGN; trademark
12117 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
12118 % U+FB01 LATIN SMALL LIGATURE FI; fi
12119 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
12120 % U+FB02 LATIN SMALL LIGATURE FL; fl
12121 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
12122 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
12123 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
12124 % U+0152 LATIN CAPITAL LIGATURE OE; OE
12125 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
12126 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
12127 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
12128 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
12129 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
12130 \DeclareTextCommand{\IJ}{PD1}{\230}
12131 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
12132 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
12133 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
12134 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
12135 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
12136 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
12137 % U+0153 LATIN SMALL LIGATURE OE; oe
12138 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
12139 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
12140 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
12141 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
12142 \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.

12143 % U+20AC EURO SIGN; *Euro, euro
12144 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
12145 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
12146 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
12147 % U+00A2 CENT SIGN; cent
12148 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
12149 % U+00A3 POUND SIGN; sterling
12150 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
12151 % U+00A4 CURRENCY SIGN; currency
12152 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
12153 % U+00A5 YEN SIGN; yen
12154 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
12155 % U+00A6 BROKEN BAR; brokenbar
12156 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
12157 % U+00A7 SECTION SIGN; section
12158 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7

12159 % U+00A8 DIAERESIS; dieresis
 12160 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 12161 % U+00A9 COPYRIGHT SIGN; copyright
 12162 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 12163 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 12164 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 12165 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 12166 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 12167 % U+00AC NOT SIGN; logicalnot
 12168 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 12169 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 12170 % U+00AE REGISTERED SIGN; registered
 12171 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 12172 % U+00AF MACRON; *macron, overscore
 12173 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 12174 % U+00B0 DEGREE SIGN; degree
 12175 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 12176 % U+00B1 PLUS-MINUS SIGN; plusminus
 12177 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 12178 % U+00B2 SUPERSCRIPT TWO; twosuperior
 12179 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 12180 % U+00B3 SUPERSCRIPT THREE; threesuperior
 12181 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 12182 % U+00B4 ACUTE ACCENT; acute
 12183 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 12184 % U+00B5 MICRO SIGN; mu, mu1
 12185 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 12186 % U+00B6 PILCROW SIGN; paragraph
 12187 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 12188 % U+00B7 MIDDLE DOT; middot, *periodcentered
 12189 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 12190 % U+00B8 CEDILLA; cedilla
 12191 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 12192 % U+00B9 SUPERSCRIPT ONE; onesuperior
 12193 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
 12194 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 12195 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 12196 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
 12197 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 12198 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 12199 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 12200 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 12201 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 12202 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 12203 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 12204 % U+00BF INVERTED QUESTION MARK; questiondown
 12205 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 12206 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 12207 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 12208 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 12209 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 12210 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 12211 \DeclareTextCompositeCommand{\`}{PD1}{A}{\302}% U+00C2
 12212 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 12213 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
 12214 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis

12215 \DeclareTextCompositeCommand{"}{PD1}{A}{\304}% U+00C4
12216 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12217 \DeclareTextCompositeCommand{r}{PD1}{A}{\305}% U+00C5
12218 % U+00C6 LATIN CAPITAL LETTER AE; AE
12219 \DeclareTextCommand{AE}{PD1}{\306}% U+00C6
12220 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12221 \DeclareTextCompositeCommand{c}{PD1}{C}{\307}% U+00C7
12222 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12223 \DeclareTextCompositeCommand{'}{PD1}{E}{\310}% U+00C8
12224 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12225 \DeclareTextCompositeCommand{'}{PD1}{E}{\311}% U+00C9
12226 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12227 \DeclareTextCompositeCommand{^}{PD1}{E}{\312}% U+00CA
12228 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12229 \DeclareTextCompositeCommand{"}{PD1}{E}{\313}% U+00CB
12230 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12231 \DeclareTextCompositeCommand{'}{PD1}{I}{\314}% U+00CC
12232 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12233 \DeclareTextCompositeCommand{'}{PD1}{I}{\315}% U+00CD
12234 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12235 \DeclareTextCompositeCommand{^}{PD1}{I}{\316}% U+00CE
12236 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12237 \DeclareTextCompositeCommand{"}{PD1}{I}{\317}% U+00CF
12238 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12239 \DeclareTextCommand{DH}{PD1}{\320}% U+00D0
12240 \DeclareTextCommand{DJ}{PD1}{\320}% U+00D0
12241 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12242 \DeclareTextCompositeCommand{~}{PD1}{N}{\321}% U+00D1
12243 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12244 \DeclareTextCompositeCommand{'}{PD1}{O}{\322}% U+00D2
12245 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12246 \DeclareTextCompositeCommand{'}{PD1}{O}{\323}% U+00D3
12247 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12248 \DeclareTextCompositeCommand{^}{PD1}{O}{\324}% U+00D4
12249 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12250 \DeclareTextCompositeCommand{~}{PD1}{O}{\325}% U+00D5
12251 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12252 \DeclareTextCompositeCommand{"}{PD1}{O}{\326}% U+00D6
12253 % U+00D7 MULTIPLICATION SIGN; multiply
12254 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
12255 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12256 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
12257 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12258 \DeclareTextCompositeCommand{'}{PD1}{U}{\331}% U+00D9
12259 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12260 \DeclareTextCompositeCommand{'}{PD1}{U}{\332}% U+00DA
12261 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12262 \DeclareTextCompositeCommand{^}{PD1}{U}{\333}% U+00DB
12263 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12264 \DeclareTextCompositeCommand{"}{PD1}{U}{\334}% U+00DC
12265 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12266 \DeclareTextCompositeCommand{'}{PD1}{Y}{\335}% U+00DD
12267 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12268 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
12269 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12270 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
12271 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave

12272 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
12273 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12274 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
12275 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12276 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
12277 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12278 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
12279 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12280 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
12281 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12282 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
12283 % U+00E6 LATIN SMALL LETTER AE; ae
12284 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
12285 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12286 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
12287 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12288 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
12289 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12290 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
12291 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12292 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
12293 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12294 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
12295 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12296 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
12297 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
12298 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12299 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
12300 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
12301 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12302 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12303 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12304 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12305 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12306 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12307 % U+00F0 LATIN SMALL LETTER ETH; eth
12308 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
12309 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12310 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
12311 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12312 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
12313 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12314 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
12315 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12316 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
12317 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
12318 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
12319 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
12320 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
12321 % U+00F7 DIVISION SIGN; divide
12322 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
12323 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
12324 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
12325 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
12326 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
12327 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
12328 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA

```

12329 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
12330 \DeclareTextCompositeCommand{\`}{PD1}{u}{\373}% U+00FB
12331 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
12332 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
12333 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
12334 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
12335 % U+00FE LATIN SMALL LETTER THORN; thorn
12336 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
12337 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
12338 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
12339 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

```

Glyphs that consist of several characters.

```

12340 \DeclareTextCommand{\SS}{PD1}{SS}
12341 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

```

Aliases (german.sty)

```

12342 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
12343 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
12344 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
12345 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
12346 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
12347 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
12348 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
12349 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

```

Aliases (math names)

```

12350 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
12351 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
12352 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
12353 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
12354 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
12355 \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;

```

12356 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
12357 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
12358 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
12359 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
12360 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
12361 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
12362 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
12363 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
12364 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
12365 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
12366 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
12367 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
12368 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
12369 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot

```

```

12370 \end{pdlenc}

```

50.2 PU encoding

```

12371 \newcommand{puenc}
12372 \DeclareFontEncoding{PU}{}{}

```

50.2.1 NFSS2 accents

```

12373 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
12374 \DeclareTextCommand{\'}{PU}[1]{\#1\83\000}% U+0300

```

```

12375 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
12376 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
12377 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
12378 \DeclareTextCommand{\~}{PU}[1]{#1\83\002}% U+0302
12379 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
12380 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
12381 % U+0304 COMBINING MACRON; macroncmb
12382 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
12383 % U+0306 COMBINING BREVE; brevecmb
12384 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
12385 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
12386 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
12387 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
12388 % U+0308 COMBINING DIAERESIS; dieresiscmb
12389 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
12390 % U+030A COMBINING RING ABOVE; ringcmb
12391 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
12392 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
12393 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
12394 % U+030C COMBINING CARON; caroncmb
12395 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
12396 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
12397 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
12398 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
12399 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
12400 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
12401 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
12402 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
12403 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
12404 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
12405 % U+0327 COMBINING CEDILLA; cedillacmb
12406 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
12407 % U+0328 COMBINING OGONEK; ogonekcmb
12408 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
12409 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
12410 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
12411 % U+20DD COMBINING ENCLOSING CIRCLE
12412 \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.
12413 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textasciigrave}
12414 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
12415 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}
12416 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
12417 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
12418 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
12419 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
12420 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
12421 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
12422 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
12423 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
12424 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
12425 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
12426 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
12427 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
12428 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
12429 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}

```

```

12430 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
12431 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
12432 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textasciigrave}
12433 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
12434 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}
12435 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
12436 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
12437 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
12438 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
12439 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
12440 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
12441 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
12442 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
12443 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
12444 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
12445 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
12446 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
12447 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
12448 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
12449 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
12450 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

12451 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
12452 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
12453 \DeclareTextCommand{\capitalgrave}{PU}[1]{\'{#1}}
12454 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
12455 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
12456 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
12457 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}
12458 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
12459 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
12460 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
12461 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
12462 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
12463 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.\{#1}}
12464 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
12465 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

12466 % U+0009 (CHARACTER TABULATION)
12467 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
12468 % U+000A (LINE FEED)
12469 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
12470 % U+000D (CARRIAGE RETURN)
12471 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

12472 % U+0022 QUOTATION MARK; quotedbl
12473 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
12474 % U+0023 NUMBER SIGN; numbersign
12475 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
12476 % U+0024 DOLLAR SIGN; dollar
12477 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
12478 % U+0025 PERCENT SIGN; percent
12479 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025

```

12480 % U+0026 AMPERSAND; ampersand
 12481 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
 12482 % U+0027 APOSTROPHE; quotesingle
 12483 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
 12484 % U+0028 LEFT PARENTHESIS; parenleft
 12485 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
 12486 % U+0029 RIGHT PARENTHESIS; parenright
 12487 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
 12488 % U+002A ASTERISK; asterisk
 12489 \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
 12490 % U+003C LESS-THAN SIGN; less
 12491 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 12492 % U+003E GREATER-THAN SIGN; greater
 12493 \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
 12494 % U+005C REVERSE SOLIDUS; backslash
 12495 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 12496 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12497 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 12498 % U+005F LOW LINE; underscore
 12499 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 12500 % U+0060 GRAVE ACCENT; grave
 12501 \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
 12502 % U+0069 LATIN SMALL LETTER I; i
 12503 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
 12504 \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
 12505 % U+007B LEFT CURLY BRACKET; braceleft
 12506 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 12507 % U+007C VERTICAL LINE; *bar, verticalbar

12508 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 12509 % U+007D RIGHT CURLY BRACKET; braceright
 12510 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 12511 % U+007E TILDE; asciitilde
 12512 \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
 12513 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 12514 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 12515 % U+00A2 CENT SIGN; cent
 12516 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 12517 % U+00A3 POUND SIGN; sterling
 12518 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 12519 % U+00A4 CURRENCY SIGN; currency
 12520 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 12521 % U+00A5 YEN SIGN; yen
 12522 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 12523 % U+00A6 BROKEN BAR; brokenbar
 12524 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 12525 % U+00A7 SECTION SIGN; section
 12526 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 12527 % U+00A8 DIAERESIS; dieresis
 12528 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 12529 % U+00A9 COPYRIGHT SIGN; copyright
 12530 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 12531 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 12532 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 12533 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 12534 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 12535 % U+00AC NOT SIGN; logicalnot
 12536 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 12537 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 12538 % U+00AE REGISTERED SIGN; registered
 12539 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 12540 % U+00AF MACRON; *macron, overscore
 12541 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 12542 % U+00B0 DEGREE SIGN; degree
 12543 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 12544 % U+00B1 PLUS-MINUS SIGN; plusminus
 12545 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 12546 % U+00B2 SUPERSCRIFT TWO; twosuperior
 12547 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 12548 % U+00B3 SUPERSCRIFT THREE; threesuperior
 12549 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 12550 % U+00B4 ACUTE ACCENT; acute
 12551 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 12552 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 12553 % U+00B5 MICRO SIGN; mu, mu1
 12554 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 12555 % U+00B6 PILCROW SIGN; paragraph
 12556 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 12557 % U+00B7 MIDDLE DOT; middot, *periodcentered
 12558 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 12559 % U+00B8 CEDILLA; cedilla

12560 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
12561 % U+00B9 SUPERSCRIPT ONE; onesuperior
12562 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
12563 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
12564 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
12565 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
12566 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
12567 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
12568 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
12569 % U+00BD VULGAR FRACTION ONE HALF; onehalf
12570 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
12571 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
12572 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
12573 % U+00BF INVERTED QUESTION MARK; questiondown
12574 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
12575 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
12576 \DeclareTextCompositeCommand{`}{PU}{A}{\80\300}% U+00C0
12577 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
12578 \DeclareTextCompositeCommand{'}{PU}{A}{\80\301}% U+00C1
12579 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12580 \DeclareTextCompositeCommand{^}{PU}{A}{\80\302}% U+00C2
12581 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
12582 \DeclareTextCompositeCommand{~}{PU}{A}{\80\303}% U+00C3
12583 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
12584 \DeclareTextCompositeCommand{"}{PU}{A}{\80\304}% U+00C4
12585 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12586 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
12587 % U+00C6 LATIN CAPITAL LETTER AE; AE
12588 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
12589 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12590 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
12591 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12592 \DeclareTextCompositeCommand{`}{PU}{E}{\80\310}% U+00C8
12593 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12594 \DeclareTextCompositeCommand{'}{PU}{E}{\80\311}% U+00C9
12595 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12596 \DeclareTextCompositeCommand{^}{PU}{E}{\80\312}% U+00CA
12597 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12598 \DeclareTextCompositeCommand{"}{PU}{E}{\80\313}% U+00CB
12599 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12600 \DeclareTextCompositeCommand{`}{PU}{I}{\80\314}% U+00CC
12601 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12602 \DeclareTextCompositeCommand{'}{PU}{I}{\80\315}% U+00CD
12603 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12604 \DeclareTextCompositeCommand{^}{PU}{I}{\80\316}% U+00CE
12605 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12606 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
12607 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12608 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
12609 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12610 \DeclareTextCompositeCommand{~}{PU}{N}{\80\321}% U+00D1
12611 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12612 \DeclareTextCompositeCommand{`}{PU}{O}{\80\322}% U+00D2
12613 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12614 \DeclareTextCompositeCommand{'}{PU}{O}{\80\323}% U+00D3
12615 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12616 \DeclareTextCompositeCommand{^}{PU}{O}{\80\324}% U+00D4

12617 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12618 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
12619 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12620 \DeclareTextCompositeCommand{\\"}{PU}{O}{\80\326}% U+00D6
12621 % U+00D7 MULTIPLICATION SIGN; multiply
12622 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
12623 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12624 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
12625 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12626 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
12627 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12628 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
12629 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12630 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
12631 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12632 \DeclareTextCompositeCommand{\\"}{PU}{U}{\80\334}% U+00DC
12633 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12634 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
12635 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12636 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
12637 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12638 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
12639 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12640 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
12641 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12642 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
12643 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12644 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
12645 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12646 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
12647 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12648 \DeclareTextCompositeCommand{\\"}{PU}{a}{\80\344}% U+00E4
12649 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12650 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
12651 % U+00E6 LATIN SMALL LETTER AE; ae
12652 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
12653 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12654 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
12655 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12656 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
12657 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12658 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
12659 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12660 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
12661 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12662 \DeclareTextCompositeCommand{\\"}{PU}{e}{\80\353}% U+00EB
12663 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12664 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
12665 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
12666 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12667 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
12668 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
12669 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12670 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12671 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12672 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12673 \DeclareTextCompositeCommand{\\"}{PU}{i}{\80\357}% U+00EF

12674 \DeclareTextCompositeCommand{"}{PU}{i}{\80\357}% U+00EF
 12675 % U+00F0 LATIN SMALL LETTER ETH; eth
 12676 \DeclareTextCommand{dh}{PU}{\80\360}% U+00F0
 12677 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
 12678 \DeclareTextCompositeCommand{~}{PU}{n}{\80\361}% U+00F1
 12679 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
 12680 \DeclareTextCompositeCommand{'}{PU}{o}{\80\362}% U+00F2
 12681 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
 12682 \DeclareTextCompositeCommand{'}{PU}{o}{\80\363}% U+00F3
 12683 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
 12684 \DeclareTextCompositeCommand{^}{PU}{o}{\80\364}% U+00F4
 12685 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
 12686 \DeclareTextCompositeCommand{~}{PU}{o}{\80\365}% U+00F5
 12687 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 12688 \DeclareTextCompositeCommand{"}{PU}{o}{\80\366}% U+00F6
 12689 % U+00F7 DIVISION SIGN; divide
 12690 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 12691 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 12692 \DeclareTextCommand{o}{PU}{\80\370}% U+00F8
 12693 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 12694 \DeclareTextCompositeCommand{'}{PU}{u}{\80\371}% U+00F9
 12695 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 12696 \DeclareTextCompositeCommand{'}{PU}{u}{\80\372}% U+00FA
 12697 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 12698 \DeclareTextCompositeCommand{^}{PU}{u}{\80\373}% U+00FB
 12699 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 12700 \DeclareTextCompositeCommand{"}{PU}{u}{\80\374}% U+00FC
 12701 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 12702 \DeclareTextCompositeCommand{'}{PU}{y}{\80\375}% U+00FD
 12703 % U+00FE LATIN SMALL LETTER THORN; thorn
 12704 \DeclareTextCommand{th}{PU}{\80\376}% U+00FE
 12705 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 12706 \DeclareTextCompositeCommand{"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

12707 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 12708 \DeclareTextCompositeCommand{=}{PU}{A}{\81\000}% U+0100
 12709 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 12710 \DeclareTextCompositeCommand{=}{PU}{a}{\81\001}% U+0101
 12711 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 12712 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 12713 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 12714 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 12715 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 12716 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 12717 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 12718 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 12719 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 12720 \DeclareTextCompositeCommand{'}{PU}{C}{\81\006}% U+0106
 12721 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 12722 \DeclareTextCompositeCommand{'}{PU}{c}{\81\007}% U+0107
 12723 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 12724 \DeclareTextCompositeCommand{^}{PU}{C}{\81\010}% U+0108
 12725 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 12726 \DeclareTextCompositeCommand{^}{PU}{c}{\81\011}% U+0109
 12727 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent

12728 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
12729 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
12730 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
12731 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
12732 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
12733 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
12734 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
12735 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
12736 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
12737 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
12738 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
12739 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
12740 \DeclareTextCommand{DJ}{PU}{\81\020}% U+0110
12741 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
12742 \DeclareTextCommand{dj}{PU}{\81\021}% U+0111
12743 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
12744 \DeclareTextCompositeCommand{=}{PU}{E}{\81\022}% U+0112
12745 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
12746 \DeclareTextCompositeCommand{=}{PU}{e}{\81\023}% U+0113
12747 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
12748 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
12749 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
12750 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
12751 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
12752 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
12753 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
12754 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
12755 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
12756 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
12757 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
12758 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
12759 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
12760 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
12761 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
12762 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
12763 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
12764 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
12765 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
12766 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
12767 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
12768 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
12769 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
12770 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
12771 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
12772 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
12773 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
12774 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
12775 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
12776 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
12777 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
12778 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
12779 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
12780 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
12781 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
12782 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
12783 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
12784 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126

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12785 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
12786 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
12787 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
12788 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
12789 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
12790 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
12791 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
12792 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
12793 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
12794 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
12795 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
12796 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
12797 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
12798 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
12799 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
12800 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
12801 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
12802 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
12803 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
12804 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
12805 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
12806 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
12807 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
12808 \DeclareTextCompositeCommand{.}{PU}{I}{\81\060}% U+0130
12809 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
12810 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
12811 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
12812 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
12813 % U+0133 LATIN SMALL LIGATURE IJ; ij
12814 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
12815 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
12816 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
12817 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
12818 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
12819 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
12820 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
12821 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
12822 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
12823 \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 chosen `\textkra`.

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12824 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
12825 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
12826 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
12827 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
12828 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
12829 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
12830 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
12831 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
12832 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
12833 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
12834 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
12835 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
12836 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
12837 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E

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There seems to be no variants of letters ‘L’ and ‘I’ with a dot above (reasonable). Therefore the \. accent is reused instead of making a separate accent macro \textmiddledot.

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12838 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
12839 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
12840 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
12841 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
12842 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
12843 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
12844 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
12845 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
12846 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
12847 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
12848 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
12849 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
12850 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
12851 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
12852 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
12853 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
12854 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
12855 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
12856 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
12857 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
12858 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
12859 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
12860 % U+014A LATIN CAPITAL LETTER ENG; Eng
12861 \DeclareTextCommand{\ng}{PU}{\81\112}% U+014A
12862 % U+014B LATIN SMALL LETTER ENG; eng
12863 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
12864 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
12865 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
12866 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
12867 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
12868 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
12869 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
12870 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
12871 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
12872 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
12873 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
12874 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
12875 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
12876 % U+0152 LATIN CAPITAL LIGATURE OE; OE
12877 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
12878 % U+0153 LATIN SMALL LIGATURE OE; oe
12879 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
12880 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
12881 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
12882 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
12883 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
12884 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
12885 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
12886 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
12887 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
12888 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
12889 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
12890 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
12891 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
12892 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute

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12893 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
12894 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
12895 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
12896 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
12897 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
12898 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
12899 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
12900 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
12901 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
12902 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
12903 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
12904 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
12905 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
12906 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
12907 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
12908 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
12909 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
12910 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
12911 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
12912 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
12913 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
12914 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
12915 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
12916 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
12917 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
12918 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
12919 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
12920 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
12921 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
12922 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
12923 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
12924 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
12925 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
12926 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
12927 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
12928 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
12929 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
12930 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
12931 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
12932 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
12933 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
12934 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
12935 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
12936 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
12937 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
12938 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
12939 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
12940 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
12941 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
12942 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
12943 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
12944 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
12945 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
12946 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
12947 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
12948 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
12949 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176

12950 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 12951 \DeclareTextCompositeCommand{\`}{PU}{y}{\81\167}% U+0177
 12952 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 12953 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 12954 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 12955 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 12956 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 12957 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 12958 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 12959 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 12960 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 12961 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 12962 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 12963 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 12964 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 12965 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 12966 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 12967 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

12968 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 12969 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 12970 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 12971 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 12972 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 12973 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 12974 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 12975 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 12976 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 12977 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 12978 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 12979 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 12980 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 12981 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 12982 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 12983 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 12984 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 12985 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 12986 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 12987 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 12988 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 12989 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 12990 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 12991 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 12992 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 12993 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 12994 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 12995 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 12996 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 12997 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
 12998 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 12999 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 13000 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 13001 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 13002 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 13003 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
 13004 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0

13005 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
13006 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
13007 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
13008 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
13009 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
13010 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
13011 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\370}% U+01F8
13012 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
13013 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\371}% U+01F9
13014 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
13015 \DeclareTextCompositeCommand{\'}{PU}{AE}{\81\374}% U+01FC
13016 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
13017 \DeclareTextCompositeCommand{\'}{PU}{ae}{\81\375}% U+01FD
13018 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacut
13019 \DeclareTextCompositeCommand{\'}{PU}{O}{\81\376}% U+01FE
13020 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacut
13021 \DeclareTextCompositeCommand{\'}{PU}{o}{\81\377}% U+01FF
13022 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
13023 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
13024 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
13025 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
13026 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
13027 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
13028 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
13029 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
13030 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
13031 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
13032 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
13033 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
13034 \DeclareTextCompositeCommand{\G}{PU}{j}{\82\011}% U+0209
13035 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
13036 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
13037 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
13038 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
13039 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
13040 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
13041 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
13042 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
13043 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
13044 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
13045 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
13046 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
13047 % U+021E LATIN CAPITAL LETTER H WITH CARON
13048 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
13049 % U+021F LATIN SMALL LETTER H WITH CARON
13050 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
13051 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
13052 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
13053 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
13054 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
13055 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
13056 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
13057 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
13058 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
13059 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
13060 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
13061 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE

13062 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 13063 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 13064 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 13065 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 13066 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 13067 % U+0237 LATIN SMALL LETTER DOTLESS J
 13068 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

13069 % U+02C7 CARON; caron
 13070 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 13071 % U+02D8 BREVE; breve
 13072 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 13073 % U+02D9 DOT ABOVE; dotaccent
 13074 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 13075 % U+02DA RING ABOVE; ring
 13076 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 13077 % U+02DB OGONEK; ogonek
 13078 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 13079 % U+02DC SMALL TILDE; ilde, *tilde
 13080 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 13081 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 13082 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 13083 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 13084 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 13085 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 13086 % U+02F7 MODIFIER LETTER LOW TILDE
 13087 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

13088 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13089 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 13090 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13091 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 13092 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 13093 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 13094 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13095 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 13096 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13097 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

13098 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 13099 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 13100 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 13101 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 13102 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphanos
 13103 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 13104 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 13105 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 13106 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 13107 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 13108 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 13109 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 13110 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 13111 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 13112 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos

13113 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
13114 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
13115 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
13116 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; Iotadieresis
13117 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
13118 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
13119 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
13120 % U+0392 GREEK CAPITAL LETTER BETA; Beta
13121 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
13122 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
13123 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
13124 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
13125 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
13126 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
13127 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
13128 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
13129 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
13130 % U+0397 GREEK CAPITAL LETTER ETA; Eta
13131 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
13132 % U+0398 GREEK CAPITAL LETTER THETA; Theta
13133 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
13134 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
13135 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
13136 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
13137 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
13138 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
13139 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
13140 % U+039C GREEK CAPITAL LETTER MU; Mu
13141 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
13142 % U+039D GREEK CAPITAL LETTER NU; Nu
13143 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
13144 % U+039E GREEK CAPITAL LETTER XI; Xi
13145 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
13146 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
13147 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
13148 % U+03A0 GREEK CAPITAL LETTER PI; Pi
13149 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
13150 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
13151 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
13152 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
13153 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
13154 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
13155 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
13156 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
13157 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
13158 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
13159 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
13160 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
13161 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
13162 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
13163 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
13164 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
13165 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
13166 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
13167 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
13168 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
13169 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilondieresis

13170 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
13171 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
13172 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
13173 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
13174 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
13175 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
13176 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
13177 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
13178 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
13179 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilondieresis
13180 \DeclareTextCompositeCommand{"}{PU}{\textupsilonacute}{\83\260}% U+03B0
13181 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
13182 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
13183 % U+03B2 GREEK SMALL LETTER BETA; beta
13184 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
13185 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
13186 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
13187 % U+03B4 GREEK SMALL LETTER DELTA; delta
13188 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
13189 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
13190 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
13191 % U+03B6 GREEK SMALL LETTER ZETA; zeta
13192 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
13193 % U+03B7 GREEK SMALL LETTER ETA; eta
13194 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
13195 % U+03B8 GREEK SMALL LETTER THETA; theta
13196 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
13197 % U+03B9 GREEK SMALL LETTER IOTA; iota
13198 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
13199 % U+03BA GREEK SMALL LETTER KAPPA; kappa
13200 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
13201 % U+03BB GREEK SMALL LETTER LAMDA; lambda
13202 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
13203 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
13204 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
13205 % U+03BD GREEK SMALL LETTER NU; nu
13206 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
13207 % U+03BE GREEK SMALL LETTER XI; xi
13208 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
13209 % U+03BF GREEK SMALL LETTER OMICRON; omicron
13210 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
13211 % U+03C0 GREEK SMALL LETTER PI; pi
13212 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
13213 % U+03C1 GREEK SMALL LETTER RHO; rho
13214 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
13215 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
13216 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
13217 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
13218 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
13219 % U+03C4 GREEK SMALL LETTER TAU; tau
13220 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
13221 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
13222 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
13223 % U+03C6 GREEK SMALL LETTER PHI; phi
13224 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
13225 % U+03C7 GREEK SMALL LETTER CHI; chi
13226 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7

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13227 % U+03C8 GREEK SMALL LETTER PSI; psi
13228 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
13229 % U+03C9 GREEK SMALL LETTER OMEGA; omega
13230 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
13231 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
13232 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
13233 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; upsilondieresis
13234 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
13235 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
13236 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
13237 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
13238 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
13239 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
13240 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
13241 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
13242 % U+03DA GREEK LETTER STIGMA; Stigmagreek
13243 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
13244 % U+03DB GREEK SMALL LETTER STIGMA
13245 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
13246 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
13247 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
13248 % U+03DD GREEK SMALL LETTER DIGAMMA
13249 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
13250 % U+03DE GREEK LETTER KOPPA; Koppagreek
13251 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
13252 % U+03DF GREEK SMALL LETTER KOPPA
13253 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
13254 % U+03E0 GREEK LETTER SAMPI; Sampigreek
13255 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
13256 % U+03E1 GREEK SMALL LETTER SAMPI
13257 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

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50.2.9 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

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13258 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
13259 \DeclareTextCompositeCommand{'}{PU}{\CYRE}{\84\000}% U+0400
13260 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
13261 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
13262 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% ???
13263 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
13264 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
13265 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
13266 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
13267 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
13268 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
13269 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
13270 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
13271 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrillic, *afii10055
13272 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
13273 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
13274 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
13275 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
13276 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
13277 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
13278 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
13279 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409

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13280 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
13281 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
13282 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
13283 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
13284 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
13285 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
13286 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
13287 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
13288 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
13289 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
13290 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
13291 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
13292 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
13293 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
13294 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
13295 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
13296 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
13297 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
13298 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
13299 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
13300 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
13301 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
13302 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
13303 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
13304 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
13305 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
13306 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
13307 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
13308 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
13309 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
13310 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
13311 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
13312 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
13313 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
13314 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
13315 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
13316 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
13317 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
13318 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
13319 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
13320 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
13321 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
13322 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
13323 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
13324 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
13325 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
13326 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
13327 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
13328 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
13329 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
13330 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
13331 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
13332 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
13333 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
13334 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
13335 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
13336 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039

13337 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
13338 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
13339 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
13340 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
13341 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
13342 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
13343 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
13344 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
13345 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
13346 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
13347 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
13348 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
13349 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
13350 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
13351 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
13352 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
13353 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
13354 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
13355 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
13356 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
13357 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
13358 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
13359 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
13360 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
13361 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
13362 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
13363 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
13364 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
13365 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
13366 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
13367 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
13368 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
13369 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
13370 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
13371 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
13372 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
13373 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
13374 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, icyrillic
13375 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
13376 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
13377 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
13378 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
13379 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
13380 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
13381 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
13382 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
13383 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
13384 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
13385 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
13386 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
13387 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
13388 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
13389 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
13390 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
13391 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
13392 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
13393 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic

13394 \DeclareTextCommand{\cyrS}{PU}{\84\101}% U+0441
13395 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
13396 \DeclareTextCommand{\cyrT}{PU}{\84\102}% U+0442
13397 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
13398 \DeclareTextCommand{\cyrU}{PU}{\84\103}% U+0443
13399 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
13400 \DeclareTextCommand{\cyrF}{PU}{\84\104}% U+0444
13401 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
13402 \DeclareTextCommand{\cyrH}{PU}{\84\105}% U+0445
13403 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
13404 \DeclareTextCommand{\cyrC}{PU}{\84\106}% U+0446
13405 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
13406 \DeclareTextCommand{\cyrCh}{PU}{\84\107}% U+0447
13407 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
13408 \DeclareTextCommand{\cyrSh}{PU}{\84\110}% U+0448
13409 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
13410 \DeclareTextCommand{\cyrShch}{PU}{\84\111}% U+0449
13411 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
13412 \DeclareTextCommand{\cyrHrdSn}{PU}{\84\112}% U+044A
13413 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
13414 \DeclareTextCommand{\cyrErY}{PU}{\84\113}% U+044B
13415 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
13416 \DeclareTextCommand{\cyrSftSn}{PU}{\84\114}% U+044C
13417 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
13418 \DeclareTextCommand{\cyrErEv}{PU}{\84\115}% U+044D
13419 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
13420 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E
13421 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
13422 \DeclareTextCommand{\cyrYa}{PU}{\84\117}% U+044F
13423 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
13424 \DeclareTextCompositeCommand{\'}{PU}{\cyrE}{\84\120}% U+0450
13425 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
13426 \DeclareTextCommand{\cyrYo}{PU}{\84\121}% U+0451
13427 \DeclareTextCompositeCommand{\"}{PU}{\cyrE}{\84\121}% U+0451
13428 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
13429 \DeclareTextCommand{\cyrDje}{PU}{\84\122}% U+0452
13430 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
13431 \DeclareTextCompositeCommand{\'}{PU}{\cyrG}{\84\123}% U+0453
13432 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
13433 \DeclareTextCommand{\cyrIe}{PU}{\84\124}% U+0454
13434 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
13435 \DeclareTextCommand{\cyrDze}{PU}{\84\125}% U+0455
13436 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
13437 \DeclareTextCommand{\cyrIi}{PU}{\84\126}% U+0456
13438 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
13439 \DeclareTextCommand{\cyrYi}{PU}{\84\127}% U+0457
13440 \DeclareTextCompositeCommand{\"}{PU}{\cyrIi}{\84\127}% U+0457
13441 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
13442 \DeclareTextCommand{\cyrJe}{PU}{\84\130}% U+0458
13443 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
13444 \DeclareTextCommand{\cyrLje}{PU}{\84\131}% U+0459
13445 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
13446 \DeclareTextCommand{\cyrNje}{PU}{\84\132}% U+045A
13447 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
13448 \DeclareTextCommand{\cyrTshe}{PU}{\84\133}% U+045B
13449 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
13450 \DeclareTextCompositeCommand{\'}{PU}{\cyrK}{\84\134}% U+045C

13451 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
13452 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
13453 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
13454 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
13455 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
13456 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
13457 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
13458 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
13459 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
13460 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
13461 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
13462 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
13463 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
13464 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
13465 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
13466 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
13467 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
13468 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
13469 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
13470 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
13471 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
13472 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
13473 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
13474 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslitleiotifiedcyrillic
13475 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
13476 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslitleiotifiedcyrillic
13477 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
13478 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
13479 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
13480 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
13481 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
13482 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotifiedcyrillic
13483 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
13484 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
13485 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
13486 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
13487 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
13488 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
13489 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
13490 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
13491 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
13492 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
13493 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
13494 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
13495 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
13496 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
13497 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
13498 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
13499 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
13500 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
13501 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
13502 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
13503 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
13504 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
13505 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
13506 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
13507 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478

13508 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 13509 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 13510 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
 13511 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 13512 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 13513 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 13514 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
 13515 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 13516 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
 13517 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 13518 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 13519 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 13520 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 13521 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 13522 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 13523 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 13524 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 13525 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 13526 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 13527 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrillicmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrillicmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrillicmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrillicmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 13528 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 13529 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 13530 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 13531 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 13532 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 13533 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 13534 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 13535 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 13536 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 13537 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 13538 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 13539 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 13540 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 13541 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 13542 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 13543 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 13544 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 13545 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 13546 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 13547 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 13548 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 13549 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 13550 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 13551 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 13552 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 13553 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496

13554 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
13555 \DeclareTextCommand{\cyrzhdesc}{PU}{\84\227}% U+0497
13556 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
13557 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
13558 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
13559 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
13560 \DeclareTextCommand{\cyrzdesc}{PU}{\84\231}% U+0499
13561 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
13562 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
13563 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
13564 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
13565 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
13566 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kavertikalstrokecyrillic
13567 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
13568 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kavertikalstrokecyrillic
13569 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
13570 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
13571 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
13572 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
13573 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
13574 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
13575 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
13576 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
13577 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
13578 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
13579 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
13580 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
13581 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
13582 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
13583 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
13584 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
13585 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
13586 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
13587 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
13588 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
13589 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
13590 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
13591 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
13592 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
13593 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
13594 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
13595 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
13596 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
13597 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
13598 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
13599 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
13600 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
13601 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
13602 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
13603 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
13604 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
13605 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
13606 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
13607 \DeclareTextCommand{\cyr}{PU}{\84\257}% U+04AF
13608 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
13609 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
13610 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic

13611 \DeclareTextCommand{\cyrhcrs}{PU}{\84\261}% U+04B1
13612 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
13613 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
13614 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
13615 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
13616 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
13617 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
13618 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
13619 \DeclareTextCommand{\cyrтетse}{PU}{\84\265}% U+04B5
13620 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
13621 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
13622 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
13623 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
13624 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Cheverticalstrokecyrillic
13625 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
13626 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; cheverticalstrokecyrillic
13627 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
13628 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
13629 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
13630 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
13631 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
13632 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
13633 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
13634 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
13635 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
13636 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
13637 \DeclareTextCommand{\CYRABCHDSC}{PU}{\84\276}% U+04BE
13638 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
13639 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
13640 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
13641 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
13642 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
13643 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
13644 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
13645 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
13646 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
13647 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
13648 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
13649 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
13650 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
13651 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
13652 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
13653 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
13654 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
13655 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
13656 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
13657 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
13658 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
13659 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
13660 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
13661 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
13662 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
13663 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
13664 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
13665 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
13666 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
13667 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE

\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA

13668 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
13669 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
13670 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
13671 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
13672 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
13673 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
13674 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
13675 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
13676 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
13677 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
13678 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
13679 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
13680 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevocyrillic
13681 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
13682 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevocyrillic
13683 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
13684 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
13685 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
13686 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
13687 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
13688 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiesiscyrillic
13689 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
13690 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiesiscyrillic
13691 \DeclareTextCompositeCommand{\U}{PU}{\cyrschwa}{\84\333}% U+04DB
13692 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
13693 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\334}% U+04DC
13694 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
13695 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\335}% U+04DD
13696 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
13697 \DeclareTextCompositeCommand{\U}{PU}{\CYRZ}{\84\336}% U+04DE
13698 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
13699 \DeclareTextCompositeCommand{\U}{PU}{\cyrz}{\84\337}% U+04DF
13700 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
13701 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
13702 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
13703 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
13704 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
13705 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\342}% U+04E2
13706 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
13707 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\343}% U+04E3
13708 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
13709 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\344}% U+04E4
13710 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
13711 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\345}% U+04E5
13712 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
13713 \DeclareTextCompositeCommand{\U}{PU}{\CYRO}{\84\346}% U+04E6
13714 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
13715 \DeclareTextCompositeCommand{\U}{PU}{\cyro}{\84\347}% U+04E7
13716 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
13717 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
13718 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
13719 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
13720 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
13721 \DeclareTextCompositeCommand{\U}{PU}{\CYROTLD}{\84\352}% U+04EA
13722 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
13723 \DeclareTextCompositeCommand{\U}{PU}{\cyrotld}{\84\353}% U+04EB

13724 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
 13725 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
 13726 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
 13727 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 13728 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 13729 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
 13730 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 13731 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
 13732 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 13733 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 13734 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 13735 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 13736 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 13737 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 13738 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 13739 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 13740 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 13741 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 13742 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 13743 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 13744 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 13745 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 13746 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 13747 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 13748 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
 13749 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 13750 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
 13751 \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
 13752 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 13753 \DeclareTextCommand{\CYRHhk}{PU}{\84\374}% U+04FC
 13754 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 13755 \DeclareTextCommand{\cyrhhk}{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

13756 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 13757 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

13758 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 13759 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 13760 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 13761 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 13762 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 13763 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 13764 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 13765 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 13766 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 13767 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 13768 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 13769 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 13770 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow

13771 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
13772 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
13773 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
13774 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
13775 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
13776 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
13777 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
13778 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
13779 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
13780 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
13781 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
13782 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
13783 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
13784 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
13785 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
13786 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
13787 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
13788 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
13789 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
13790 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
13791 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
13792 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
13793 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
13794 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
13795 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
13796 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
13797 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
13798 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
13799 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
13800 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
13801 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
13802 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
13803 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
13804 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
13805 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
13806 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
13807 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
13808 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
13809 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
13810 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
13811 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
13812 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
13813 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
13814 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
13815 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
13816 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
13817 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
13818 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
13819 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
13820 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
13821 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
13822 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
13823 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
13824 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
13825 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
13826 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
13827 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54

13828 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
13829 \DeclareTextCompositeCommand{'}{PU}{p}{\9036\125}% U+1E55
13830 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
13831 \DeclareTextCompositeCommand{.}{PU}{P}{\9036\126}% U+1E56
13832 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
13833 \DeclareTextCompositeCommand{.}{PU}{p}{\9036\127}% U+1E57
13834 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
13835 \DeclareTextCompositeCommand{.}{PU}{R}{\9036\130}% U+1E58
13836 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
13837 \DeclareTextCompositeCommand{.}{PU}{r}{\9036\131}% U+1E59
13838 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
13839 \DeclareTextCompositeCommand{b}{PU}{R}{\9036\136}% U+1E5E
13840 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
13841 \DeclareTextCompositeCommand{b}{PU}{r}{\9036\137}% U+1E5F
13842 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
13843 \DeclareTextCompositeCommand{.}{PU}{S}{\9036\140}% U+1E60
13844 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
13845 \DeclareTextCompositeCommand{.}{PU}{s}{\9036\141}% U+1E61
13846 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
13847 \DeclareTextCompositeCommand{b}{PU}{T}{\9036\156}% U+1E6E
13848 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
13849 \DeclareTextCompositeCommand{b}{PU}{t}{\9036\157}% U+1E6F
13850 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
13851 \DeclareTextCompositeCommand{~}{PU}{V}{\9036\174}% U+1E7C
13852 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
13853 \DeclareTextCompositeCommand{~}{PU}{v}{\9036\175}% U+1E7D
13854 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
13855 \DeclareTextCompositeCommand{'}{PU}{W}{\9036\200}% U+1E80
13856 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
13857 \DeclareTextCompositeCommand{'}{PU}{w}{\9036\201}% U+1E81
13858 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
13859 \DeclareTextCompositeCommand{'}{PU}{W}{\9036\202}% U+1E82
13860 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
13861 \DeclareTextCompositeCommand{'}{PU}{w}{\9036\203}% U+1E83
13862 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
13863 \DeclareTextCompositeCommand{"}{PU}{W}{\9036\204}% U+1E84
13864 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
13865 \DeclareTextCompositeCommand{"}{PU}{w}{\9036\205}% U+1E85
13866 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
13867 \DeclareTextCompositeCommand{.}{PU}{W}{\9036\206}% U+1E86
13868 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
13869 \DeclareTextCompositeCommand{.}{PU}{w}{\9036\207}% U+1E87
13870 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
13871 \DeclareTextCompositeCommand{.}{PU}{X}{\9036\212}% U+1E8A
13872 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
13873 \DeclareTextCompositeCommand{.}{PU}{x}{\9036\213}% U+1E8B
13874 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
13875 \DeclareTextCompositeCommand{"}{PU}{X}{\9036\214}% U+1E8C
13876 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
13877 \DeclareTextCompositeCommand{"}{PU}{x}{\9036\215}% U+1E8D
13878 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
13879 \DeclareTextCompositeCommand{.}{PU}{Y}{\9036\216}% U+1E8E
13880 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
13881 \DeclareTextCompositeCommand{.}{PU}{y}{\9036\217}% U+1E8F
13882 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
13883 \DeclareTextCompositeCommand{^}{PU}{Z}{\9036\220}% U+1E90
13884 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex

13885 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
 13886 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 13887 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 13888 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 13889 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 13890 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 13891 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 13892 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 13893 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
 13894 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 13895 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 13896 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 13897 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 13898 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotaccent
 13899 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 13900 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 13901 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 13902 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 13903 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 13904 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 13905 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 13906 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 13907 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 13908 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 13909 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 13910 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 13911 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

13912 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 13913 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 13914 % U+2013 EN DASH; endash
 13915 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 13916 % U+2014 EM DASH; emdash
 13917 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 13918 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 13919 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 13920 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 13921 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 13922 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 13923 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 13924 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 13925 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 13926 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 13927 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 13928 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 13929 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 13930 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 13931 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 13932 % U+2020 DAGGER; dagger
 13933 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 13934 % U+2021 DOUBLE DAGGER; daggerdbl
 13935 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 13936 % U+2022 BULLET; bullet
 13937 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 13938 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13939 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026

13940 % U+2030 PER MILLE SIGN; perthousand
 13941 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 13942 % U+2031 PER TEN THOUSAND SIGN
 13943 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 13944 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 13945 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 13946 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 13947 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 13948 % U+203B REFERENCE MARK; referencemark
 13949 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 13950 % U+203D INTERROBANG
 13951 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 13952 % U+2044 FRACTION SLASH; fraction
 13953 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 13954 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 13955 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 13956 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 13957 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 13958 % U+2052 COMMERCIAL MINUS SIGN
 13959 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

13960 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 13961 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 13962 % U+2074 SUPERSCRIPT FOUR; foursuperior
 13963 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 13964 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 13965 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
 13966 % U+2076 SUPERSCRIPT SIX; sixsuperior
 13967 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 13968 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 13969 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 13970 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 13971 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 13972 % U+2079 SUPERSCRIPT NINE; ninesuperior
 13973 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 13974 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 13975 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 13976 % U+207B SUPERSCRIPT MINUS
 13977 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 13978 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 13979 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
 13980 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 13981 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 13982 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 13983 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 13984 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 13985 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 13986 % U+2080 SUBSCRIPT ZERO; zeroinferior
 13987 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 13988 % U+2081 SUBSCRIPT ONE; oneinferior
 13989 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 13990 % U+2082 SUBSCRIPT TWO; twoinferior
 13991 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 13992 % U+2083 SUBSCRIPT THREE; threeinferior
 13993 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 13994 % U+2084 SUBSCRIPT FOUR; fourinferior

13995 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 13996 % U+2085 SUBSCRIPT FIVE; fiveinferior
 13997 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 13998 % U+2086 SUBSCRIPT SIX; sixinferior
 13999 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 14000 % U+2087 SUBSCRIPT SEVEN; seveninferior
 14001 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 14002 % U+2088 SUBSCRIPT EIGHT; eightinferior
 14003 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 14004 % U+2089 SUBSCRIPT NINE; nineinferior
 14005 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 14006 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 14007 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 14008 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 14009 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

14010 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 14011 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 14012 % U+20A4 LIRA SIGN; afii08941, *lira
 14013 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 14014 % U+20A6 NAIRA SIGN
 14015 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 14016 % U+20A7 PESETA SIGN; peseta
 14017 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 14018 % U+20A9 WON SIGN; won
 14019 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 14020 % U+20AB DONG SIGN; dong
 14021 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 14022 % U+20AC EURO SIGN; *Euro, euro
 14023 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 14024 % U+20B1 PESO SIGN
 14025 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 14026 % U+20B2 GUARANI SIGN
 14027 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

14028 % U+2103 DEGREE CELSIUS; centigrade
 14029 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 14030 % U+2116 NUMERO SIGN; *afii61352, numero
 14031 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 14032 % U+2117 SOUND RECORDING COPYRIGHT
 14033 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 14034 % U+211E PRESCRIPTION TAKE; prescription
 14035 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 14036 % U+2120 SERVICE MARK
 14037 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 14038 % U+2122 TRADE MARK SIGN; trademark
 14039 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 14040 % U+2126 OHM SIGN; Ohm, Omega
 14041 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 14042 % U+2127 INVERTED OHM SIGN
 14043 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 14044 % U+212B ANGSTROM SIGN; angstrom
 14045 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 14046 % U+212E ESTIMATED SYMBOL; estimated
 14047 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E

14048 % U+2135 ALEF SYMBOL; aleph
14049 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

14050 % U+2190 LEFTWARDS ARROW; arrowleft
14051 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
14052 % U+2191 UPWARDS ARROW; arrowup
14053 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
14054 % U+2192 RIGHTWARDS ARROW; arrowright
14055 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
14056 % U+2193 DOWNWARDS ARROW; arrowdown
14057 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

14058 % U+2212 MINUS SIGN; minus
14059 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
14060 % U+221A SQUARE ROOT; radical
14061 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

14062 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
14063 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
14064 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
14065 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

14066 % U+2422 BLANK SYMBOL
14067 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
14068 % U+2423 OPEN BOX; blank
14069 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

14070 % U+2460 CIRCLED DIGIT ONE; onecircle
14071 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
14072 % U+2461 CIRCLED DIGIT TWO; twocircle
14073 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
14074 % U+2462 CIRCLED DIGIT THREE; threecircle
14075 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
14076 % U+2463 CIRCLED DIGIT FOUR; fourcircle
14077 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
14078 % U+2464 CIRCLED DIGIT FIVE; fivecircle
14079 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
14080 % U+2465 CIRCLED DIGIT SIX; sixcircle
14081 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
14082 % U+2466 CIRCLED DIGIT SEVEN; sevenscircle
14083 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
14084 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
14085 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
14086 % U+2468 CIRCLED DIGIT NINE; ninecircle
14087 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
14088 % U+2469 CIRCLED NUMBER TEN; tencircle
14089 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
14090 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
14091 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
14092 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
14093 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
14094 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle

14095 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
 14096 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
 14097 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
 14098 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
 14099 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
 14100 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
 14101 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
 14102 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
 14103 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
 14104 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
 14105 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
 14106 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
 14107 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
 14108 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 14109 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 14110 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 14111 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 14112 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 14113 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 14114 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 14115 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 14116 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 14117 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 14118 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 14119 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 14120 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 14121 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 14122 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 14123 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 14124 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 14125 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 14126 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 14127 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 14128 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 14129 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 14130 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 14131 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 14132 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 14133 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 14134 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 14135 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 14136 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 14137 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 14138 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 14139 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 14140 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 14141 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 14142 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 14143 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 14144 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 14145 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 14146 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 14147 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 14148 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 14149 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 14150 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 14151 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA

14152 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 14153 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 14154 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 14155 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 14156 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 14157 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 14158 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 14159 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 14160 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 14161 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 14162 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 14163 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 14164 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 14165 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 14166 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 14167 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 14168 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 14169 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 14170 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 14171 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 14172 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 14173 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 14174 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 14175 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 14176 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 14177 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 14178 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 14179 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 14180 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 14181 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 14182 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 14183 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 14184 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 14185 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 14186 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 14187 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 14188 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 14189 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 14190 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 14191 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 14192 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 14193 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 14194 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 14195 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 14196 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 14197 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 14198 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 14199 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 14200 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 14201 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 14202 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 14203 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 14204 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 14205 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 14206 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 14207 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 14208 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle

14209 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 14210 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 14211 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 14212 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 14213 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 14214 % U+24EA CIRCLED DIGIT ZERO
 14215 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

14216 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 14217 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 14218 % U+25EF LARGE CIRCLE; largecircle
 14219 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

14220 % U+266A EIGHTH NOTE; musicalnote
 14221 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 14222 % U+26AD MARRIAGE SYMBOL
 14223 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 14224 % U+26AE DIVORCE SYMBOL
 14225 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

14226 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 14227 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 14228 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 14229 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

14230 % U+FB01 LATIN SMALL LIGATURE FI; fi
 14231 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 14232 % U+FB02 LATIN SMALL LIGATURE FL; fl
 14233 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

14234 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

14235 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 14236 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 14237 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 14238 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 14239 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 14240 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 14241 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 14242 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

14243 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 14244 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
 14245 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
 14246 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
 14247 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}

14248 </puenc>

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```
14249 \langle *puvnc\rangle
14250 \DeclareTextCommand{\abreve}{PU}{\81\003}
14251 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
14252 \DeclareTextCommand{\dj}{PU}{\81\021}
14253 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
14254 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
14255 \DeclareTextCommand{\ohorn}{PU}{\81\241}
14256 \DeclareTextCommand{\uhorn}{PU}{\81\260}
14257 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
14258 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
14259 \DeclareTextCommand{\DJ}{PU}{\81\020}
14260 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
14261 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
14262 \DeclareTextCommand{\OHORN}{PU}{\81\240}
14263 \DeclareTextCommand{\UHORN}{PU}{\81\257}

14264 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
14265 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
14266 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
14267 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
14268 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
14269 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
14270 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
14271 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
14272 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
14273 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
14274 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
14275 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
14276 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
14277 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
14278 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
14279 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
14280 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
14281 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
14282 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
14283 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
14284 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
14285 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
14286 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
14287 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
14288 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
14289 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
14290 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
14291 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
14292 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
14293 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
14294 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
14295 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
14296 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
14297 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
14298 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
14299 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
14300 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
14301 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
14302 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
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14303 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
14304 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
14305 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
14306 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
14307 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
14308 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
14309 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
14310 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
14311 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
14312 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
14313 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
14314 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
14315 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
14316 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
14317 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
14318 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
14319 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
14320 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
14321 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
14322 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
14323 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
14324 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
14325 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
14326 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
14327 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
14328 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
14329 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}
14330 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
14331 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
14332 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
14333 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
14334 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
14335 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
14336 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
14337 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
14338 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
14339 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
14340 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
14341 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
14342 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
14343 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
14344 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
14345 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
14346 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
14347 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
14348 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
14349 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
14350 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
14351 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
14352 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
14353 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
14354 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
14355 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
14356 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
14357 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
14358 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
14359 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}

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14360 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
14361 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
14362 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
14363 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
14364 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
14365 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
14366 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
14367 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
14368 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
14369 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
14370 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
14371 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
14372 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}
14373 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
14374 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
14375 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
14376 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
14377 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
14378 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
14379 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
14380 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
14381 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
14382 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
14383 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
14384 </puvnenc>

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50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

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14385 <*puarenc>
14386 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LETTER HAMZA
14387 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LETTER ALEF WITH MADDA
14388 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LETTER ALEF WITH HAMZA
14389 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LETTER WAW WITH HAMZA
14390 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LETTER ALEF WITH HAMZA ABOVE
14391 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
14392 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
14393 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
14394 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
14395 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
14396 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LETTER THEH
14397 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LETTER JEEM
14398 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
14399 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
14400 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
14401 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
14402 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
14403 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
14404 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
14405 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LETTER SHEEN
14406 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
14407 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
14408 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
14409 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
14410 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
14411 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LETTER GHAIN

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14412 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
14413 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
14414 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
14415 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
14416 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
14417 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LETTER MEEM
14418 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
14419 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
14420 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afii57448;ARABIC LETTER WAW
14421 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afii57449;ARABIC LETTER ALEF MAKSURA
14422 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afii57450;ARABIC LETTER YEH

14423 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
14424 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN
14425 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
14426 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
14427 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afii57455;ARABIC DAMMA
14428 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afii57456;ARABIC KASRA
14429 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afii57457;ARABIC SHADDA
14430 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afii57458;ARABIC SUKUN

Farsi

14431 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afii57506;ARABIC LETTER PEH
14432 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afii57507;ARABIC LETTER TCHEH
14433 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afii57508;ARABIC LETTER JEH
14434 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afii????;FARSI LETTER KAF
14435 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afii57509;ARABIC LETTER GAF
14436 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afii????;FARSI LETTER YEH

14437 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
14438 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ
14439 </puarenc>

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14440 < *check>
14441 \typeout{}
14442 \begin{document}
14443 \end{document}
14444 </check>

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