

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#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.

Email: oberdiek@uni-freiburg.de.

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

6.1 Description of PDF strings

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

- They are surrounded by parentheses. The hexadecimal form is not supported.
- Like PostScript language strings they use the same escaping mechanism:

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <i>ddd</i>
- Strings are stored either in `PDFDocEncoding`, which is a superset of `ISOLatin1` and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

- The result should obey the rules of the PDF specification for strings.
- The string can safely processed by \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\textP\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 take the following item into account, that 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 found 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 a marker for the xspace support.
- \TeX silently removes the outermost 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 consist of the following tokens/catcodes:

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

After $\backslash\text{HyPsd@CheckCatcodes}$ 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 a 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.

```

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 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 inter-

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

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

```
627 \ifundefined{T@PD1}{\input{pd1enc.def}}{}
628 \DeclareFontFamily{PD1}{pdf}{}
629 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
630 \DeclareFontSubstitution{PD1}{pdf}{m}{n}
```

6.3.2 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.

```
631 \def\HyPsd@InitUnicode{%
632   \ifundefined{T@PU}{\input{puenc.def}}{}%
633   \DeclareFontFamily{PU}{pdf}{}%
634   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
635   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
636   \let\HyPsd@InitUnicode\relax
637 }
```

6.4 Additional user commands

6.4.1 \texorpdfstring

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

```
638 \def\texorpdfstring{%
639   \ifHy@pdfstring
640     \expandafter\@secondoftwo
641   \else
642     \expandafter\@firstoftwo
643   \fi
644 }
```

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`.

```
645 \ifundefined{pdfstringdefPreHook}{%
646   \let\pdfstringdefPreHook\empty
647 }{}
648 \ifundefined{pdfstringdefPostHook}{%
649   \let\pdfstringdefPostHook\gobble
650 }{}
```

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

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

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

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

```
651 \def\pdfstringdefDisableCommands{%
652   \begingroup
653     \makeatletter
654     \HyPsd@DisableCommands
655 }
```

`\HyPsd@DisableCommands`

```
656 \long\def\HyPsd@DisableCommands#1{%
657   \toks0=\expandafter{\pdfstringdefPreHook}%
658   \toks1={#1}%
659   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
660   \endgroup
661 }
```

`\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`.

```
662 \def\pdfstringdefWarn#1{%
663   \expandafter\noexpand\csname<>-string#1\endcsname
664 }
```

6.5 Help macros for expansion

6.5.1 Babel languages

```
665 \newif\ifHy@next
```

Nothing to do for english.

```
666 \@ifundefined{danish@sh@"@sel}{-}{-}%
667   \def\HyPsd@babel@danish{%
668     \declare@shorthand{danish}{|}{-}%
669     \declare@shorthand{danish}{~}{-}%
670   }%
671 }
672 \@ifundefined{dutch@sh@"@sel}{-}{-}%
673   \def\HyPsd@babel@dutch{%
```

```

674 \declare@shorthand{dutch}{"}{|}%
675 \declare@shorthand{dutch}{"}{|}%
676 }%
677 }
678 \@ifundefined{finnish@sh@sel}{|}{%
679 \def\HyPsd@babel@finnish{%
680 \declare@shorthand{finnish}{"}{|}%
681 }%
682 }
683 \@ifundefined{french@sh@sel}{|}{%
684 \def\HyPsd@babel@frenchb{%
685 \def\guill@spacing{ }%
686 }%
687 }
688 \@ifundefined{german@sh@sel}{|}{%
689 \def\HyPsd@babel@german{%
690 \declare@shorthand{german}{f}{f}%
691 \declare@shorthand{german}{"}{|}%
692 \declare@shorthand{german}{"}{|}%
693 }%
694 }
695 \@ifundefined{macedonian@sh@sel}{|}{%
696 \def\HyPsd@babel@macedonian{%
697 \declare@shorthand{macedonian}{"}{|}%
698 \declare@shorthand{macedonian}{"}{|}%
699 }%
700 }{|}
701 \@ifundefined{ngerman@sh@sel}{|}{%
702 \def\HyPsd@babel@ngerman{%
703 \declare@shorthand{ngerman}{"}{|}%
704 \declare@shorthand{ngerman}{"}{|}%
705 }%
706 }
707 \@ifundefined{portuges@sh@sel}{|}{%
708 \def\HyPsd@babel@portuges{%
709 \declare@shorthand{portuges}{"}{|}%
710 }%
711 }
712 \@ifundefined{russian@sh@sel}{|}{%
713 \def\HyPsd@babel@russian{%
714 \declare@shorthand{russian}{"}{|}%
715 \declare@shorthand{russian}{"}{|}%
716 }%
717 }
718 \@ifundefined{slovene@sh@sel}{|}{%
719 \def\HyPsd@babel@slovene{%
720 \declare@shorthand{slovene}{"}{|}%
721 }%
722 }

```

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

```

723 \@ifundefined{spanish@sh@sel}{|}{%
724 \def\HyPsd@babel@spanish{%
725 \declare@shorthand{spanish}{<<}{\guillemotleft}%
726 \declare@shorthand{spanish}{>>}{\guillemotright}%
727 \declare@shorthand{spanish}{=}{-}%
728 \declare@shorthand{spanish}{"}{|}%
729 \declare@shorthand{spanish}{!}{\textexclamdown}%

```

```

730 \declare@shorthand{spanish}{"}{\textquestiondown}%
731 }%
732 }
733 \@ifundefined{swedish@sh@"@sel}{}{%
734 \def\HyPsd@babel@swedish{%
735 \declare@shorthand{swedish}{"}{}%
736 \declare@shorthand{swedish}{"}{-}%
737 }%
738 }
739 \@ifundefined{ukrainian@sh@"@sel}{}{%
740 \def\HyPsd@babel@ukrainian{%
741 \declare@shorthand{ukrainian}{"}{}%
742 \declare@shorthand{ukrainian}{"}{-}%
743 }%
744 }
745 \@ifundefined{usorbian@sh@"@sel}{}{%
746 \def\HyPsd@babel@usorbian{%
747 \declare@shorthand{usorbian}{"}{f}%
748 \declare@shorthand{usorbian}{"}{}%
749 }%
750 }
751 \@ifundefined{greek@sh@\string~@sel}{%
752 \let\HyPsd@GreekPatch\@empty
753 }{%
754 \def\HyPsd@GreekPatch{%
755 \let\greeknumeral\HyPsd@greeknumeral
756 \let\Greeknatural\HyPsd@greeknatural
757 }%
758 }
759 \def\HyPsd@greeknumeral#1{%
760 \HyPsd@GreekNum\@firstoftwo{#1}%
761 }
762 \def\HyPsd@Greeknatural#1{%
763 \HyPsd@GreekNum\@secondoftwo{#1}%
764 }
765 \def\HyPsd@GreekNum#1#2{%
766 \ifHy@unicode
767 \ifnum#2<\@one
768 \@arabic{#2}%
769 \else
770 \ifnum#2<1000000 %
771 \HyPsd@@GreekNum#1{#2}%
772 \else
773 \@arabic{#2}%
774 \fi
775 \fi
776 \else
777 \@arabic{#2}%
778 \fi
779 }
780 \def\HyPsd@@GreekNum#1#2{%
781 \ifnum#2<\@m
782 \ifnum#2<10 %
783 \expandafter\HyPsd@GreekNumI
784 \expandafter\@gobble\expandafter#1\number#2%
785 \else
786 \ifnum#2<100 %

```

```

787         \expandafter\HyPsd@GreekNumII
788         \expandafter\@gobble\expandafter#1\number#2%
789     \else
790         \expandafter\HyPsd@GreekNumIII
791         \expandafter\@gobble\expandafter#1\number#2%
792     \fi
793 \fi
794 \ifnum#2>\z@
795     \textnumeralsigngreek
796 \fi
797 \else
798     \ifnum#2<\@M
799         \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
800     \else
801         \ifnum#2<100000 %
802             \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
803         \else
804             \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
805         \fi
806     \fi
807 \fi
808 }
809 \def\HyPsd@GreekNumI#1#2#3{%
810     #1{%
811         \ifnum#3>\z@
812             \textnumeralsignlowergreek
813         \fi
814     }%
815     \expandafter#2%
816     \ifcase#3 %
817         {}{}%
818         \or\textalpha\textAlpha
819         \or\textbeta\textBeta
820         \or\textgamma\textGamma
821         \or\textdelta\textDelta
822         \or\textepsilon\textEpsilon
823         \or\textstigmagreek\textStigmagreek
824         \or\textzeta\textZeta
825         \or\texteta\textEta
826         \or\texttheta\textTheta
827     \else
828         {}{}%
829     \fi
830 }
831 \def\HyPsd@GreekNumII#1#2#3#4{%
832     #1{%
833         \ifnum#3>\z@
834             \textnumeralsignlowergreek
835         \fi
836     }%
837     \expandafter#2%
838     \ifcase#3 %
839         {}{}%
840         \or\textiota\textIota
841         \or\textkappa\textKappa
842         \or\textlambda\textLambda
843         \or\textmu\textMu

```

```

844 \or\textnu\textNu
845 \or\textxi\textXi
846 \or\textomicron\textOmicron
847 \or\textpi\textPi
848 \or\textkoppagreek\textKoppagreek
849 \else
850   {}{}%
851 \fi
852 \HyPsd@GreekNumI#1#2#4%
853 }
854 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
855   #1{%
856     \ifnum#3>\z@
857       \textnumeralsignlowergreek
858     \fi
859   }%
860 \expandafter#2%
861 \ifcase#3 %
862   {}{}%
863 \or\textrho\textRho
864 \or\textsigma\textSigma
865 \or\texttau\textTau
866 \or\textupsilon\textUpsilon
867 \or\textphi\textPhi
868 \or\textchi\textChi
869 \or\textpsi\textPsi
870 \or\textomega\textOmega
871 \or\textsampigreek\textSampigreek
872 \else
873   {}{}%
874 \fi
875 \HyPsd@GreekNumII#1#2#4#5%
876 }
877 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
878   \HyPsd@GreekNumI\@firstofone#1#2%
879   \HyPsd@@GreekNum#1{#3#4#5}%
880 }
881 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
882   \HyPsd@GreekNumII\@firstofone#1#2#3%
883   \HyPsd@@GreekNum#1{#4#5#6}%
884 }
885 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
886   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
887   \HyPsd@@GreekNum#1{#5#6#7}%
888 }

```

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 ($\geq 0x40$).


```

889 \begingroup
890   \catcode"7F=\active
891   \toks@{%
892     \let\CJK@ignorespaces\empty
893     \def\CJK@char#1{\@gobbletwo}%
894     \let\CJK@charx\@gobblefour
895     \let\CJK@punctchar\@gobblefour
896     \def\CJK@punctcharx#1{\@gobblefour}%
897     \catcode"7F=\active
898     \def^^7f#1^^7f#2^^7f{%
899       \string #1\HyPsd@DecimalToOctal{#2}%
900     }%
901     % ... ?
902     \ifHy@unicode
903       \def\Hy@cjkpu{\80}%
904     \else
905       \let\Hy@cjkpu\@empty
906     \fi
907     \HyPsd@CJKActiveChars
908   }%
909   \count@=127 %
910   \@whilenum\count@<255 \do{%
911     \advance\count@ by 1 %
912     \lccode'\~= \count@
913     \lowercase{%
914       \toks@\expandafter{\the\toks@ ~}%
915     }%
916   }%
917   \toks@\expandafter{\the\toks@ !}%
918   \xdef\HyPsd@CJKhook{\the\toks@}%
919 \endgroup

```

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

```

920 \def\HyPsd@CJKActiveChars#1{%
921   \ifx#1!%
922     \let\HyPsd@CJKActiveChars\relax
923   \else
924     \edef#1{\noexpand\Hy@cjkpu\string#1}%
925   \fi
926   \HyPsd@CJKActiveChars
927 }

```

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

```

928 \def\HyPsd@DecimalToOctal#1{%
929   \ifcase #1 %
930     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
931     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
932     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
933     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
934     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
935     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
936     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
937     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
938     \or @\or A\or B\or C\or D\or E\or F\or G%
939     \or H\or I\or J\or K\or L\or M\or N\or O%
940     \or P\or Q\or R\or S\or T\or U\or V\or W%

```

```

941 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
942 \or \140\or a\or b\or c\or d\or e\or f\or g%
943 \or h\or i\or j\or k\or l\or m\or n\or o%
944 \or p\or q\or r\or s\or t\or u\or v\or w%
945 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
946 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
947 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
948 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
949 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
950 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
951 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
952 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
953 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
954 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
955 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
956 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
957 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
958 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
959 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
960 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
961 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
962 \fi
963 }

```

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 L^AT_EX 2_ε versions [1998/06/01] and [1998/12/01]. I expect that versions below [1995/12/01] don't work.

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

```

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

```

```

\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}

964 \def\HyPsd@inmathwarn#1#2{%
965   \ifx#2\expandafter
966     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
967       \HyPsd@GLYPHERR
968       \expandafter\@gobble\string#1%
969       >%
970       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
971     \else
972       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
973     \fi
974   \else
975     \expandafter#2%
976   \fi
977 }
978 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
979 \def\HyPsd@EndWithElse#1\else\else}

```

\HyPsd@add@accent

```

980 \def\HyPsd@add@accent#1#2{%
981   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
982   #2%
983 }%

```

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.

```

984 \def\HyPsd@LetUnexpandableSpace#1{%
985   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
986 }

```

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

```

987 \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.

```

988 \edef\HyPsd@XSPACE{\string#\string X}
989 \edef\HyPsd@ITALCORR{\string#\string I}
990 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.6 \hspace fix

\HyPsd@hspace

```

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

```

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

```

992 \def\HyPsd@@hspace#1*#2\END{%
993   \ifx\#2\%
994     \HyPsd@hspacetest{#1}%
995   \else
996     \expandafter\HyPsd@hspacetest
997   \fi
998 }

```

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

```

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

```

6.5.7 Fix for AMS classes

```

1000 \@ifundefined{tocsection}{%
1001   \let\HyPsd@AMSclassfix\relax
1002 }{%
1003   \def\HyPsd@AMSclassfix{%
1004     \let\tocpart\HyPsd@tocsection
1005     \let\tocchapter\HyPsd@tocsection
1006     \let\tocappendix\HyPsd@tocsection
1007     \let\tocsection\HyPsd@tocsection
1008     \let\tocsubsection\HyPsd@tocsection
1009     \let\tocsubsubsection\HyPsd@tocsection
1010     \let\tocparagraph\HyPsd@tocsection
1011   }%
1012   \def\HyPsd@tocsection#1#2#3{%
1013     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1014     #3%
1015   }%
1016 }

```

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.

```

1017 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%

```

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

```

1018 \def\HyPsd@@ref#1*#2\END{%
1019   \ifx\#2\%
1020     \HyPsd@@@ref{#1}%
1021   \else
1022     \expandafter\HyPsd@@@ref
1023   \fi
1024 }%

```

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

```

1025 \def\HyPsd@@@ref#1{%
1026   \expandafter\ifx\csname r@#1\endcsname\relax
1027     ??%
1028   \else
1029     \expandafter\expandafter\expandafter
1030     \@car\csname r@#1\endcsname\@nil
1031   \fi
1032 }

```

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

```

1033 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*END}

```

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

```

1034 \def\HyPsd@@pageref#1*#2END{%
1035   \ifx\#2\%
1036     \HyPsd@@@pageref{#1}%
1037   \else
1038     \expandafter\HyPsd@@@pageref
1039   \fi
1040 }

```

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

```

1041 \def\HyPsd@@@pageref#1{%
1042   \expandafter\ifx\csname r@#1\endcsname\relax
1043     ??%
1044   \else
1045     \expandafter\expandafter\expandafter\expandafter
1046     \expandafter\expandafter\expandafter\@car
1047     \expandafter\expandafter\expandafter\@gobble
1048     \csname r@#1\endcsname{}\@nil
1049   \fi
1050 }

```

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

```

1051 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*END}

```

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

```

1052 \def\HyPsd@@nameref#1*#2END{%
1053   \ifx\#2\%
1054     \HyPsd@@@nameref{#1}%
1055   \else
1056     \expandafter\HyPsd@@@nameref
1057   \fi
1058 }

```

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

```

1059 \def\HyPsd@@@nameref#1{%
1060   \expandafter\ifx\csname r@#1\endcsname\relax
1061     ??%
1062   \else
1063     \expandafter\expandafter\expandafter\expandafter
1064     \expandafter\expandafter\expandafter\@car
1065     \expandafter\expandafter\expandafter\@gobbletwo

```

```

1066 \csname r@#1\endcsname{}{} \@nil
1067 \fi
1068 }

```

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

```

1069 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}

```

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

```

1070 \def\HyPsd@@autoref#1*#2\END{%
1071 \ifx\#2\%
1072 \HyPsd@@autoref{#1}%
1073 \else
1074 \expandafter\HyPsd@@autoref
1075 \fi
1076 }

```

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

```

1077 \def\HyPsd@@@autoref#1{%
1078 \expandafter\ifx\csname r@#1\endcsname\relax
1079 ??%
1080 \else
1081 \expandafter\expandafter\expandafter\HyPsd@autorefname
1082 \csname r@#1\endcsname{}{}{} \@nil
1083 \expandafter\expandafter\expandafter
1084 \@car\csname r@#1\endcsname\@nil
1085 \fi
1086 }

```

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

```

1087 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1088 \ifx\#4\%
1089 \else
1090 \HyPsd@@autorefname#4.\@nil
1091 \fi
1092 }

```

`\HyPsd@@autorefname`

```

1093 \def\HyPsd@@autorefname#1.#2\@nil{%
1094 \@ifundefined{#1autorefname}{%
1095 \@ifundefined{#1name}{%
1096 }{%
1097 \csname#1name\endcsname\space
1098 }%
1099 }{%
1100 \csname#1autorefname\endcsname\space
1101 }%
1102 }

```

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 causes TeX to stop with an error message. With a deep trick it is possible to define commands in such a context: `\csname` does the job, it defines the command to be `\relax`, if it has no meaning.

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

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

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

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

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

```
\HyPsd@DefCommand
\HyPsd@LetCommand 1103 \begingroup
1104   \def\x#1#2{%
1105     \endgroup
1106     \let#1\def
1107     \def\HyPsd@DefCommand##1##2##{%
1108       #1%
1109       \expandafter\noexpand
1110       \csname\expandafter\@gobble\string##1\@empty\endcsname
1111       \@gobble
1112     }%
1113     \let#2\let
1114     \def\HyPsd@LetCommand##1{%
1115       \expandafter\ifx\csname##1\expandafter\endcsname
1116         \csname iftrue\endcsname
1117       \pdfstringdefWarn\let
1118       \expandafter\@gobble
1119     \else
1120       \expandafter\ifx\csname##1\expandafter\endcsname
1121         \csname iffalse\endcsname
1122       \pdfstringdefWarn\let
1123       \expandafter\expandafter\expandafter\@gobble
1124     \else
1125       #2%
1126       \expandafter\noexpand
1127       \csname##1\expandafter\expandafter\expandafter\endcsname
1128     \fi
1129   \fi
1130 }%
1131 }%
1132 \expandafter\x\csname <def>-command\expandafter\endcsname
1133   \csname <let>-command\endcsname
1134 \def\HyPsd@LetCommand#1{%
```

```

1135 \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1136 \expandafter\expandafter\expandafter{%
1137 \expandafter\@gobble\string#1\@empty
1138 }%
1139 }

```

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.

```

1140 \def\HyPsd@ifnextchar{%
1141 \pdfstringdefWarn\ifnextchar
1142 \expandafter\@gobbletwo\@gobble
1143 }

```

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

```

1144 \def\HyPsd@new@ifnextchar{%
1145 \pdfstringdefWarn\new@ifnextchar
1146 \expandafter\@gobbletwo\@gobble
1147 }

```

6.5.11 \@protected@testoptifnextchar

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

```

1148 \def\HyPsd@protected@testopt#1{%
1149 \pdfstringdefWarn#1%
1150 \@gobbletwo
1151 }

```

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:

```

1152 \def\HyPsd@Warning#1{%
1153 \begingroup
1154 \def\space{ }%
1155 \Hy@Warning{#1}%
1156 \endgroup
1157 }

```

6.6.2 Protecting spaces

```

1158 \RequirePackage{etexcmds}[2007/09/09]
1159 \ifetex@unexpanded
1160 \expandafter\@secondoftwo
1161 \else

```



```

1162 \expandafter\@firstoftwo
1163 \fi
1164 {%

```

`\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`.

```

1165 \def\HyPsd@ProtectSpaces#1{%
1166   \iftrue
1167     \expandafter\HyPsd@@ProtectSpacesFi
1168     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1169   \fi
1170 }%

```

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

```

1171 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1172   \fi
1173   \ifx\scrollmode#2\scrollmode
1174     \HyPsd@RemoveMask#1\HyPsd@End#3%
1175   \else
1176     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1177     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1178   \fi
1179 }%

```

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.

```

1180 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1181   \toks@\expandafter{#1}%
1182   \xdef#2{\the\toks@}%
1183 }%
1184 }{%
1185 \let\HyPsd@fi\fi
1186 \def\HyPsd@ProtectSpaces#1{%
1187   \xdef#1{%
1188     \iftrue
1189       \expandafter\HyPsd@@ProtectSpacesFi
1190       \expandafter|\expandafter\@empty#1| %
1191     \HyPsd@fi
1192   }%
1193   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1194 }%
1195 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1196   \fi
1197   \etex@unexpanded{#1}%
1198   \ifx\scrollmode#2\scrollmode
1199   \else
1200     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1201   \HyPsd@fi
1202 }%
1203 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1204   \xdef#2{\etex@unexpanded\expandafter{#1}}%
1205 }%
1206 }

```

6.6.3 Remove grouping braces

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

```
1207 \def\HyPsd@RemoveBraces#1{%
1208   \ifx\scrollmode#1\scrollmode
1209   \else
1210     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1211   \fi
1212 }
```

`\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`.

```
1213 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1214   \fi
1215   \def\Hy@temp@A{#1#2}%
1216   \def\Hy@temp@B{#3}%
1217   \ifx\Hy@temp@A\Hy@temp@B
1218     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1219       \HyPsd@String#1%
1220     }%
1221     \ifx\scrollmode#2\scrollmode
1222     \else
1223       \Hy@ReturnAfterFiFiEnd{%
1224         \HyPsd@RemoveBraces{#2}%
1225       }%
1226     \fi
1227   \else
1228     \def\Hy@temp@A{#1}%
1229     \HyPsd@AppendItalcorr\HyPsd@String
1230     \ifx\Hy@temp@A\@empty
1231       \Hy@ReturnAfterElseFiFiEnd{%
1232         \HyPsd@RemoveBraces{#2}%
1233       }%
1234     \else
1235       \HyPsd@ProtectSpaces\Hy@temp@A
1236       \HyPsd@AppendItalcorr\Hy@temp@A
1237       \Hy@ReturnAfterFiFiEnd{%
1238         \expandafter\HyPsd@RemoveBraces\expandafter
1239           {\Hy@temp@A#2}%
1240       }%
1241     \fi
1242   \fi
1243   \Hy@ReturnEnd
1244 }
```

`\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`.

```
1245 \def\HyPsd@AppendItalcorr#1{%
1246   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/}#1%
```

```

1247 }
1248 \def\HyPsd@@AppendItalcorr#1#2{%
1249   \expandafter\def\expandafter#2\expandafter{#2#1}%
1250 }

```

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`).

```

1251 \def\HyPsd@CheckCatcodes#1#2\HyPsd@End{%
1252   \global\let\HyPsd@Rest\relax
1253   \ifcat\relax\noexpand#1\relax
1254     \ifx#1\protect
1255       \else
1256         \ifx#1\penalty
1257           \setbox\z@=\hbox{%
1258             \afterassignment\HyPsd@AfterCountRemove
1259             \count@=#2\HyPsd@End
1260           }%
1261         \else
1262           \ifx#1\kern
1263             \setbox\z@=\hbox{%
1264               \afterassignment\HyPsd@AfterDimenRemove
1265               \dimen@=#2\HyPsd@End
1266             }%
1267           \else
1268             \ifx#1\hskip
1269               \setbox\z@=\hbox{%
1270                 \afterassignment\HyPsd@AfterSkipRemove
1271                 \skip@=#2\HyPsd@End
1272               }%
1273             \else
1274               \HyPsd@CatcodeWarning{#1}%
1275             \fi
1276           \fi
1277         \fi
1278       \fi
1279     \else
1280       \ifcat#1A% letter
1281         \expandafter\def\expandafter\HyPsd@String\expandafter{%
1282           \HyPsd@String#1%
1283         }%
1284       \else
1285         \ifcat#1 % SPACE
1286           \expandafter\def\expandafter\HyPsd@String\expandafter{%
1287             \HyPsd@String\HyPsd@SPACEOPTI
1288           }%
1289         \else

```

```

1290     \ifcat$#1%
1291     \HyPsd@CatcodeWarning{math shift}%
1292     \else
1293     \ifcat&#1%
1294     \HyPsd@CatcodeWarning{alignment tab}%
1295     \else
1296     \ifcat^#1%
1297     \HyPsd@CatcodeWarning{superscript}%
1298     \else
1299     \ifcat_#1%
1300     \HyPsd@CatcodeWarning{subscript}%
1301     \else
1302     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1303     \HyPsd@String#1%
1304     }%
1305     \fi
1306     \fi
1307     \fi
1308     \fi
1309     \fi
1310     \fi
1311     \fi
1312     \ifx\HyPsd@Rest\relax
1313     \ifx\scrollmode#2\scrollmode
1314     \else
1315     \Hy@ReturnAfterFiFiEnd{%
1316     \HyPsd@CheckCatcodes#2\HyPsd@end
1317     }%
1318     \fi
1319     \else
1320     \ifx\HyPsd@Rest\@empty
1321     \else
1322     \Hy@ReturnAfterFiFiEnd{%
1323     \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@end
1324     }%
1325     \fi
1326     \fi
1327     \Hy@ReturnEnd
1328 }

```

Remove counts, dimens, skips.

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

```

1329 \def\HyPsd@AfterCountRemove#1\HyPsd@end{%
1330   \gdef\HyPsd@Rest{#1}%
1331 }

```

\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.

```

1332 \def\HyPsd@AfterDimenRemove#1\HyPsd@end{%
1333   \ifdim\ifx\HyPsd@String\@empty\z@ \else\dimen@ \fi > 1ex %
1334   \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1335   \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1336   \else
1337   \ifdim\dimen@=\z@

```

```

1338     \else
1339       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1340     \fi
1341     \gdef\HyPsd@Rest{#1}%
1342   \fi
1343 }

```

`\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).

```

1344 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1345   \ifdim\ifx\HyPsd@String\@empty\z@ \else \skip@ \fi > 1ex %
1346     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1347     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1348   \else
1349     \ifdim\skip@ = \z@
1350       \else
1351         \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1352       \fi
1353     \gdef\HyPsd@Rest{#1}%
1354   \fi
1355 }

```

Catcode warnings.

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

```

1356 \def\HyPsd@CatcodeWarning#1{%
1357   \HyPsd@Warning{%
1358     Token not allowed in a PDF string (%
1359     \ifHy@unicode
1360       Unicode%
1361     \else
1362       PDFDocEncoding%
1363     \fi
1364   ),%
1365   \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
1366 }%
1367 }
1368 \begingroup
1369   \catcode'\|=0 %
1370   \catcode'\|=12 %
1371   \gdef\HyPsd@RemoveCmdPrefix#1{%
1372     \expandafter\HyPsd@RemoveCmdPrefix
1373     \string#1|@empty\<>-|@empty|@empty
1374   }%
1375   \gdef\HyPsd@RemoveCmdPrefix#1\<>-#2|@empty#3|@empty{#1#2}%
1376 \endgroup

```

`\HyPsd@RemoveSpaceWarning`

```

1377 \def\HyPsd@RemoveSpaceWarning#1{%
1378   \HyPsd@Warning{%
1379     Token not allowed in a PDFDocEncoded string:%
1380     \MessageBreak #1\MessageBreak
1381     removed%
1382   }%
1383 }

```

\HyPsd@ReplaceSpaceWarning

```
1384 \def\HyPsd@ReplaceSpaceWarning#1{%
1385   \HyPsd@Warning{%
1386     Token not allowed in a PDFDocEncoded string:%
1387     \MessageBreak #1\MessageBreak
1388     replaced by space%
1389   }%
1390 }
```

6.6.5 Check for wrong glyphs

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

```
1391 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1392   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1393     \HyPsd@String#1%
1394   }%
1395   \ifx\#2\%
1396   \else
1397     \Hy@ReturnAfterFi{%
1398       \HyPsd@GlyphProcessWarning#2\@empty
1399     }%
1400   \fi
1401 }
1402 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1403   \HyPsd@@GlyphProcessWarning#1++>%
1404   \HyPsd@GlyphProcess#2\@empty
1405 }
1406 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1407   \ifx\#2\%
1408     \HyPsd@Warning{%
1409       Glyph not defined in %
1410       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1411       removing '@backslashchar#1'%
1412     }%
1413   \else
1414     \HyPsd@Warning{%
1415       Composite letter '@backslashchar#1+#2'\MessageBreak
1416       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1417       \MessageBreak
1418       removing '@backslashchar#1'%
1419     }%
1420   \fi
1421 }
```

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.

```
1422 \def\HyPsd@spaceopti#1{ % first space
1423   \ifx\HyPsd@spaceopti#1%
1424     \040%
1425   \else
1426     #1%
1427   \fi
```

```
1428 }%
```

6.6.6 Replacing tokens

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

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

```
1429 \def\HyPsd@Subst#1#2#3{%
1430   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1431     \fi
1432     ##1%
1433     \ifx\scrollmode##2\scrollmode
1434     \else
1435       #2%
1436       \HyPsd@@ReplaceFi##2\END
1437     \fi
1438   }%
1439   \xdef#3{%
1440     \iftrue
1441       \expandafter\HyPsd@@ReplaceFi#3#1\END
1442     \fi
1443   }%
1444 }
```

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

```
1445 \def\HyPsd@StringSubst#1{%
1446   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1447 }
```

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.

```
1448 \def\HyPsd@doxspace#1{%
1449   \ifx#1\relax\else
1450     \ifx#1.\else
1451       \ifx#1:\else
1452         \ifx#1,\else
1453           \ifx#1;\else
1454             \ifx#1!\else
1455               \ifx#1?\else
1456                 \ifx#1/\else
1457                   \ifx#1-\else
1458                     \ifx#1'\else
1459                       \HyPsd@SPACEOPTI
1460                     \fi
1461                   \fi
1462                 \fi
1463               \fi
1464             \fi
1465           \fi
1466         \fi
```

```

1467     \fi
1468     \fi
1469     \fi
1470     #1%
1471 }%

```

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.

```

1472 \begingroup
1473   \catcode'\|=0 %
1474   \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1475 |gdef|HyPsd@ConvertToUnicode#1{%
1476   |xdef#1{%
1477     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1478   }%
1479   |ifx#1|@empty
1480   |else
1481     |xdef#1{%
1482       \376\377%
1483       #1%
1484     }%
1485   |fi
1486 }%

```

\HyPsd@DoConvert

```

1487 |gdef|HyPsd@DoConvert#1{%
1488   |ifx#1|@empty
1489   |else
1490     |Hy@ReturnAfterFi{%
1491       |ifx#1\%%
1492       \%%
1493       |expandafter|HyPsd@DoEscape
1494     |else
1495       \000#1%
1496       |expandafter|HyPsd@DoConvert
1497     |fi
1498   }%
1499   |fi
1500 }%

```

\HyPsd@DoEscape

```

1501 |gdef|HyPsd@DoEscape#1{%
1502   |ifx#19%
1503   |expandafter|HyPsd@GetTwoBytes
1504   |else
1505     |Hy@ReturnAfterFi{%
1506       |ifx#18%
1507       00%
1508       |expandafter|HyPsd@GetTwoBytes
1509     |else
1510       #1%

```



```

1511         |expandafter|HyPsd@GetOneByte
1512         |fi
1513     }%
1514     |fi
1515 }%

```

`\HyPsd@GetTwoBytes`

```

1516 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1517     #1\#2#3#4%
1518     |HyPsd@DoConvert
1519 }%

```

`\HyPsd@GetOneByte`

```

1520 |gdef|HyPsd@GetOneByte#1#2{%
1521     #1#2%
1522     |HyPsd@DoConvert
1523 }%
1524 |endgroup

```

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

```

1525 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1526     \xdef#4{#4#1#2}%
1527     \HyPsd@@ConvertToUnicode#3\END#4%
1528 }

```

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 eT_EXhere 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

```

```

1529 \begingroup\expandafter\expandafter\expandafter\endgroup
1530 \expandafter\ifx\csname numexpr\endcsname\relax
1531     \let\HyPsd@UTFviii\relax
1532 \else
1533     \begingroup
1534         \lccode'\~='^^f4\relax
1535     \lowercase{\endgroup
1536         \def\HyPsd@UTFviii{%
1537             \let\UTFviii@two@octets\HyPsd@UTFviii@two
1538             \let\UTFviii@three@octets\HyPsd@UTFviii@three
1539             \let\UTFviii@four@octets\HyPsd@UTFviii@four
1540             \ifx~\HyPsd@UTFviii@ccxliv@undef
1541                 \let~\HyPsd@UTFviii@ccxliv@def
1542             \fi
1543             \let\unichar\HyPsd@unichar
1544         }%
1545     }%
1546     \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
1547     \edef\HyPsd@UTFviii@ccxliv@def{%

```

```

1548 \noexpand\UTFviii@four@octets\string ^^f4%
1549 }%

```

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.

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

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

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

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

$$(5)$$

```

1550 \def\HyPsd@UTFviii@two#1#2{%
1551 \expandafter\HyPsd@UTFviii@two
1552 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|%
1553 \number'#1\expandafter|%
1554 \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter|%
1555 \number'#2 \@nil
1556 }%
1557 \def\HyPsd@UTFviii@two#1|#2|#3|#4\@nil{%
1558 \expandafter\8%
1559 \number\numexpr #1-48\expandafter\relax
1560 \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1561 \number\numexpr #3-8*%
1562 \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1563 \number\numexpr #4-8*#3\relax
1564 }%

```

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

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

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

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

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

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

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

$$(12)$$

```

1565 \def\HyPsd@UTFviii@three#1#2#3{%
1566 \expandafter\HyPsd@UTFviii@three
1567 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|%
1568 \number'#1\expandafter|%
1569 \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter|%
1570 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter|%
1571 \number'#2\expandafter|%
1572 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter|%
1573 \number'#3 \@nil
1574 }%
1575 \def\HyPsd@UTFviii@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1576 \expandafter\9%
1577 \number\numexpr #1-56\expandafter\relax
1578 \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1579 \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax

```

```

1580 \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1581 \number\numexpr #6-16\expandafter\relax
1582 \number\numexpr #7-8*#6\relax
1583 }%

```

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

```

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

```

```

1584 \def\HyPsd@UTFviii@four#1#2{%
1585 \expandafter\HyPsd@UTFviii@four\number
1586 \numexpr-1+(' #1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
1587 \expandafter|\number
1588 \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp|%
1589 }%
1590 \def\HyPsd@UTFviii@four#1|#2|#3{%
1591 \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1592 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1593 \ifodd#2 %
1594 \number\numexpr(#2-1)/2\relax
1595 \else
1596 \number\numexpr#2/2\relax
1597 \fi
1598 \number\numexpr\ifodd#2 4+\fi
1599 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
1600 \933%
1601 \expandafter\HyPsd@UTFviii@four\number
1602 \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp|%
1603 }%
1604 \def\HyPsd@UTFviii@four#1|#2{%
1605 \number\numexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1606 \csname\number\numexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1607 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
1608 \number\numexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
1609 }%

```

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

```

1610 \def\HyPsd@unichar#1{%
1611 \ifHy@unicode
1612 \ifnum#1>"10FFFF %
1613 \HyPsd@UnicodeReplacementCharacter % illegal
1614 \else
1615 \ifnum#1>"FFFF %

```

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

```

1616 \expandafter\HyPsd@unichar\expandafter{%
1617 \number\numexpr 55296+%
1618 \dimexpr.0009765625\dimexpr\number#1sp-\p@
1619 \relax\relax\relax
1620 }%

```

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

```

1621 \expandafter\HyPsd@unichar\expandafter{%
1622 \number\numexpr#1-9216%

```

```

1623             -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1624             \relax\relax\relax
1625     }%
1626     \else
1627         \ifnum#1>"7FF %
1628             \9%
1629             \expandafter\HyPsd@unichar@first@byte\expandafter{%
1630                 \number
1631                 \dimexpr.00390625\dimexpr\number#1sp\relax\relax
1632             }%
1633         \else
1634             \8%
1635             \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
1636         \fi
1637         \expandafter\HyPsd@unichar@second@byte\expandafter{%
1638             \number
1639             \numexpr#1-256*\number
1640             \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
1641         }%
1642     \fi
1643 \fi
1644 \else
1645     .% unsupported (Unicode -> PDF Doc Encoding)
1646 \fi
1647 }%
1648 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
1649 \def\HyPsd@unichar@first@byte#1{%
1650     \number\dimexpr.015625\dimexpr#1sp\relax\relax
1651     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1652         \number
1653         \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1654         \relax\relax\relax
1655     }%
1656 }%
1657 \def\HyPsd@unichar@second@byte#1{%
1658     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
1659     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1660         \number
1661         \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1662         \relax\relax\relax
1663     }%
1664 }%
1665 \def\HyPsd@unichar@octtwo#1{%
1666     \number\dimexpr.125\dimexpr#1sp\relax\relax
1667     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
1668     \relax\relax\relax
1669 }%
1670 \fi

```

7 Support of other packages

7.1 Class memoir

```

1671 \@ifclassloaded{memoir}{%
1672     \AtEndOfPackage{\RequirePackage{memhfixc}}}%
1673 }{}

```

7.2 Package subfigure

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

```

1674 \@ifpackageloaded{subfigure}{%
1675   \@ifundefined{sub@label}{%
1676     \Hy@hypertextnamesfalse
1677   }{%
1678     \renewcommand*{\sub@label}[1]{%
1679       \@bsphack
1680       \subfig@oldlabel{#1}%
1681       \if@filesw
1682         \begingroup
1683           \edef\@currentlabstr{%
1684             \expandafter\strip@prefix\meaning\@currentlabelname
1685           }%
1686           \protected@write\@auxout{}{%
1687             \string\newlabel{sub@#1}{%
1688               {\@nameuse{@@thesub\@capttype}}%
1689               {\thepage}%
1690             }%
1691             \expandafter\strip@period\@currentlabstr
1692             \relax.\relax\@@@%
1693           }%
1694           {\@currentHref}%
1695           {}%
1696         }%
1697       }%
1698       \endgroup
1699     \fi
1700     \@esphack
1701   }%
1702   \@ifpackagelater{subfigure}{2002/03/26}{-}{-}%
1703   \providecommand*\@toclevel@subfigure{1}%
1704   \providecommand*\@toclevel@subtable{1}%
1705 }%
1706 }%
1707 }{}

```

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:

```

1708 \@ifundefined{XR@addURL}{%
1709 }{}

```

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.

```

1710 \def\xr@addURL#1{\xr@dURL#1{}{}{}{}\\}%
1711 \def\xr@dURL#1#2#3#4#5\{%
1712   {#1}{#2}%
1713   \if!#4!%
1714     \else
1715       {#3}{#4}{\xr@URL}%
1716     \fi
1717 }%
1718 }
1719 \def\Hy@true{true}

```

```
1720 \def\Hy@false{false}
```

Providing dummy definitions.

```
1721 \let\literalps@out\@gobble
1722 \newcommand\pdfbookmark[3] [] {}
1723 \def\Acrobatmenu#1#2{\leavevmode#2}
1724 \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

```
1725 \let\HyperRaiseLinkHook\@empty
1726 \def\HyperRaiseLinkDefault{\baselineskip}
```

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

```
1727 \def\Hy@raisedlink#1{%
1728   \ifvmode
1729     #1%
1730   \else
1731     \penalty\@M
1732     \smash{%
1733       \begingroup
1734         \let\HyperRaiseLinkLength\@tempdima
1735         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
1736         \HyperRaiseLinkHook
1737       \expandafter\endgroup
1738       \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
1739     }%
1740   \fi
1741 }
```

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

```
\Hy@RestoreLastskip
1742 \def\Hy@SaveLastskip{%
1743   \let\Hy@RestoreLastskip\relax
1744   \ifvmode
1745     \ifdim\lastskip=\z@
1746       \let\Hy@RestoreLastskip\nobreak
1747     \else
1748       \begingroup
1749         \skip@=-\lastskip
1750       \edef\x{%
1751         \endgroup
1752         \def\noexpand\Hy@RestoreLastskip{%
1753           \noexpand\ifvmode
1754             \noexpand\nobreak
1755             \vskip\the\skip@
```

```

1756         \vskip\the\lastskip\relax
1757         \noexpand\fi
1758     }%
1759 }%
1760 \x
1761 \fi
1762 \else
1763     \ifhmode
1764         \ifdim\lastskip=\z@
1765             \let\Hy@RestoreLastskip\nobreak
1766         \else
1767             \begingroup
1768                 \skip@=-\lastskip
1769                 \edef\x{%
1770                     \endgroup
1771                     \def\noexpand\Hy@RestoreLastskip{%
1772                         \noexpand\ifhmode
1773                         \noexpand\nobreak
1774                         \hskip\the\skip@
1775                         \hskip\the\lastskip\relax
1776                     \noexpand\fi
1777                 }%
1778             }%
1779         \x
1780     \fi
1781 \fi
1782 \fi
1783 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

1784 \def\Hy@boolkey{\@dblarg\Hy@boolkey}
1785 \def\Hy@boolkey[#1]#2#3{%
1786     \lowercase{\def\Hy@tempa{#3}}%
1787     \ifx\Hy@tempa\@empty
1788         \let\Hy@tempa\Hy@true
1789     \fi
1790     \ifx\Hy@tempa\Hy@true
1791     \else
1792         \ifx\Hy@tempa\Hy@false
1793         \else
1794             \let\Hy@tempa\relax
1795         \fi
1796     \fi
1797     \ifx\Hy@tempa\relax
1798         \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
1799     \else
1800         \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
1801         \csname Hy@#2\Hy@tempa\endcsname
1802     \fi
1803 }

```

\Hy@WarnOptionValue

```

1804 \def\Hy@WarnOptionValue#1#2#3{%
1805   \Hy@Warning{%
1806     Unexpected value ‘#1’\MessageBreak
1807     of option ‘#2’ instead of\MessageBreak
1808     #3%
1809   }%
1810 }

```

\Hy@DisableOption

```

1811 \def\Hy@DisableOption#1{%
1812   \ifundefined{KV@Hyp@#1@default}{%
1813     \define@key{Hyp}{#1}%
1814   }{%
1815     \define@key{Hyp}{#1}[]%
1816   }%
1817   {\Hy@WarnOptionDisabled{#1}}%
1818 }

```

\Hy@WarnOptionDisabled

```

1819 \def\Hy@WarnOptionDisabled#1{%
1820   \Hy@Warning{%
1821     Option ‘#1’ has already been used,\MessageBreak
1822     setting the option has no effect%
1823   }%
1824 }

```

\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.

```

1825 \def\Hy@CheckOptionValue#1#2#3{%
1826   \begingroup
1827     \edef\x{#1}%
1828     \@onelevel@sanitize\x
1829     \let\y=y%
1830     \def\do##1##2{%
1831       \def\z{##1}%
1832       \@onelevel@sanitize\z
1833       \ifx\x\z
1834         \let\y=n%
1835       \let\do\@gobbletwo
1836     \fi
1837   }%
1838   #3%
1839   \ifx\y y%
1840     \def\do##1##2{%
1841       * ‘##1’%
1842       \ifx\\##2\\\else\space(##2)\fi
1843     \MessageBreak
1844   }%
1845   \Hy@Warning{%
1846     Values of option ‘#2’:\MessageBreak
1847     #3%
1848     * An empty value disables the option.\MessageBreak
1849     Unknown value ‘\x’%
1850   }%
1851   \fi
1852 \endgroup
1853 }

```



```

\Hy@DefNameKey #1: option name
#2: \do list with known values, first argument of \do is value, second argument is a
comment.
1854 \def\Hy@DefNameKey#1{%
1855   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
1856 }

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
1857 \def\Hy@@DefNameKey#1#2#3{%
1858   \define@key{Hyp}{#2}{%
1859     \edef#1{##1}%
1860     \ifx#1\@empty
1861     \else
1862       \Hy@CheckOptionValue{##1}{#2}{#3}%
1863     \fi
1864   }%
1865   \let#1\@empty
1866 }

\Hy@UseNameKey
1867 \def\Hy@UseNameKey#1#2{%
1868   \ifx#2\@empty
1869   \else
1870     /#1/#2%
1871   \fi
1872 }

```

9.2 Defining the options

```

1873 \define@key{Hyp}{implicit}[true]{%
1874   \Hy@boolkey{implicit}{#1}%
1875 }
1876 \define@key{Hyp}{draft}[true]{%
1877   \Hy@boolkey{draft}{#1}%
1878 }
1879 \define@key{Hyp}{final}[true]{%
1880   \Hy@boolkey{final}{#1}%
1881 }
1882 \let\KV@Hyp@nolinks\KV@Hyp@draft
1883 \define@key{Hyp}{a4paper}[true]{%
1884   \def\special@paper{210mm,297mm}%
1885   \def\Hy@pageheight{842}%
1886 }
1887 \define@key{Hyp}{a5paper}[true]{%
1888   \def\special@paper{148mm,210mm}%
1889   \def\Hy@pageheight{595}%
1890 }
1891 \define@key{Hyp}{b5paper}[true]{%
1892   \def\special@paper{176mm,250mm}%
1893   \def\Hy@pageheight{709}%
1894 }
1895 \define@key{Hyp}{letterpaper}[true]{%
1896   \def\special@paper{8.5in,11in}%
1897   \def\Hy@pageheight{792}%

```

```

1898 }
1899 \define@key{Hyp}{legalpaper}[true]{%
1900   \def\special@paper{8.5in,14in}%
1901   \def\Hy@pageheight{1008}%
1902 }
1903 \define@key{Hyp}{executivepaper}[true]{%
1904   \def\special@paper{7.25in,10.5in}%
1905   \def\Hy@pageheight{720}%
1906 }
1907 \define@key{Hyp}{setpagesize}[true]{%
1908   \Hy@boolkey{setpagesize}{#1}%
1909 }
1910 \define@key{Hyp}{debug}[true]{%
1911   \Hy@boolkey[debug]{verbose}{#1}%
1912 }
1913 \define@key{Hyp}{linktocpage}[true]{%
1914   \Hy@boolkey{linktocpage}{#1}%
1915   \ifHy@linktocpage
1916     \let\Hy@linktoc\Hy@linktoc@page
1917   \else
1918     \let\Hy@linktoc\Hy@linktoc@section
1919   \fi
1920 }
1921 \chardef\Hy@linktoc@none=0 %
1922 \chardef\Hy@linktoc@section=1 %
1923 \chardef\Hy@linktoc@page=2 %
1924 \chardef\Hy@linktoc@all=3 %
1925 \ifHy@linktocpage
1926   \let\Hy@linktoc\Hy@linktoc@page
1927 \else
1928   \let\Hy@linktoc\Hy@linktoc@section
1929 \fi
1930 \define@key{Hyp}{linktoc}{%
1931   \@ifundefined{Hy@linktoc@#1}{%
1932     \Hy@Warning{%
1933       Unexpected value ‘#1’ of\MessageBreak
1934       option ‘linktoc’ instead of ‘none’,\MessageBreak
1935       ‘section’, ‘page’ or ‘all’%
1936     }%
1937   }{%
1938     \expandafter\let\expandafter\Hy@linktoc
1939     \csname Hy@linktoc@#1\endcsname
1940   }%
1941 }
1942 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
1943 \let\XR@ext\relax
1944 \define@key{Hyp}{verbose}[true]{%
1945   \Hy@boolkey{verbose}{#1}%
1946 }
1947 \define@key{Hyp}{typexml}[true]{%
1948   \Hy@boolkey{typexml}{#1}%
1949 }

```

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.

```

1950 \define@key{Hyp}{raiselinks}[true]{%

```

```

1951 \Hy@boolkey{raiselinks}{#1}%
1952 }

```

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

```

1953 \def\Hy@setbreaklinks#1{%
1954   \csname breaklinks#1\endcsname
1955 }

1956 \def\Hy@breaklinks@unsupported{%
1957   \ifx\Hy@setbreaklinks@gobble
1958     \ifHy@breaklinks
1959       \Hy@WarningNoLine{%
1960         You have enabled option 'breaklinks'.\MessageBreak
1961         But driver '\Hy@driver.def' does not support this.\MessageBreak
1962         Expect trouble with the link areas of broken links%
1963       }%
1964     \fi
1965   \fi
1966 }

1967 \define@key{Hyp}{breaklinks}[true]{%
1968   \Hy@boolkey{breaklinks}{#1}%
1969   \let\Hy@setbreaklinks@gobble
1970 }

```

Determines whether an automatic anchor is put on each page

```

1971 \define@key{Hyp}{pageanchor}[true]{%
1972   \Hy@boolkey{pageanchor}{#1}%
1973 }

```

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.

```

1974 \define@key{Hyp}{plainpages}[true]{%
1975   \Hy@boolkey{plainpages}{#1}%
1976 }

```

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

```

1977 \define@key{Hyp}{naturalnames}[true]{%
1978   \Hy@boolkey{naturalnames}{#1}%
1979 }

```

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

```

1980 \define@key{Hyp}{hypertexnames}[true]{%
1981   \Hy@boolkey{hypertexnames}{#1}%
1982 }

```

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

```

1983 \define@key{Hyp}{nesting}[true]{%
1984   \Hy@boolkey{nesting}{#1}%
1985 }

1986 \define@key{Hyp}{unicode}[true]{%
1987   \Hy@boolkey{unicode}{#1}%
1988   \ifHy@unicode
1989     \def\HyPsd@pdfencoding{unicode}%
1990   \else
1991     \def\HyPsd@pdfencoding{pdfdoc}%
1992   \fi
1993   \HyPsd@LoadUnicode
1994 }
1995 \def\HyPsd@LoadUnicode{%

```

```

1996 \@ifundefined{T@PU}{\input{puenc.def}}{}%
1997 \DeclareFontFamily{PU}{pdf}{}%
1998 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
1999 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2000 \global\let\HyPsd@LoadUnicode\relax
2001 }
2002 \AtBeginDocument{%
2003 \ifx\HyPsd@LoadUnicode\relax
2004 \else
2005 \def\HyPsd@LoadUnicode{%
2006 \PackageError{hyperref}{}%
2007 Unicode support for bookmarks is not available.\MessageBreak
2008 Activate unicode support by using one of the options\MessageBreak
2009 'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2010 in the preamble%
2011 }\@ehc
2012 \global\let\HyPsd@LoadUnicode\relax
2013 \global\Hy@unicodedefalse
2014 \global\let\Hy@unicodetrue\Hy@unicodedefalse
2015 }%
2016 \fi
2017 }

2018 \define@key{Hyp}{pdfencoding}{%
2019 \edef\HyPsd@temp{#1}%
2020 \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2021 \let\HyPsd@pdfencoding\HyPsd@temp
2022 \Hy@unicodedefalse
2023 \else
2024 \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2025 \z@
2026 \else
2027 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2028 \z@
2029 \else
2030 \@ne
2031 \fi
2032 \fi
2033 \let\HyPsd@pdfencoding\HyPsd@temp
2034 \hypersetup{unicode}%
2035 \ifHy@unicode
2036 \def\HyPsd@pdfencoding{#1}%
2037 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2038 \HyPsd@LoadStringEncoding
2039 \fi
2040 \else
2041 \Hy@Warning{Cannot switch to unicode bookmarks}%
2042 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2043 \fi
2044 \else
2045 \@onelevel@sanitize\HyPsd@temp
2046 \Hy@Warning{%
2047 Values of option 'pdfencoding':\MessageBreak
2048 'pdfdoc', 'unicode', 'auto'.\MessageBreak
2049 Ignoring unknown value '\HyPsd@temp'%
2050 }%
2051 \fi
2052 \fi

```

```

2053 }
2054 \def\HyPsd@pdfencoding@auto{auto}
2055 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2056 \def\HyPsd@pdfencoding@unicode{unicode}
2057 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2058 \def\HyPsd@LoadStringEnc{%
2059   \RequirePackage{stringenc}[2007/06/14]%
2060   \let\HyPsd@LoadStringEnc\relax
2061 }
2062 \AtBeginDocument{%
2063   \ifpackageloaded{stringenc}{%
2064     \let\HyPsd@LoadStringEnc\relax
2065   }{%
2066     \def\HyPsd@LoadStringEnc{%
2067       \Hy@WarningNoLine{%
2068         Missing package ‘stringenc’. Use ‘pdfencoding=auto’\MessageBreak
2069         in the preamble or load the package there%
2070       }%
2071     }%
2072   }%
2073 }

2074 \newif\ifHy@setpdfversion
2075 \define@key{Hyp}{pdfversion}{%
2076   \ifundefined{Hy@pdfversion@#1}{%
2077     \PackageWarning{hyperref}{%
2078       Unsupported PDF version ‘#1’.\MessageBreak
2079       Valid values: 1.2 until 1.9%
2080     }%
2081   }{%
2082     \Hy@setpdfversiontrue
2083     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2084   }%
2085 }
2086 \@namedef{Hy@pdfversion@1.2}{2}%
2087 \@namedef{Hy@pdfversion@1.3}{3}%
2088 \@namedef{Hy@pdfversion@1.4}{4}%
2089 \@namedef{Hy@pdfversion@1.5}{5}%
2090 \@namedef{Hy@pdfversion@1.6}{6}%
2091 \@namedef{Hy@pdfversion@1.7}{7}%
2092 \@namedef{Hy@pdfversion@1.8}{8}%
2093 \@namedef{Hy@pdfversion@1.9}{9}%
2094 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2095 \define@key{Hyp}{hyperref}[true]{}
2096 \define@key{Hyp}{tex4ht}[true]{%
2097   \Hy@texhttrue
2098   \setkeys{Hyp}{colorlinks=true}%
2099   \def\BeforeTeXIVht{\usepackage{color}}%
2100   \def\Hy@driver{htex4ht}%
2101   \def\MaybeStopEarly{%
2102     \typeout{Hyperref stopped early}%
2103     \AfterBeginDocument{%
2104       \PDF@FinishDoc
2105       \gdef\PDF@FinishDoc{}%
2106     }%

```

```

2107 \endinput
2108 }%
2109 }
2110 \define@key{Hyp}{pdftex}[true]{%
2111 \def\Hy@driver{hpdtex}%
2112 }
2113 \define@key{Hyp}{nativepdf}[true]{%
2114 \def\Hy@driver{hdvips}%
2115 }
2116 \define@key{Hyp}{dvipdfm}[true]{%
2117 \def\Hy@driver{hdvipdfm}%
2118 }
2119 \define@key{Hyp}{dvipdfmx}[true]{%
2120 \def\Hy@driver{hdvipdfm}%
2121 }
2122 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2123 \expandafter\ifx\csname if#1\expandafter\endcsname
2124 \csname iftrue\endcsname
2125 \chardef\SpecialDvipdfmxOutlineOpen\@ne
2126 \else
2127 \chardef\SpecialDvipdfmxOutlineOpen\z@
2128 \fi
2129 }
2130 \define@key{Hyp}{xetex}[true]{%
2131 \def\Hy@driver{hdvipdfm}%
2132 }
2133 \define@key{Hyp}{pdfmark}[true]{%
2134 \def\Hy@driver{hdvips}%
2135 }
2136 \define@key{Hyp}{dvips}[true]{%
2137 \def\Hy@driver{hdvips}%
2138 }
2139 \define@key{Hyp}{hypertex}[true]{%
2140 \def\Hy@driver{hypertex}%
2141 }
2142 \let\Hy@MaybeStopNow\relax
2143 \define@key{Hyp}{vtex}[true]{%
2144 \begingroup\expandafter\expandafter\expandafter\endgroup
2145 \expandafter\ifx\csname OpMode\endcsname\relax
2146 \@latex@error{Non-VTeX processor}{}%
2147 \global\let\Hy@MaybeStopNow\endinput
2148 \endinput
2149 \else
2150 \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2151 \def\Hy@driver{hvtex}%
2152 \else
2153 \ifnum\OpMode=10\relax
2154 \def\Hy@driver{hvtexhtm}%
2155 \def\MaybeStopEarly{%
2156 \typeout{Hyperref stopped early}%
2157 \AfterBeginDocument{%
2158 \PDF@FinishDoc
2159 \gdef\PDF@FinishDoc{}}%
2160 }%
2161 \endinput
2162 }%
2163 \else

```

```

2164      \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2165      \global\let\Hy@MaybeStopNow\endinput
2166      \endinput
2167    \fi
2168  \fi
2169 \fi
2170 }
2171 \define@key{Hyp}{vtexpdfmark}[true]{%
2172   \begingroup\expandafter\expandafter\expandafter\endgroup
2173   \expandafter\ifx\csname OpMode\endcsname\relax
2174     \@latex@error{Non-VTeX processor}{}%
2175     \let\Hy@MaybeStopNow\endinput
2176     \endinput
2177   \else
2178     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2179     \def\Hy@driver{hvtexmrk}%
2180   \else
2181     \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2182     \let\Hy@MaybeStopNow\endinput
2183     \endinput
2184   \fi
2185 \fi
2186 }
2187 \define@key{Hyp}{dviwindo}[true]{%
2188   \def\Hy@driver{hdviwind}%
2189   \setkeys{Hyp}{colorlinks}%
2190   \PassOptionsToPackage{dviwindo}{color}%
2191 }
2192 \define@key{Hyp}{dvipsone}[true]{%
2193   \def\Hy@driver{hdvipson}%
2194 }
2195 \define@key{Hyp}{textures}[true]{%
2196   \def\Hy@driver{htexture}%
2197 }
2198 \define@key{Hyp}{latex2html}[true]{%
2199   \AtBeginDocument{\@latextohtmlX}%
2200 }

```

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

```

2201 \define@key{Hyp}{ps2pdf}[true]{%
2202   \def\Hy@driver{hdvips}%
2203   \providecommand*\pdfborder{0 0 1}%
2204 }

```

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.

```

2205 \define@key{Hyp}{hyperfigures}[true]{%
2206   \Hy@boolkey[hyperfigures]{figures}{#1}%
2207 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2208 \define@key{Hyp}{hyperfootnotes}[true]{%
2209   \Hy@boolkey{hyperfootnotes}{#1}%
2210 }

```

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

```

2211 \def\back@none{none}
2212 \def\back@section{section}
2213 \def\back@page{page}
2214 \def\back@slide{slide}
2215 \define@key{Hyp}{backref}[section]{%
2216   \lowercase{\def\Hy@tempa{#1}}%
2217   \ifx\Hy@tempa\@empty
2218     \let\Hy@tempa\back@section
2219   \fi
2220   \ifx\Hy@tempa\Hy@false
2221     \let\Hy@tempa\back@none
2222   \fi
2223   \ifx\Hy@tempa\back@slide
2224     \let\Hy@tempa\back@section
2225   \fi
2226   \ifx\Hy@tempa\back@page
2227     \PassOptionsToPackage{hyperpageref}{backref}%
2228     \Hy@backreftrue
2229   \else
2230     \ifx\Hy@tempa\back@section
2231       \PassOptionsToPackage{hyperref}{backref}%
2232       \Hy@backreftrue
2233     \else
2234       \ifx\Hy@tempa\back@none
2235         \Hy@backreffalse
2236       \else
2237         \Hy@WarnOptionValue{#1}{backref}{%
2238           'section', 'slide', 'page', 'none', \MessageBreak
2239           or 'false'}%
2240       \fi
2241     \fi
2242   \fi
2243 }
2244 \define@key{Hyp}{pagebackref}[true]{%
2245   \lowercase{\def\Hy@tempa{#1}}%
2246   \ifx\Hy@tempa\@empty
2247     \let\Hy@tempa\Hy@true
2248   \fi
2249   \ifx\Hy@tempa\Hy@true
2250     \PassOptionsToPackage{hyperpageref}{backref}%
2251     \Hy@backreftrue
2252   \else
2253     \ifx\Hy@tempa\Hy@false
2254       \Hy@backreffalse
2255     \else
2256       \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2257     \fi
2258   \fi
2259 }

```

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

```

2260 \define@key{Hyp}{hyperindex}[true]{%
2261   \Hy@boolkey{hyperindex}{#1}%
2262 }

```

Configuration of encap char.

```

2263 \define@key{Hyp}{encap}[\|]{%

```



```

2264 \def\HyInd@EncapChar{#1}%
2265 }

```

12 Language options

The `\autoref` feature depends on the language.

```

2266 \def\HyLang@afrikaans{%
2267   \def\equationautorefname{Vergelyking}%
2268   \def\footnoteautorefname{Voetnota}%
2269   \def\itemautorefname{Item}%
2270   \def\figureautorefname{Figuur}%
2271   \def\tableautorefname{Tabel}%
2272   \def\partautorefname{Deel}%
2273   \def\appendixautorefname{Bylae}%
2274   \def\chapterautorefname{Hoofstuk}%
2275   \def\sectionautorefname{Afdeling}%
2276   \def\subsectionautorefname{Subafdeling}%
2277   \def\subsubsectionautorefname{Subsubafdeling}%
2278   \def\paragraphautorefname{Paragraaf}%
2279   \def\subparagraphautorefname{Subparagraaf}%
2280   \def\FancyVerbLineautorefname{Lyn}%
2281   \def\theoremautorefname{Teorema}%
2282   \def\pageautorefname{Bladsy}%
2283 }
2284 \def\HyLang@english{%
2285   \def\equationautorefname{Equation}%
2286   \def\footnoteautorefname{footnote}%
2287   \def\itemautorefname{item}%
2288   \def\figureautorefname{Figure}%
2289   \def\tableautorefname{Table}%
2290   \def\partautorefname{Part}%
2291   \def\appendixautorefname{Appendix}%
2292   \def\chapterautorefname{chapter}%
2293   \def\sectionautorefname{section}%
2294   \def\subsectionautorefname{subsection}%
2295   \def\subsubsectionautorefname{subsubsection}%
2296   \def\paragraphautorefname{paragraph}%
2297   \def\subparagraphautorefname{subparagraph}%
2298   \def\FancyVerbLineautorefname{line}%
2299   \def\theoremautorefname{Theorem}%
2300   \def\pageautorefname{page}%
2301 }
2302 \def\HyLang@french{%
2303   \def\equationautorefname{\ 'Equation}%
2304   \def\footnoteautorefname{note}%
2305   \def\itemautorefname{item}%
2306   \def\figureautorefname{Figure}%
2307   \def\tableautorefname{Tableau}%
2308   \def\partautorefname{Partie}%
2309   \def\appendixautorefname{Appendice}%
2310   \def\chapterautorefname{chapitre}%
2311   \def\sectionautorefname{section}%
2312   \def\subsectionautorefname{sous-section}%
2313   \def\subsubsectionautorefname{sous-sous-section}%
2314   \def\paragraphautorefname{paragraphe}%
2315   \def\subparagraphautorefname{sous-paragraphe}%

```

```

2316 \def\FancyVerbLineautorefname{ligne}%
2317 \def\theoremautorefname{Th\'eor\'eme}%
2318 \def\pageautorefname{page}%
2319 }
2320 \def\HyLang@german{%
2321 \def\equationautorefname{Gleichung}%
2322 \def\footnoteautorefname{Fu\ss note}%
2323 \def\itemautorefname{Punkt}%
2324 \def\figureautorefname{Abbildung}%
2325 \def\tableautorefname{Tabelle}%
2326 \def\partautorefname{Teil}%
2327 \def\appendixautorefname{Anhang}%
2328 \def\chapterautorefname{Kapitel}%
2329 \def\sectionautorefname{Abschnitt}%
2330 \def\subsectionautorefname{Unterabschnitt}%
2331 \def\subsubsectionautorefname{Unterunterabschnitt}%
2332 \def\paragraphautorefname{Absatz}%
2333 \def\subparagraphautorefname{Unterabsatz}%
2334 \def\FancyVerbLineautorefname{Zeile}%
2335 \def\theoremautorefname{Theorem}%
2336 \def\pageautorefname{Seite}%
2337 }
2338 \def\HyLang@italian{%
2339 \def\equationautorefname{Equazione}%
2340 \def\footnoteautorefname{nota}%
2341 \def\itemautorefname{punto}%
2342 \def\figureautorefname{Figura}%
2343 \def\tableautorefname{Tabella}%
2344 \def\partautorefname{Parte}%
2345 \def\appendixautorefname{Appendice}%
2346 \def\chapterautorefname{Capitolo}%
2347 \def\sectionautorefname{sezione}%
2348 \def\subsectionautorefname{sottosezione}%
2349 \def\subsubsectionautorefname{sottosottosezione}%
2350 \def\paragraphautorefname{paragrafo}%
2351 \def\subparagraphautorefname{sottoparagrafo}%
2352 \def\FancyVerbLineautorefname{linea}%
2353 \def\theoremautorefname{Teorema}%
2354 \def\pageautorefname{Pag.\@}%
2355 }
2356 \def\HyLang@magyar{%
2357 \def\equationautorefname{Egyenlet}%
2358 \def\footnoteautorefname{l\'abjegyzet}%
2359 \def\itemautorefname{Elem}%
2360 \def\figureautorefname{'Abra}%
2361 \def\tableautorefname{T\'abl\'azat}%
2362 \def\partautorefname{R\'esz}%
2363 \def\appendixautorefname{F\'uggel\'ek}%
2364 \def\chapterautorefname{fejezet}%
2365 \def\sectionautorefname{szakasz}%
2366 \def\subsectionautorefname{alszakasz}%
2367 \def\subsubsectionautorefname{alalszakasz}%
2368 \def\paragraphautorefname{bekezd\'es}%
2369 \def\subparagraphautorefname{albekezd\'es}%
2370 \def\FancyVerbLineautorefname{sor}%
2371 \def\theoremautorefname{T\'etel}%
2372 \def\pageautorefname{oldal}%

```

```

2373 }
2374 \def\HyLang@portuges{%
2375   \def\equationautorefname{Equa\c c\~ao}%
2376   \def\footnoteautorefname{Nota de rodap\'}e}%
2377   \def\itemautorefname{Item}%
2378   \def\figureautorefname{Figura}%
2379   \def\tableautorefname{Tabela}%
2380   \def\partautorefname{Parte}%
2381   \def\appendixautorefname{Ap\^endice}%
2382   \def\chapterautorefname{Cap\'}itulo}%
2383   \def\sectionautorefname{Se\c c\~ao}%
2384   \def\subsectionautorefname{Subse\c c\~ao}%
2385   \def\subsubsectionautorefname{Subsubse\c c\~ao}%
2386   \def\paragraphautorefname{par\'}agrafo}%
2387   \def\subparagraphautorefname{subpar\'}agrafo}%
2388   \def\FancyVerbLineautorefname{linha}%
2389   \def\theoremautorefname{Teorema}%
2390   \def\pageautorefname{P\'}agina}%
2391 }

```

Next commented section for Russian is provided by Olga Lapko.

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

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

```

2392 \def\HyLang@russian{%

```

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

```

2393   \def\equationautorefname{\cyr\cyrv\cyrery\cyr.}%

```

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

```

2394 %   \def\equationautorefname{%
2395 %     \cyr\cyrv\cyrery\cyr\cyrz\cyre\cyrn\cyri\cyre
2396 %   }%

```

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

```

2397   \def\footnoteautorefname{%
2398     \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyr. \ \cyrp\cyr\cyri\cyr. %
2399   }%

```

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

```

2400 %   \def\footnoteautorefname{%
2401 %     \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyr\cyrh\cyrn\cyro\cyre \ %
2402 %     \cyrp\cyr\cyri\cyr\cyre\cyrh\cyra\cyrn\cyri\cyre
2403 %   }%

```

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

```

2404 %   \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2405 %   \def\Accfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyru}%

```

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

```
2406 \def\itemautorefname{\cyr\cyrp.}%
2407 % \def\itemautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
```

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

```
2408 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2409 \def\tableautorefname{\cyr\cyrt\cyra\cyrb\cyrl.}%
```

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

```
2410 \def\partautorefname{\cyr\cyrch.}%
2411 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2412 \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.

```
2413 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2414 % \def\appendixautorefname{%
2415 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
2416 % }%
```

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.

```
2417 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2418 \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.

```
2419 \def\paragraphautorefname{\cyr\cyrp.}%
2420 \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.

```
2421 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2422 % \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.

```
2423 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
2424 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
2425 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2426 % \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 ...

```
2427 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2428 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
```

```
2429 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
2430 \def\pageautorefname{\cyr\cyrs.}%
```

```
2431 }
```

```
2432 \def\HyLang@spanish{%
```

```
2433 \def\equationautorefname{Ecuaci\'on}%
```

```
2434 \def\footnoteautorefname{Nota a pie de p\'agina}%
```

```
2435 \def\itemautorefname{Elemento}%
```

```
2436 \def\figureautorefname{Figura}%
```

```
2437 \def\tableautorefname{Tabla}%
```

```
2438 \def\partautorefname{Parte}%
```

```
2439 \def\appendixautorefname{Ap\'endice}%
```

```
2440 \def\chapterautorefname{Cap\'itulo}%
```

```
2441 \def\sectionautorefname{Secci\'on}%
```

```
2442 \def\subsectionautorefname{Subsecci\'on}%
```

```
2443 \def\subsubsectionautorefname{Subsubsecci\'on}%
```

```
2444 \def\paragraphautorefname{P\'arrafo}%
```

```
2445 \def\subparagraphautorefname{Subp\'arrafo}%
```

```
2446 \def\FancyVerbLineautorefname{L\'inea}%
```

```
2447 \def\theoremautorefname{Teorema}%
```

```
2448 \def\pageautorefname{P\'agina}%
```

```
2449 }
```

```
2450 \def\HyLang@vietnamese{%
```

```
2451 \def\equationautorefname{Ph\uhorn{}\ohorn{}ng tr\'inh}%
```

```
2452 \def\footnoteautorefname{Ch\'u th\'ich}%
```

```
2453 \def\itemautorefname{m\du{c}%
```

```
2454 \def\figureautorefname{H\'inh}%
```

```
2455 \def\tableautorefname{B\h{a}ng}%
```

```
2456 \def\partautorefname{Ph\'acircumflex{}n}%
```

```
2457 \def\appendixautorefname{Ph\du{} l\du{c}%
```

```
2458 \def\chapterautorefname{ch\uhorn{}\ohorn{}ng}%
```

```
2459 \def\sectionautorefname{m\du{c}%
```

```
2460 \def\subsectionautorefname{m\du{c}%
```

```
2461 \def\subsubsectionautorefname{m\du{c}%
```

```
2462 \def\paragraphautorefname{\dj{}o\du{a}n}%
```

```
2463 \def\subparagraphautorefname{\dj{}o\du{a}n}%
```

```
2464 \def\FancyVerbLineautorefname{d\'ong}%
```

```
2465 \def\theoremautorefname{DJ{}\du{nh} l\'y}%
```

```
2466 \def\pageautorefname{Trang}%
```

```
2467 }
```

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

```
2468 \def\HyLang@addto#1#2{%
```

```
2469 #2%
```

```
2470 \@temptokena{#2}%
```

```
2471 \ifx#1\relax
```

```
2472 \let#1\@empty
```

```
2473 \fi
```

```
2474 \ifx#1\undefined
```

```

2475 \edef#1{\the\@temptokena}%
2476 \else
2477 \toks@\expandafter{#1}%
2478 \edef#1{\the\toks@\the\@temptokena}%
2479 \fi
2480 \@temptokena{}\toks@\@temptokena
2481 }

2482 \def\HyLang@DeclareLang#1#2#3{%
2483 \begingroup
2484 \edef\x##1##2{%
2485 \noexpand\ifx##2\relax
2486 \errmessage{No definitions for language #2' found!}%
2487 \noexpand\fi
2488 \endgroup
2489 \noexpand\define@key{Hyp}{#1}[]{%
2490 \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
2491 #3%
2492 }%
2493 }%
2494 \expandafter\x\csname extras#1\expandafter\endcsname
2495 \csname HyLang@#2\endcsname
2496 }

2497 \HyLang@DeclareLang{english}{english}{}
2498 \HyLang@DeclareLang{UKenglish}{english}{}
2499 \HyLang@DeclareLang{british}{english}{}
2500 \HyLang@DeclareLang{USenglish}{english}{}
2501 \HyLang@DeclareLang{american}{english}{}
2502 \HyLang@DeclareLang{german}{german}{}
2503 \HyLang@DeclareLang{austrian}{german}{}
2504 \HyLang@DeclareLang{ngerman}{german}{}
2505 \HyLang@DeclareLang{naustrian}{german}{}
2506 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
2507 \HyLang@DeclareLang{brazil}{portuges}{}
2508 \HyLang@DeclareLang{brazilian}{portuges}{}
2509 \HyLang@DeclareLang{portuguese}{portuges}{}
2510 \HyLang@DeclareLang{spanish}{spanish}{}
2511 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
2512 \HyLang@DeclareLang{french}{french}{}
2513 \HyLang@DeclareLang{frenchb}{french}{}
2514 \HyLang@DeclareLang{francais}{french}{}
2515 \HyLang@DeclareLang{acadian}{french}{}
2516 \HyLang@DeclareLang{canadien}{french}{}
2517 \HyLang@DeclareLang{italian}{italian}{}
2518 \HyLang@DeclareLang{magyar}{magyar}{}
2519 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

2520 \define@key{Hyp}{vietnamese}[]{}%
2521 \HyLang@addto\extrasvietnamese\HyLang@vietnamese
2522 \AtEndOfPackage{%
2523 \ifundefined{T@PU}{-}{}%
2524 \input{pvnenc.def}%
2525 }%
2526 }%
2527 }

2528 \define@key{Hyp}{vietnam}[]{}%
2529 \HyLang@addto\extravietnam\HyLang@vietnamese

```

```

2530 \AtEndOfPackage{%
2531     \ifundefined{T@PU}{-}{%
2532         \input{puvncnc.def}%
2533     }%
2534 }%
2535 }

```

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

```

2536 \define@key{Hyp}{arabic}[] {%
2537     \AtEndOfPackage{%
2538         \ifundefined{T@PU}{-}{%
2539             \input{puarenc.def}%
2540         }%
2541     }%
2542 }

```

13 Options to change appearance of links

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

```

2543 \define@key{Hyp}{colorlinks}[true]{%
2544     \Hy@boolkey{colorlinks}{#1}%
2545 }
2546 \define@key{Hyp}{ocgcolorlinks}[true]{%
2547     \Hy@boolkey{ocgcolorlinks}{#1}%
2548 }
2549 \AtBeginDocument{%
2550     \begingroup
2551         \ifundefined{OBJ@OCG@view}{%
2552             \ifHy@ocgcolorlinks
2553                 \Hy@Warning{%
2554                     Driver does not support ‘ocgcolorlinks’,\MessageBreak
2555                     using ‘colorlinks’ instead%
2556                 }%
2557             \fi
2558         }{}%
2559     \endgroup
2560 }
2561 \define@key{Hyp}{frenchlinks}[true]{%
2562     \Hy@boolkey{frenchlinks}{#1}%
2563 }

```

14 Bookmarking

```

2564 \define@key{Hyp}{bookmarks}[true]{%
2565     \Hy@boolkey{bookmarks}{#1}%
2566 }
2567 \define@key{Hyp}{bookmarksopen}[true]{%
2568     \Hy@boolkey{bookmarksopen}{#1}%
2569 }

```

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.

```

2570 \let\Hy@bookmarksdepth\c@tocdepth
2571 \define@key{Hyp}{bookmarksdepth}[]{%
2572   \begingroup
2573     \edef\x{#1}%
2574     \ifx\x\empty
2575       \global\let\Hy@bookmarksdepth\c@tocdepth
2576     \else
2577       \@ifundefined{toclevel@x}{%
2578         \onelevel@sanitize\x
2579         \edef\y{\expandafter\@car\x\@nil}%
2580         \ifcase 0\expandafter\ifx\y-1\fi
2581           \expandafter\ifnum\expandafter'\y>47 %
2582             \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
2583           \Hy@Warning{Unknown document division name (\x)}%
2584         \else
2585           \setbox\z@=\hbox{%
2586             \count@=\x
2587             \xdef\Hy@bookmarksdepth{\the\count@}%
2588           }%
2589         \fi
2590       }{%
2591         \setbox\z@=\hbox{%
2592           \count@=\csname toclevel@x\endcsname
2593           \xdef\Hy@bookmarksdepth{\the\count@}%
2594         }%
2595       }%
2596     \fi
2597   \endgroup
2598 }

```

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

```

2599 \define@key{Hyp}{bookmarksopenlevel}{%
2600   \def\@bookmarksopenlevel{#1}%
2601 }
2602 \def\@bookmarksopenlevel{\maxdimen}
2603 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
2604 \define@key{Hyp}{bookmarkstype}{%
2605   \def\Hy@bookmarkstype{#1}%
2606 }
2607 \def\Hy@bookmarkstype{toc}

```

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

```

2608 \define@key{Hyp}{bookmarksnumbered}[true]{%
2609   \Hy@boolkey{bookmarksnumbered}{#1}%
2610 }

```

Option `CJKbookmarks` enables the patch for CJK bookmarks.

```

2611 \define@key{Hyp}{CJKbookmarks}[true]{%
2612   \Hy@boolkey{CJKbookmarks}{#1}%
2613 }
2614 \def\Hy@temp#1{%
2615   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
2616 }

```



```

2617 \def\Hy@temp#1#2#3{%
2618   \define@key{Hyp}{#2color}{%
2619     \HyColor@HyperrefColor{##1}#1%
2620   }%
2621   \def#1{#3}%
2622 }
2623 \Hy@temp{link}{red}
2624 \Hy@temp{anchor}{black}
2625 \Hy@temp{cite}{green}
2626 \Hy@temp{file}{cyan}
2627 \Hy@temp{url}{magenta}
2628 \Hy@temp{menu}{red}
2629 \Hy@temp{run}{\@filecolor}
2630 \define@key{Hyp}{pagecolor}{%
2631   \Hy@WarningPageColor
2632 }
2633 \def\Hy@WarningPageColor{%
2634   \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
2635   \global\let\Hy@WarningPageColor\relax
2636 }

2637 \def\hyperbaseurl#1{\def\@baseurl{#1}}
2638 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
2639 \let\@baseurl\empty
2640 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
2641 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
2642 \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.

```

2643 \let\pdfpagetransition\relax
2644 \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.

```

2645 \let\pdfpageduration\relax
2646 \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.

```

2647 \newif\ifHy@useHidKey
2648 \Hy@useHidKeyfalse
2649 \define@key{Hyp}{pdfpagehidden}[true]{%
2650   \Hy@boolkey{pdfpagehidden}{#1}%
2651   \ifHy@pdfpagehidden
2652     \global\Hy@useHidKeytrue
2653   \fi
2654 }

```

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).

```

2655 \def\Hy@ColorList{cite,file,link,menu,run,url}
2656 \@for\Hy@temp:=\Hy@ColorList\do{%
2657   \edef\Hy@temp{%
2658     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
2659       \noexpand\HyColor@HyperrefBorderColor
2660         {##1}%
2661       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
2662       {hyperref}%
2663       {\Hy@temp bordercolor}%
2664     }%
2665   }%
2666   \Hy@temp
2667 }
2668 \define@key{Hyp}{pagebordercolor}{%
2669   \Hy@WarningPageBorderColor
2670 }
2671 \def\Hy@WarningPageBorderColor{%
2672   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
2673   \global\let\Hy@WarningPageBorderColor\relax
2674 }
2675 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
2676 \Hy@DefNameKey{pdfhighlight}{%
2677   \do{/I}{Invert}%
2678   \do{/N}{None}%
2679   \do{/O}{Outline}%
2680   \do{/P}{Push}%
2681 }
2682 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
2683 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
2684 \def\Hy@setpdfborder{%
2685   \ifx\@pdfborder\@empty
2686   \else
2687     /Border[\@pdfborder]%
2688   \fi
2689   \ifx\@pdfborderstyle\@empty
2690   \else
2691     /BS<<\@pdfborderstyle>>%
2692   \fi
2693 }
2694 \Hy@DefNameKey{pdfpagemode}{%
2695   \do{UseNone}{}%
2696   \do{UseOutlines}{}%
2697   \do{UseThumbs}{}%
2698   \do{FullScreen}{}%
2699   \do{UseOC}{PDF 1.5}%
2700   \do{UseAttachments}{PDF 1.6}%
2701 }
2702 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
2703   \do{UseNone}{}%
2704   \do{UseOutlines}{}%
2705   \do{UseThumbs}{}%
2706   \do{FullScreen}{}%

```

```

2707 \do{UseOC}{PDF 1.5}%
2708 \do{UseAttachments}{PDF 1.6}%
2709 }
2710 \Hy@DefNameKey{pdfdirection}{%
2711 \do{L2R}{Left to right}%
2712 \do{R2L}{Right to left}%
2713 }
2714 \Hy@DefNameKey{pdfviewarea}{%
2715 \do{MediaBox}{}%
2716 \do{CropBox}{}%
2717 \do{BleedBox}{}%
2718 \do{TrimBox}{}%
2719 \do{ArtBox}{}%
2720 }
2721 \Hy@DefNameKey{pdfviewclip}{%
2722 \do{MediaBox}{}%
2723 \do{CropBox}{}%
2724 \do{BleedBox}{}%
2725 \do{TrimBox}{}%
2726 \do{ArtBox}{}%
2727 }
2728 \Hy@DefNameKey{pdfprintarea}{%
2729 \do{MediaBox}{}%
2730 \do{CropBox}{}%
2731 \do{BleedBox}{}%
2732 \do{TrimBox}{}%
2733 \do{ArtBox}{}%
2734 }
2735 \Hy@DefNameKey{pdfprintclip}{%
2736 \do{MediaBox}{}%
2737 \do{CropBox}{}%
2738 \do{BleedBox}{}%
2739 \do{TrimBox}{}%
2740 \do{ArtBox}{}%
2741 }
2742 \Hy@DefNameKey{pdfprintscaling}{%
2743 \do{AppDefault}{}%
2744 \do{None}{}%
2745 }
2746 \Hy@DefNameKey{pdfduplex}{%
2747 \do{Simplex}{}%
2748 \do{DuplexFlipShortEdge}{}%
2749 \do{DuplexFlipLongEdge}{}%
2750 }
2751 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
2752 \do{true}{}%
2753 \do{false}{}%
2754 }
2755 \define@key{Hyp}{pdfprintpagerange}{%
2756 \def\@pdfprintpagerange{#1}%
2757 }
2758 \Hy@DefNameKey{pdfnumcopies}{%
2759 \do{2}{two copies}%
2760 \do{3}{three copies}%
2761 \do{4}{four copies}%
2762 \do{5}{five copies}%
2763 }

```

```

2764 \define@key{Hyp}{pdfusetitle}[true]{%
2765   \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
2766 }
2767 \define@key{Hyp}{pdftitle}{\pdfstringdef\@pdftitle{#1}}
2768 \define@key{Hyp}{pdfauthor}{\pdfstringdef\@pdfauthor{#1}}
2769 \define@key{Hyp}{pdfproducer}{\pdfstringdef\@pdfproducer{#1}}
2770 \define@key{Hyp}{pdfcreator}{\pdfstringdef\@pdfcreator{#1}}
2771 \define@key{Hyp}{pdfcreationdate}{%
2772   \begingroup
2773     \Hy@unicodedefalse
2774     \pdfstringdef\@pdfcreationdate{#1}%
2775   \endgroup
2776 }
2777 \define@key{Hyp}{pdfmoddate}{%
2778   \begingroup
2779     \Hy@unicodedefalse
2780     \pdfstringdef\@pdfmoddate{#1}%
2781   \endgroup
2782 }
2783 \define@key{Hyp}{pdfsubject}{\pdfstringdef\@pdfsubject{#1}}
2784 \define@key{Hyp}{pdfkeywords}{\pdfstringdef\@pdfkeywords{#1}}
2785 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
2786 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
2787 \let\setpdflinkmargin@gobble
2788 \def\calculate@pdfview#1 #2\{%
2789   \def\@pdfview{#1}%
2790   \ifx\#2\%
2791     \def\@pdfviewparams{-32768}%
2792   \else
2793     \def\@pdfviewparams{#2}%
2794   \fi
2795 }
2796 \begingroup\expandafter\expandafter\expandafter\endgroup
2797 \expandafter\ifx\csname numexpr\endcsname\relax
2798   \def\Hy@number#1{%
2799     \expandafter\@firstofone\expandafter{\number#1}%
2800   }%
2801 \else
2802   \def\Hy@number#1{%
2803     \the\numexpr#1\relax
2804   }%
2805 \fi
2806 \define@key{Hyp}{pdfstartpage}{%
2807   \ifx\#1\%
2808     \def\@pdfstartpage{}%
2809   \else
2810     \edef\@pdfstartpage{\Hy@number{#1}}%
2811   \fi
2812 }%
2813 \define@key{Hyp}{pdfstartview}{%
2814   \ifx\#1\%
2815     \def\@pdfstartview{}%
2816   \else
2817     \hypercalcbpdef\@pdfstartview{ /#1 }%
2818   \fi
2819 }
2820 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}

```

```

2821 \define@key{Hyp}{pdftoolbar}[true]{%
2822   \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
2823 }
2824 \define@key{Hyp}{pdfmenubar}[true]{%
2825   \Hy@boolkey[pdfmenubar]{menubar}{#1}%
2826 }
2827 \define@key{Hyp}{pdfwindowui}[true]{%
2828   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
2829 }
2830 \define@key{Hyp}{pdffitwindow}[true]{%
2831   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
2832 }
2833 \define@key{Hyp}{pdfcenterwindow}[true]{%
2834   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
2835 }
2836 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
2837   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
2838 }
2839 \define@key{Hyp}{pdfa}[true]{%
2840   \Hy@boolkey[pdfa]{#1}%
2841 }
2842 \define@key{Hyp}{pdfnewwindow}[true]{%
2843   \def\Hy@temp{#1}%
2844   \ifx\Hy@temp\empty
2845     \Hy@newwindowsetfalse
2846   \else
2847     \Hy@newwindowsettrue
2848     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
2849   \fi
2850 }
2851 \def\Hy@SetNewWindow{%
2852   \ifHy@newwindowset
2853     /NewWindow %
2854     \ifHy@newwindow true\else false\fi
2855   \fi
2856 }
2857 \Hy@DefNameKey{pdfpagelayout}{%
2858   \do{SinglePage}{}%
2859   \do{OneColumn}{}%
2860   \do{TwoColumnLeft}{}%
2861   \do{TwoColumnRight}{}%
2862   \do{TwoPageLeft}{PDF 1.5}%
2863   \do{TwoPageRight}{PDF 1.5}%
2864 }
2865 \define@key{Hyp}{pdflang}{%
2866   \def\@pdflang{#1}%
2867 }
2868 \define@key{Hyp}{pdfpagelabels}[true]{%
2869   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
2870 }
2871 \define@key{Hyp}{pdfescapeform}[true]{%
2872   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
2873 }

```

Default values:

```

2874 \def\@linkbordercolor{1 0 0}
2875 \def\@urlbordercolor{0 1 1}
2876 \def\@menubordercolor{1 0 0}

```

```

2877 \def\@filebordercolor{0 .5 .5}
2878 \def\@runbordercolor{0 .7 .7}
2879 \def\@citebordercolor{0 1 0}
2880 \def\@pdfhighlight{/I}
2881 \def\@pdftitle{}
2882 \def\@pdfauthor{}
2883 \let\@pdfproducer\relax
2884 \def\@pdfcreator{LaTeX with hyperref package}
2885 \def\@pdfcreationdate{}
2886 \def\@pdfmoddate{}
2887 \def\@pdfsubject{}
2888 \def\@pdfkeywords{}
2889 \def\@pdfpagescrop{}
2890 \def\@pdfstartview{ /Fit }
2891 \def\@pdfstartpage{1}
2892 \def\@pdfprintpagerange{}
2893 \def\@pdflang{}
2894 \let\PDF@SetupDoc\@empty
2895 \let\PDF@FinishDoc\@empty
2896 \let\phantomsection\@empty
2897 \let\special@paper\@empty
2898 \def\HyperDestNameFilter#1{#1}
2899 \ifundefined{stockwidth}{%
2900   \ifdim\paperwidth>\z@
2901     \ifdim\paperheight>\z@
2902       \edef\special@paper{\the\paperwidth,\the\paperheight}%
2903     \fi
2904   \fi
2905 }{%
2906   \ifdim\stockwidth>\z@
2907     \ifdim\stockheight>\z@
2908       \edef\special@paper{\the\stockwidth,\the\stockheight}%
2909     \fi
2910   \fi
2911 }
2912 \begingroup
2913   \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
2914   \dimen@=\x\relax
2915   \ifdim\dimen@>\z@
2916   \else
2917     \dimen@=11in\relax
2918     \Hy@WarningNoLine{%
2919       Height of page (\expandafter\string\x) %
2920       is invalid (\the\x),\MessageBreak
2921       using 11in%
2922     }%
2923   \fi
2924   \dimen@=0.99626401\dimen@
2925   \xdef\Hy@pageheight{\strip@pt\dimen@}%
2926 \endgroup
2927 \def\HyInd@EncapChar{\|}
2928 \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.

```

2929 \let\hyper@normalise\ExecuteOptions

```

```

2930 \let\ExecuteOptions\hypersetup
2931 \Hy@RestoreCatcodes
2932 \InputIfFileExists{hyperref.cfg}{-}{-}
2933 \Hy@SetCatcodes
2934 \let\ExecuteOptions\hyper@normalise
2935 \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`.

```

2936 \RequirePackage{kvoptions}[2006/08/17]

```

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

```

2937 \@ifpackageloaded{tex4ht}{%
2938   \ifpackagewith{hyperref}{tex4ht}{-}{-}%
2939   \PassOptionsToPackage{tex4ht}{hyperref}%
2940 }%
2941 }{}

```

```

2942 \let\ReadBookmarks\relax
2943 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

2944 \AtBeginDocument{%
2945   \ifHy@draft
2946     \let\hyper@@anchor@gobble
2947     \gdef\hyper@link#1#2#3{#3}%
2948     \let\hyper@anchorstart@gobble
2949     \let\hyper@anchorend@empty
2950     \let\hyper@linkstart@gobbletwo
2951     \let\hyper@linkend@empty
2952     \def\hyper@linkurl#1#2{#1}%
2953     \def\hyper@linkfile#1#2#3{#1}%
2954     \def\hyper@link@[#1]#2#3{#1}%
2955     \def\Acrobatmenu#1#2{\leavevmode#2}%
2956     \let\PDF@SetupDoc@empty
2957     \let\PDF@FinishDoc@empty
2958     \let\@fifthoffive\@secondoftwo
2959     \let\@secondoffive\@secondoftwo
2960     \let\ReadBookmarks\relax
2961     \let\WriteBookmarks\relax
2962     \Hy@WarningNoLine{ draft mode on}%
2963   \fi
2964   \Hy@DisableOption{draft}%
2965   \Hy@DisableOption{nolinks}%
2966   \Hy@DisableOption{final}%
2967 }

```

15.1 PDF/A

```

2968 \Hy@DisableOption{pdfa}

2969 \ifHy@pdfa
2970   \setkeys{Hyp}{pdfversion=1.4}%
2971   \def\Hy@Acrobatmenu#1#2{%
2972     \leavevmode
2973     \begingroup
2974     \edef\x{#1}%

```

```

2975 \@onelevel@sanitize\x
2976 \ifx\x\Hy@NextPage
2977 \let\y=Y%
2978 \else
2979 \ifx\x\Hy@PrevPage
2980 \let\y=Y%
2981 \else
2982 \ifx\x\Hy@FirstPage
2983 \let\y=Y%
2984 \else
2985 \ifx\x\Hy@LastPage
2986 \let\y=Y%
2987 \else
2988 \let\y=N%
2989 \fi
2990 \fi
2991 \fi
2992 \fi
2993 \expandafter\endgroup
2994 \ifx\y Y%
2995 \else
2996 \PackageError{hyperref}{%
2997 PDF/A: Named action ‘#1’ is not permitted%
2998 }\@ehc
2999 {#2}%
3000 \expandafter\@gobble
3001 \fi
3002 }%
3003 \def\Hy@temp#1{%
3004 \expandafter\def\csname Hy@#1\endcsname{#1}%
3005 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3006 }%
3007 \Hy@temp{NextPage}%
3008 \Hy@temp{PrevPage}%
3009 \Hy@temp{FirstPage}%
3010 \Hy@temp{LastPage}%
3011 \else
3012 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3013 \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.

```

3014 \Hy@nextfalse
3015 \@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3016 \@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3017 \@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3018 \ifHy@next
3019 \let\texttilde\~%
3020 \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.

```

3021 \@ifpackageloaded{babel}{%

```



```

3022 \@ifpackagelater{babel}{2008/03/16}{%
3023   \def\Hy@PatchLanguageShorthands#1{%
3024     \begingroup
3025       \edef\x{#1}%
3026       \@onelevel@sanitize\x
3027       \def\y{system}%
3028       \@onelevel@sanitize\y
3029     \expandafter\endgroup
3030     \ifx\x\y
3031     \else
3032       \HyOrg@languageshorthands{#1}%
3033     \fi
3034   }%
3035   \AtBeginDocument{%
3036     \begingroup
3037       \toks0=\expandafter{\pdfstringdefPreHook}%
3038       \xdef\pdfstringdefPreHook{%
3039         \let\noexpand\HyOrg@languageshorthands
3040         \noexpand\languageshorthands
3041         \let\noexpand\languageshorthands
3042         \noexpand\Hy@PatchLanguageShorthands
3043         \the\toks0 %
3044         \let\noexpand\languageshorthands
3045         \noexpand\HyOrg@languageshorthands
3046       }%
3047     \endgroup
3048   }%
3049   }{}%
3050 }{}

3051 \ifHy@figures
3052   \Hy@Info{Hyper figures ON}%
3053 \else
3054   \Hy@Info{Hyper figures OFF}%
3055 \fi
3056 \ifHy@nesting
3057   \Hy@Info{Link nesting ON}%
3058 \else
3059   \Hy@Info{Link nesting OFF}%
3060 \fi
3061 \ifHy@hyperindex
3062   \Hy@Info{Hyper index ON}%
3063 \else
3064   \Hy@Info{Hyper index OFF}%
3065 \fi
3066 \ifHy@plainpages
3067   \Hy@Info{Plain pages ON}%
3068 \else
3069   \Hy@Info{Plain pages OFF}%
3070 \fi
3071 \ifHy@backref
3072   \Hy@Info{Backreferencing ON}%
3073 \else
3074   \Hy@Info{Backreferencing OFF}%
3075 \fi
3076 \ifHy@typexml
3077   \AtEndOfPackage{%
3078     \RequirePackage{color}%

```

```

3079 \RequirePackage{nameref}%
3080 }%
3081 \fi
3082 \Hy@DisableOption{typexml}
3083 \ifHy@implicit
3084 \typeout{Implicit mode ON; LaTeX internals redefined}%
3085 \else
3086 \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3087 \def\MaybeStopEarly{%
3088 \typeout{Hyperref stopped early}%
3089 \AfterBeginDocument{%
3090 \PDF@FinishDoc
3091 \gdef\PDF@FinishDoc{}}%
3092 }%
3093 \endinput
3094 }%
3095 \AtBeginDocument{%
3096 \let\autoref\ref
3097 \let\autopageref\pageref
3098 \ifx\@pdfpagemode\@empty
3099 \gdef\@pdfpagemode{UseNone}%
3100 \fi
3101 \global\Hy@backreffalse
3102 }%
3103 \AtEndOfPackage{%
3104 \global\let\ReadBookmarks\relax
3105 \global\let\WriteBookmarks\relax
3106 }%
3107 \fi
3108 \Hy@DisableOption{implicit}

```

15.3.1 Driver loading

```

3109 \AtEndOfPackage{%
3110 \@ifpackageloaded{tex4ht}{%
3111 \def\Hy@driver{htex4ht}%
3112 \Hy@texhttrue
3113 }{}%

```

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.

```

3114 \ifx\Hy@driver\@empty
3115 \else
3116 \def\Hy@temp{hpdftex}%
3117 \ifpdf
3118 \ifx\Hy@driver\Hy@temp
3119 \else
3120 \Hy@WarningNoLine{%
3121 Wrong driver ‘\Hy@driver.def’;\MessageBreak
3122 pdfTeX is running in PDF mode.\MessageBreak
3123 Forcing driver ‘\Hy@temp.def’%
3124 }%
3125 \let\Hy@driver\Hy@temp
3126 \fi
3127 \else
3128 \ifx\Hy@driver\Hy@temp
3129 \Hy@WarningNoLine{%
3130 Wrong driver ‘\Hy@driver.def’;\MessageBreak

```

```

3131         pdfTeX is not running in PDF mode.\MessageBreak
3132         Using default driver%
3133     }%
3134     \let\Hy@driver\@empty
3135 \fi
3136 \fi
3137 \fi
3138 \ifx\Hy@driver\@empty
3139 \else
3140     \def\Hy@temp{hdvipdfm}%
3141     \ifxetex
3142         \ifx\Hy@driver\Hy@temp
3143         \else
3144             \Hy@WarningNoLine{%
3145                 Wrong driver '\Hy@driver.def';\MessageBreak
3146                 XeTeX is running.\MessageBreak
3147                 Forcing driver '\Hy@temp.def' for XeTeX%
3148             }%
3149             \let\Hy@driver\Hy@temp
3150         \fi
3151     \fi
3152 \fi
3153 \ifx\Hy@driver\@empty
3154 \else
3155     \def\Hy@temp{hvtexhtm}%
3156     \ifvtexhtml
3157         \ifx\Hy@driver\Hy@temp
3158         \else
3159             \Hy@WarningNoLine{%
3160                 Wrong driver '\Hy@driver.def';\MessageBreak
3161                 VTeX is running in HTML mode.\MessageBreak
3162                 Forcing driver '\Hy@temp.def'%
3163             }%
3164             \let\Hy@driver\Hy@temp
3165         \fi
3166     \else
3167         \ifx\Hy@driver\Hy@temp
3168             \Hy@WarningNoLine{%
3169                 Wrong driver '\Hy@driver.def';\MessageBreak
3170                 VTeX is not running in HTML mode.\MessageBreak
3171                 Using default driver%
3172             }%
3173             \let\Hy@driver\@empty
3174         \fi
3175     \fi
3176 \fi

```

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

```

3177 \ifx\Hy@driver\@empty
3178     \providecommand*{\Hy@defaultdriver}{hypertex}%
3179     \ifpdf
3180         \def\Hy@driver{hpdftex}%
3181     \else
3182         \ifxetex
3183             \def\Hy@driver{hdvipdfm}%
3184         \else
3185             \ifvtexhtml
3186                 \def\Hy@driver{hvtexhtm}%

```

```

3187         \def\MaybeStopEarly{%
3188             \typeout{Hyperref stopped early}%
3189             \AfterBeginDocument{%
3190                 \PDF@FinishDoc
3191                 \gdef\PDF@FinishDoc{%
3192                     }%
3193             \endinput
3194         }%
3195     \else
3196         \ifvtexpdf
3197             \def\Hy@driver{hvtex}%
3198         \else
3199             \ifvtexps
3200                 \def\Hy@driver{hvtex}%
3201             \else
3202                 \let\Hy@driver\Hy@defaultdriver
3203             \fi
3204         \fi
3205     \fi
3206 \fi
3207 \fi
3208 \ifx\Hy@driver\Hy@defaultdriver
3209     \def\Hy@temp{hdvwind}%
3210     \ifx\Hy@temp\Hy@driver
3211         \setkeys{Hyp}{colorlinks}%
3212         \PassOptionsToPackage{dviwindo}{color}%
3213     \fi
3214 \fi
3215     \typeout{*hyperref using default driver \Hy@driver*}%
3216 \else
3217     \typeout{*hyperref using driver \Hy@driver*}%
3218 \fi
3219 \input{\Hy@driver.def}%
3220 \let\@unprocessedoptions\relax
3221 \Hy@RestoreCatcodes
3222 }
3223 \newif\ifHy@DvipdfmxOutlineOpen
3224 \begingroup\expandafter\expandafter\expandafter\endgroup
3225 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3226 \else
3227     \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3228         \Hy@DvipdfmxOutlineOpentru
3229     \fi
3230 \fi
3231 \Hy@DisableOption{tex4ht}
3232 \Hy@DisableOption{pdftex}
3233 \Hy@DisableOption{nativepdf}
3234 \Hy@DisableOption{dvipdfm}
3235 \Hy@DisableOption{dvipdfmx}
3236 \Hy@DisableOption{dvipdfmx-outline-open}
3237 \Hy@DisableOption{pdfmark}
3238 \Hy@DisableOption{dvips}
3239 \Hy@DisableOption{hypertex}
3240 \Hy@DisableOption{vtex}
3241 \Hy@DisableOption{vtexpdfmark}
3242 \Hy@DisableOption{dviwindo}
3243 \Hy@DisableOption{dvipsone}

```

```

3244 \Hy@DisableOption{textures}
3245 \Hy@DisableOption{latex2html}
3246 \Hy@DisableOption{ps2pdf}
3247 \Hy@DisableOption{xetex}
3248 \AtEndOfPackage{%
3249   \Hy@DisableOption{pdfversion}%
3250 }

```

15.3.2 Bookmarks

```

3251 \def\WriteBookmarks{0}
3252 \def\@bookmarkopenstatus#1{%
3253   \ifHy@bookmarksopen

```

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

```

3254   \ifnum#1<\expandafter\@firstofone\expandafter
3255     {\number\@bookmarkopenlevel} % explicit space
3256   \else
3257     -%
3258   \fi
3259 \else
3260   -%
3261 \fi
3262 }
3263 \ifHy@bookmarks
3264   \Hy@Info{Bookmarks ON}%
3265   \ifx\@pdfpagemode\@empty
3266     \def\@pdfpagemode{UseOutlines}%
3267   \fi
3268 \else
3269   \def\@bookmarkopenstatus#1{%
3270     \Hy@Info{Bookmarks OFF}%
3271     \AtEndOfPackage{%
3272       \global\let\ReadBookmarks\relax
3273       \global\let\WriteBookmarks\relax
3274     }%
3275     \ifx\@pdfpagemode\@empty
3276       \def\@pdfpagemode{UseNone}%
3277     \fi
3278 \fi
3279 \Hy@DisableOption{bookmarks}

```

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

```

3280 \AtBeginDocument{%
3281   \ifHy@ocgcolorlinks
3282     \setkeys{Hyp}{colorlinks}%
3283     \ifHy@pdfa
3284       \Hy@Warning{%
3285         PDF/A: Optional Content Groups are prohibited,\MessageBreak
3286         using ‘colorlinks’ instead of ‘ocgcolorlinks’%
3287       }%
3288       \Hy@ocgcolorlinksfalse
3289     \fi
3290   \fi
3291   \ifHy@ocgcolorlinks
3292   \else
3293     \Hy@DisableOption{ocgcolorlinks}%
3294   \fi

```

```

3295 \ifHy@colorlinks
3296   \def\@pdfborder{0 0 0}%
3297   \let\@pdfborderstyle\@empty
3298   \ifHy@typexml
3299   \else
3300     \RequirePackage{color}%
3301   \fi
3302   \def\Hy@colorlink#1{%
3303     \begingroup
3304     \HyColor@UseColor#1%
3305   }%
3306   \def\Hy@endcolorlink{\endgroup}%
3307   \Hy@Info{Link coloring ON}%
3308 \else
3309   \ifHy@frenchlinks
3310     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
3311     \def\Hy@endcolorlink{\endgroup}%
3312     \Hy@Info{French linking ON}%
3313   \else
for grouping consistency:
3314     \def\Hy@colorlink#1{\begingroup}%
3315     \def\Hy@endcolorlink{\endgroup}%
3316     \Hy@Info{Link coloring OFF}%
3317   \fi
3318 \fi
3319 \Hy@DisableOption{colorlinks}%
3320 \Hy@DisableOption{frenchlinks}%
3321 \ifHy@texht
3322   \long\def\@firstoffive#1#2#3#4#5{#1}%
3323   \long\def\@secondoffive#1#2#3#4#5{#2}%
3324   \long\def\@thirdoffive#1#2#3#4#5{#3}%
3325   \long\def\@fourthoffive#1#2#3#4#5{#4}%
3326   \long\def\@fifthoffive#1#2#3#4#5{#5}%
3327   \providecommand*\@safe@activestruer{}%
3328   \providecommand*\@safe@activesfalse{}%
3329   \def\T@ref#1{%
3330     \Hy@safe@activestruer
3331     \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
3332     \Hy@safe@activesfalse
3333   }%
3334   \def\T@pageref#1{%
3335     \Hy@safe@activestruer
3336     \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
3337     \Hy@safe@activesfalse
3338   }%
3339 \else
3340   \ifHy@typexml\else\RequirePackage{nameref}\fi
3341 \fi
3342 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
3343 \DeclareRobustCommand\pageref{%
3344   \@ifstar\@pagerefstar\T@pageref
3345 }%
3346 }
3347 \AfterBeginDocument{%
3348   \ifHy@texht
3349   \else
3350     \ReadBookmarks

```

```

3351 \fi
3352 }
3353 \ifHy@backref
3354 \RequirePackage{backref}%
3355 \else
3356 \let\Hy@backout\@gobble
3357 \fi
3358 \Hy@DisableOption{backref}
3359 \Hy@DisableOption{pagebackref}
3360 \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.

```

3361 \begingroup
3362 \endlinechar=-1 %
3363 \catcode'\^A=14 %
3364 \catcode'\^M\active
3365 \catcode'\%\active
3366 \catcode'\#\active
3367 \catcode'\_\active
3368 \catcode'\$\active
3369 \gdef\hyper@normalise{^A
3370 \begingroup
3371 \catcode'\^M\active
3372 \def^M{ }^A
3373 \catcode'\%\active
3374 \let%\@percentchar
3375 \let%\@percentchar
3376 \catcode'\#\active
3377 \def#{\hyper@hash}^A
3378 \def\#{\hyper@hash}^A
3379 \@makeother\&^A
3380 \edef\textunderscore{\string_}^A
3381 \let_\textunderscore
3382 \catcode'\_\active
3383 \let_\textunderscore
3384 \let~\hyper@tilde
3385 \let~\hyper@tilde
3386 \let\textasciitilde\hyper@tilde
3387 \let\\\@backslashchar
3388 \edef$\string$^A
3389 \Hy@safe@activetrue
3390 \hyper@n@rmalise
3391 }^A
3392 \catcode'\#=6 ^A
3393 \gdef\Hy@ActiveCarriageReturn{^M}^A
3394 \gdef\hyper@n@rmalise#1#2{^A
3395 \def\Hy@tempa{#2}^A
3396 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
3397 \Hy@ReturnAfterElseFi{^A

```

```

3398     \hyper@@normalise{#1}^^A
3399   }^^A
3400   \else
3401     \Hy@ReturnAfterFi{^^A
3402     \hyper@@normalise{#1}{#2}^^A
3403   }^^A
3404   \fi
3405 }^^A
3406 \gdef\hyper@@normalise#1#2{^^A
3407   \edef\Hy@tempa{^^A
3408     \endgroup
3409     \noexpand#1{\Hy@RemovePercentCr#2%\nil}^^A
3410   }^^A
3411   \Hy@tempa
3412 }^^A
3413 \gdef\Hy@RemovePercentCr#1%\nil{^^A
3414   #1^^A
3415   \ifx\limits#2\limits
3416   \else
3417     \Hy@ReturnAfterFi{^^A
3418     \Hy@RemovePercentCr #2\@nil
3419   }^^A
3420   \fi
3421 }^^A
3422 \endgroup
3423 \providecommand*\hyper@chars{%
3424   \let#\hyper@hash
3425   \let%\@percentchar
3426   \Hy@safe@activetrue
3427 }
3428 \def\hyperlink#1#2{%
3429   \hyper@@link{#1}{#2}%
3430 }
3431 \DeclareRobustCommand*\href{%
3432   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
3433 }
3434 \def\Hy@href#1{%
3435   \hyper@normalise\href@
3436 }
3437 \begingroup
3438   \catcode'\$=6 %
3439   \catcode'\#=12 %
3440   \gdef\href$1{\expandafter\href@split$1#\}%
3441   \gdef\href@split$1#$2#$3\{\%
3442     \hyper@@link{$1}{$2}%
3443   }%
3444 \endgroup

```

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

```

3445 \RequirePackage{url}
3446 \let\HyOrg@url\url
3447 \def\Hurl{\begingroup \Url}
3448 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
3449 \def\nolinkurl@#1{\Hurl{#1}}
3450 \DeclareRobustCommand*\url{\hyper@normalise\url@}
3451 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

```



```

3452 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
3453 \providecommand\hyper@image[2]{#2}

3454 \def\hypertarget#1#2{%
3455   \ifHy@nesting
3456     \hyper@@anchor{#1}{#2}%
3457   \else
3458     \hyper@@anchor{#1}{\relax}#2%
3459   \fi
3460 }

```

`\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.

```

3461 \DeclareRobustCommand*\hyperref{%
3462   \@ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref}
3463 }

3464 \def\Hy@babelnormalise#1[#2]{%
3465   \begingroup
3466     \Hy@safe@activestrue
3467     \edef\Hy@tempa{%
3468       \endgroup
3469       \noexpand#1[{#2}]%
3470     }%
3471   \Hy@tempa
3472 }

3473 \def\@hyperref{\hyper@normalise\@hyperref}
3474 \def\@hyperref#1#2#3{%
3475   \edef\ref@one{\ifx\\#2\\\else#2.\fi#3}%
3476   \expandafter\tryhyper@link\ref@one\{#1}%
3477 }

3478 \def\tryhyper@link#1\\#2{%
3479   \hyper@@link{#2}{#1}%
3480 }

3481 \def\hyperdef{\@ifnextchar[{\label@hyperdef}\@hyperdef}}
3482 \def\@hyperdef#1#2#3{%, category, name, text
3483   \ifHy@nesting
3484     \hyper@@anchor{#1.#2}{#3}%
3485   \else
3486     \hyper@@anchor{#1.#2}{\relax}#3%
3487   \fi
3488 }

```

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.

```

3489 \def\label@hyperref[#1]{%
3490   \expandafter\label@\@hyperref\csname r@#1\endcsname{#1}%
3491 }%

3492 \def\label@\@hyperref#1#2#3{%
3493   \ifx#1\relax
3494     \protect\G@refundefinedtrue
3495     \@latex@warning{%
3496       Hyper reference ‘#2’ on page \thepage \space undefined%
3497     }%
3498     \hyper@@link{}{??}{#3}%

```

```

3499 \else
3500 \hyper@@link{\expandafter\@fifthoffive#1}%
3501 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
3502 \fi
3503 }
3504 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
3505                                % anchor text
3506 \@bsphack
3507 \if@filesw
3508 \protected@write\@auxout{%
3509 {\string\newlabel{#1}{#2}{#3}{#4}}%
3510 \fi
3511 \@esphack
3512 \ifHy@nesting
3513 \hyper@@anchor{#2.#3}{#4}%
3514 \else
3515 \hyper@@anchor{#2.#3}{\relax}#4%
3516 \fi
3517 }

```

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.

```

3518 \def\hyper@link{\let\Hy@reserved@a\relax
3519 \@ifnextchar[{ {\hyper@link@} {\hyper@link@[link]}}%
3520 }
3521 \def\hyper@link@[#1]#2#3#4{%
3522 \begingroup
3523 \protected@edef\Hy@tempa{#2}%
3524 \Hy@safe@activestruue
3525 \edef\x{#3}%
3526 \ifx\Hy@tempa\@empty
3527 \toks0{\hyper@link{#1}}%
3528 \else
3529 \toks0{\expandafter\hyper@readexternallink#2\\{#1}}%
3530 \fi
3531 \toks2{%
3532 \Hy@safe@activesfalse
3533 #4%
3534 }%
3535 \edef\Hy@tempa{\the\toks2}%
3536 \edef\x{\endgroup
3537 \ifx\Hy@tempa\@empty
3538 \noexpand\Hy@Warning{Suppressing empty link}%
3539 \else
3540 \the\toks0 {\x}{\the\toks2}}%
3541 \fi
3542 }%
3543 \x
3544 }

```

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.

```
3545 \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.

```
3546 \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\|#1}%
3547 }
```

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

```
3548 \def\@pdftempwordfile{file}%
3549 \def\@pdftempwordrun{run}%
3550 \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:

```
3551 \ifx\|#6\|
3552 \expandafter\@hyper@linkfile file:#7\|#3}{#2}%
3553 \else
3554 \ifx\|#4\|
3555 \expandafter\@hyper@linkfile file:#7\|#3}{#2}%
3556 \else
```

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

```
3557 \def\@pdftempa{#4}%
3558 \ifx\@pdftempa\@pdftempwordfile
3559 \expandafter\@hyper@linkfile#7\|#3}{#2}%
3560 \else
```

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

```
3561 \ifx\@pdftempa\@pdftempwordrun
3562 \ifHy@pdfa
3563 \PackageError{hyperref}{%
3564 PDF/A: Launch action is prohibited%
3565 }\@ehc
3566 \begingroup
3567 \leavevmode
3568 #2%
3569 \endgroup
3570 \else
3571 \expandafter\@hyper@launch#7\|#3}{#2}%
3572 \fi
3573 \else
```

otherwise its a URL

```
3574      \hyper@linkurl{#3}{#7\ifx\\#2\\\else\hyper@hash#2\fi}%
3575      \fi
3576      \fi
3577      \fi
3578      \fi
3579 }
```

By default, turn run: into file:

```
3580 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
3581   \hyper@linkurl{#2}{%
3582     \Hy@linkfileprefix
3583     #1%
3584     \ifx\\#3\\%
3585     \else
3586       \hyper@hash
3587       #3%
3588     \fi
3589   }%
3590 }
```

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

```
3591 \def\@hyper@linkfile file:#1\\#2#3{%
3592   %file url,link string, name
3593   \filename@parse{#1}%
3594   \ifx\filename@ext\relax
3595     \edef\filename@ext{\XR@ext}%
3596   \fi
3597   \def\use@file{\filename@area\filename@base.\filename@ext}%
3598   \ifx\filename@ext\XR@ext
3599     \hyper@linkfile{#2}{\use@file}{#3}%
3600   \else
3601     \ifx\@baseurl\@empty
3602       \hyper@linkurl{#2}{%
3603         \Hy@linkfileprefix\use@file\ifx\\#3\\\else\hyper@hash#3\fi
3604       }%
3605     \else
3606       \hyper@linkurl{#2}{\use@file\ifx\\#3\\\else\hyper@hash#3\fi}%
3607     \fi
3608   \fi
3609 }
```

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.

```
3610 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
3611 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
3612   \ifx\\#1\\%
3613     #2\Hy@WarningNoLine{empty link? #1: #2#3}%
3614   \else
3615     \def\anchor@spot{#2#3}%
3616     \let\put@me@back\@empty
3617     \ifx\relax#2\relax
```

```

3618 \else
3619 \ifHy@nesting
3620 \else
3621 \ifcat a\noexpand#2\relax
3622 \else
3623 \ifcat 0\noexpand#2 \relax
3624 \else
3625 % \typeout{Anchor start is not alphanumeric %
3626 % on input line\the\inputlineno%
3627 % }%
3628 \let\anchor@spot\@empty
3629 \def\put@me@back{#2#3}%
3630 \fi
3631 \fi
3632 \fi
3633 \fi
3634 \ifHy@activeanchor
3635 \anchor@spot
3636 \else
3637 \hyper@anchor{#1}%
3638 \fi
3639 \expandafter\put@me@back
3640 \fi
3641 \let\anchor@spot\@empty
3642 }

```

18 Compatibility with the *L^AT_EX2html* package

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

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

```

3643 \let\htmladdimg\hyperimage
3644 \def\htmladdnormallink#1#2{\href{#2}{#1}}
3645 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
3646 \def\htmlref#1#2{% anchor text, label
3647 \label@hyperref[{#2}]{#1}%
3648 }

```

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

```

3649 \def\@@latextohtmlX{%
3650 \let\hhyperref\hyperref
3651 \def\hyperref##1##2##3##4{% anchor text for HTML
3652 % text to print before label in print
3653 % label
3654 % post-label text in print
3655 ##2\ref{##4}##3%
3656 }%
3657 }

```

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.

```
3658 \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
```

```
3659 \def\HyField@NewFlag#1#2{%
3660   \lowercase{\HyField@NewOption{#2}}%
3661   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3662 }
```

```
\HyField@NewFlagOnly
```

```
3663 \def\HyField@NewFlagOnly#1#2{%
3664   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3665 }
```

```
\HyField@NewOption #1: option name
```

```
3666 \def\HyField@NewOption#1{%
3667   \expandafter\newif\csname ifFld@#1\endcsname
3668   \define@key{Field}{#1}[true]{%
3669     \lowercase{\Field@boolkey{##1}}{#1}%
3670   }%
3671 }
```

```
\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
```

```
3672 \def\HyField@NewBitsetFlag#1#2#3#4{%
3673   \begingroup
3674     \count@=#4\relax
3675     \advance\count@\m@ne
3676     \def\x##1{%
3677       \endgroup
3678       \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
3679       \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
3680         \expandafter\edef\csname HyField@#3@##1\endcsname{%
3681           (\number#4) #2%
3682         }%
3683       \else
3684         \expandafter\edef\csname HyField@#3@##1\endcsname{%
```

```

3685         \csname HyField@#3@##1\endcsname
3686         /#2%
3687     }%
3688     \fi
3689 }%
3690 \expandafter\x\expandafter{\the\count@}%
3691 }

\HyField@UseFlag The bit set is HyField@#1
3692 \def\HyField@UseFlag#1#2{%
3693     \lowercase{\HyField@@UseFlag{#2}}{#1}%
3694 }

\HyField@@UseFlag
3695 \def\HyField@@UseFlag#1#2{%
3696     \bitsetSetValue{HyField@#2}{%
3697         \csname HyField@#2@#1\endcsname
3698     }{%
3699         \csname ifFld@#1\endcsname 1\else 0\fi
3700     }%
3701 }

\HyField@SetFlag The bit set is HyField@#1
3702 \def\HyField@SetFlag#1#2{%
3703     \lowercase{\HyField@@SetFlag{#2}}{#1}%
3704 }

\HyField@@SetFlag
3705 \def\HyField@@SetFlag#1#2{%
3706     \bitsetSetValue{HyField@#2}{%
3707         \csname HyField@#2@#1\endcsname
3708     }{1}%
3709 }

\HyField@PrintFlags
3710 \def\HyField@PrintFlags#1#2{%
3711     \ifHy@verbose
3712         \begingroup
3713         \let\Hy@temp\@empty
3714         \let\MessageBreak\relax
3715         \expandafter\@for\expandafter\x\expandafter:\expandafter=%
3716         \bitsetGetSetBitList{HyField@#1}\do{%
3717             \edef\Hy@temp{%
3718                 \Hy@temp
3719                 \csname HyField@#1@\x\endcsname\MessageBreak
3720             }%
3721         }%
3722     \edef\x{\endgroup
3723         \noexpand\Hy@Info{%
3724             Field flags: %
3725             \expandafter\ifx\@car#1\@nil S\else/\fi
3726             #1 %
3727             \bitsetGetDec{HyField@#1} %
3728             (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
3729             \Hy@temp
3730         for #2%

```

```

3731      }%
3732    }\x
3733  \fi
3734 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

3735 \HyField@NewFlag{Ff}{ReadOnly}{1}
3736 \HyField@NewFlag{Ff}{Required}{2}
3737 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

3738 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
3739 \HyField@NewFlag{Ff}{Radio}{16}
3740 \HyField@NewFlag{Ff}{Pushbutton}{17}
3741 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

3742 \HyField@NewFlag{Ff}{Multiline}{13}
3743 \HyField@NewFlag{Ff}{Password}{14}
3744 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
3745 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3746 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
3747 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
3748 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

3749 \HyField@NewFlag{Ff}{Combo}{18}
3750 \HyField@NewFlag{Ff}{Edit}{19}
3751 \HyField@NewFlag{Ff}{Sort}{20}
3752 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
3753 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3754 \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.

```

3755 \newif\ifFld@popdown
3756 \define@key{Field}{popdown}[true]{%
3757   \lowercase{\Field@boolkey{#1}}{popdown}%
3758 }

```

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.

```

3759 \HyField@NewFlag{F}{Invisible}{1}
3760 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
3761 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
3762 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
3763 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
3764 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
3765 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
3766 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
3767 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

```



```

3768 \ifHy@pdfa
3769   \def\HyField@PDFAFlagWarning#1#2{%
3770     \Hy@Warning{%
3771       PDF/A: Annotation flag ‘#1’ must\MessageBreak
3772       be set to ‘#2’%
3773     }%
3774   }%
3775   \Fld@invisiblefalse
3776   \def\Fld@invisibletrue{%
3777     \HyField@PDFAFlagWarning{invisible}{false}%
3778   }%
3779   \Fld@hiddenfalse
3780   \def\Fld@hiddentrue{%
3781     \HyField@PDFAFlagWarning{hidden}{false}%
3782   }%
3783   \Fld@printtrue
3784   \def\Fld@printfalse{%
3785     \HyField@PDFAFlagWarning{print}{true}%
3786   }%
3787   \Fld@nozoomtrue
3788   \def\Fld@nozoomfalse{%
3789     \HyField@PDFAFlagWarning{nozoom}{true}%
3790   }%
3791   \Fld@norotatetrue
3792   \def\Fld@norotatefalse{%
3793     \HyField@PDFAFlagWarning{norotate}{true}%
3794   }%
3795   \Fld@noviewfalse
3796   \def\Fld@noviewtrue{%
3797     \HyField@PDFAFlagWarning{noview}{false}%
3798   }%
3799 \fi

```

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

```

3800 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
3801 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
3802 \HyField@NewFlag{Submit}{GetMethod}{4}
3803 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
3804 \HyField@NewFlagOnly{Submit}{XFDF}{6}
3805 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
3806 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
3807 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
3808 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
3809 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
3810 \HyField@NewFlag{Submit}{ExclFKey}{12}
3811 \HyField@NewFlag{Submit}{EmbedForm}{14}

3812 \define@key{Field}{export}{%
3813   \lowercase{\def\Hy@temp{#1}}%
3814   \@ifundefined{Fld@export@\Hy@temp}{%
3815     \@onelevel@sanitize\Hy@temp
3816     \PackageError{hyperref}{%
3817       Unknown export format ‘\Hy@temp’.\MessageBreak
3818       Known formats are ‘FDF’, ‘HTML’, ‘XFDF’, and ‘PDF’%
3819     }\@ehc
3820   }{%
3821     \let\Fld@export\Hy@temp
3822   }%

```

```

3823 }
3824 \def\Fld@export{fdf}
3825 \@namedef{Fld@export@fdf}{0}%
3826 \@namedef{Fld@export@html}{1}%
3827 \@namedef{Fld@export@xfdf}{2}%
3828 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

3829 \def\HyField@FlagsSubmit{%
3830   \bitsetReset{HyField@Submit}%
3831   \ifcase\@nameuse{Fld@export@}\Fld@export} %
3832   % FDF
3833   \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3834   \HyField@UseFlag{Submit}{SubmitCoordinates}%
3835   \HyField@UseFlag{Submit}{IncludeAppendSaves}%
3836   \HyField@UseFlag{Submit}{IncludeAnnotations}%
3837   \HyField@UseFlag{Submit}{CanonicalFormat}%
3838   \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
3839   \HyField@UseFlag{Submit}{ExclFKey}%
3840   \HyField@UseFlag{Submit}{EmbedForm}%
3841   \or % HTML
3842   \HyField@SetFlag{Submit}{ExportFormat}%
3843   \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3844   \HyField@UseFlag{Submit}{GetMethod}%
3845   \HyField@UseFlag{Submit}{SubmitCoordinates}%
3846   \HyField@UseFlag{Submit}{CanonicalFormat}%
3847   \or % XFDF
3848   \HyField@SetFlag{Submit}{XFDF}%
3849   \HyField@UseFlag{Submit}{IncludeNoValueFields}%
3850   \HyField@UseFlag{Submit}{SubmitCoordinates}%
3851   \HyField@UseFlag{Submit}{CanonicalFormat}%
3852   \or % PDF
3853   \HyField@SetFlag{Submit}{SubmitPDF}%
3854   \HyField@UseFlag{Submit}{GetMethod}%
3855   \fi
3856   \HyField@PrintFlags{Submit}{submit button field}%
3857   \bitsetIsEmpty{HyField@Submit}{%
3858     \def\Fld@submitflags{%
3859     }{%
3860     \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
3861     }%
3862 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

3863 \def\HyField@FlagsAnnot#1{%
3864   \bitsetReset{HyField@F}%
3865   \HyField@UseFlag{F}{Invisible}%
3866   \HyField@UseFlag{F}{Hidden}%
3867   \HyField@UseFlag{F}{Print}%
3868   \HyField@UseFlag{F}{NoZoom}%
3869   \HyField@UseFlag{F}{NoRotate}%
3870   \HyField@UseFlag{F}{NoView}%

```

```

3871 \HyField@UseFlag{F}{Locked}%
3872 \HyField@UseFlag{F}{ToggleNoView}%
3873 \HyField@UseFlag{F}{LockedContents}%
3874 \HyField@PrintFlags{F}{#1}%
3875 \bitsetIsEmpty{HyField@F}{%
3876     \def\Fld@annotflags{%
3877     }{%
3878     \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
3879     }%
3880 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

3881 \def\HyField@FlagsPushButton{%
3882 \HyField@FlagsAnnot{push button field}%
3883 \bitsetReset{HyField@Ff}%
3884 \HyField@UseFlag{Ff}{ReadOnly}%
3885 \HyField@UseFlag{Ff}{Required}%
3886 \HyField@UseFlag{Ff}{NoExport}%
3887 \HyField@SetFlag{Ff}{PushButton}%
3888 \HyField@PrintFlags{Ff}{push button field}%
3889 \bitsetIsEmpty{HyField@Ff}{%
3890     \def\Fld@flags{%
3891     }{%
3892     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
3893     }%
3894 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

3895 \def\HyField@FlagsCheckBox{%
3896 \HyField@FlagsAnnot{check box field}%
3897 \bitsetReset{HyField@Ff}%
3898 \HyField@UseFlag{Ff}{ReadOnly}%
3899 \HyField@UseFlag{Ff}{Required}%
3900 \HyField@UseFlag{Ff}{NoExport}%
3901 \HyField@PrintFlags{Ff}{check box field}%
3902 \bitsetIsEmpty{HyField@Ff}{%
3903     \def\Fld@flags{%
3904     }{%
3905     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
3906     }%
3907 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

3908 \def\HyField@FlagsRadioButton{%
3909 \HyField@FlagsAnnot{radio button field}%
3910 \bitsetReset{HyField@Ff}%
3911 \HyField@UseFlag{Ff}{ReadOnly}%
3912 \HyField@UseFlag{Ff}{Required}%
3913 \HyField@UseFlag{Ff}{NoExport}%
3914 \HyField@UseFlag{Ff}{NoToggleToOff}%

```

```

3915 \HyField@SetFlag{Ff}{Radio}%
3916 \HyField@UseFlag{Ff}{RadiosInUnison}%
3917 \HyField@PrintFlags{Ff}{radio button field}%
3918 \bitsetIsEmpty{HyField@Ff}{%
3919   \def\Fld@flags{%
3920 }{%
3921   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
3922 }%
3923 }

```

19.1.7 Text fields

\HyField@FlagsText

```

3924 \def\HyField@FlagsText{%
3925   \HyField@FlagsAnnot{text field}%
3926   \bitsetReset{HyField@Ff}%
3927   \HyField@UseFlag{Ff}{ReadOnly}%
3928   \HyField@UseFlag{Ff}{Required}%
3929   \HyField@UseFlag{Ff}{NoExport}%
3930   \HyField@UseFlag{Ff}{Multiline}%
3931   \HyField@UseFlag{Ff}{Password}%
3932   \HyField@UseFlag{Ff}{FileSelect}%
3933   \HyField@UseFlag{Ff}{DoNotSpellCheck}%
3934   \HyField@UseFlag{Ff}{DoNotScroll}%
3935   \ifFld@comb
3936     \ifcase0\ifFld@multiline
3937       \else\ifFld@password
3938       \else\ifFld@fileselect
3939       \else 1\fi\fi\fi\relax
3940     \PackageError{hyperref}{%
3941       Field option ‘comb’ cannot be used together with\MessageBreak
3942       ‘multiline’, ‘password’, or ‘fileselect’%
3943     }\@ehc
3944   \else
3945     \HyField@UseFlag{Ff}{Comb}%
3946   \fi
3947 \fi
3948 \HyField@UseFlag{Ff}{RichText}%
3949 \HyField@PrintFlags{Ff}{text field}%
3950 \bitsetIsEmpty{HyField@Ff}{%
3951   \def\Fld@flags{%
3952 }{%
3953   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
3954 }%
3955 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

3956 \def\HyField@FlagsChoice{%
3957   \HyField@FlagsAnnot{choice field}%
3958   \bitsetReset{HyField@Ff}%
3959   \HyField@UseFlag{Ff}{ReadOnly}%
3960   \HyField@UseFlag{Ff}{Required}%
3961   \HyField@UseFlag{Ff}{NoExport}%
3962   \HyField@UseFlag{Ff}{Combo}%

```

```

3963 \ifFld@combo
3964   \HyField@UseFlag{Ff}{Edit}%
3965 \fi
3966 \HyField@UseFlag{Ff}{Sort}%
3967 \HyField@UseFlag{Ff}{MultiSelect}%
3968 \ifFld@combo
3969   \ifFld@edit
3970     \HyField@UseFlag{Ff}{DoNotSpellCheck}%
3971   \fi
3972 \fi
3973 \HyField@UseFlag{Ff}{CommitOnSelChange}%
3974 \HyField@PrintFlags{Ff}{choice field}%
3975 \bitsetIsEmpty{HyField@Ff}{%
3976   \def\Fld@flags{%
3977 }{%
3978   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
3979 }%
3980 }

```

19.2 Choice field

```

3981 \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`.

```

3982 \def\Fld@PDFChoices#1{%
3983   \begingroup
3984     \gdef\Fld@choices{%
3985       \def\HyTmp@optlist{%
3986         \let\HyTmp@optitem\relax
3987         \count@=0 %
3988         \kv@parse{#1}{%
3989           \Hy@pdfstringdef\kv@key\kv@key
3990           \ifx\kv@value\relax
3991             \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
3992               \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
3993             \else
3994               \xdef\Fld@choices{\Fld@choices(\kv@key)}%
3995             \fi
3996           \else
3997             \Hy@pdfstringdef\kv@value\kv@value
3998             \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@value)]}%
3999           \fi
4000         \edef\HyTmp@optlist{%
4001           \HyTmp@optlist
4002           \HyTmp@optitem{\the\count@}{\kv@key}0%
4003         }%
4004         \advance\count@ by 1 %
4005         \@gobbletwo
4006       }%
4007       \xdef\Fld@choices{/Opt[\Fld@choices]}%
4008     \ifFld@multiselect
4009       \HyField@@PDFChoices{DV}\Fld@default
4010       \HyField@@PDFChoices{V}\Fld@value
4011     \else
4012       \ifx\Fld@default\relax

```

```

4013     \else
4014     \pdfstringdef\Hy@gtemp\Fld@default
4015     \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4016     \fi
4017     \ifx\Fld@value\relax
4018     \else
4019     \pdfstringdef\Hy@gtemp\Fld@value
4020     \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4021     \fi
4022     \fi
4023 \endgroup
4024 }

```

\HyField@@PDFChoices

```

4025 \def\HyField@@PDFChoices#1#2{%
4026     \ifx#2\relax
4027     \else
4028     \count@=0 %
4029     \def\HyTmp@optitem##1##2##3{%
4030     \def\HyTmp@key{##2}%
4031     \ifx\HyTmp@key\Hy@gtemp
4032     \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4033     \HyTmp@optlist
4034     \HyTmp@optitem{##1}{##2}1%
4035     }%
4036     \let\HyTmp@found=Y%
4037     \else
4038     \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4039     \HyTmp@optlist
4040     \HyTmp@optitem{##1}{##2}##3%
4041     }%
4042     \fi
4043     }%
4044     \expandafter\comma@parse\expandafter{#2}{%
4045     \pdfstringdef\Hy@gtemp\comma@entry
4046     \let\HyTmp@found=N %
4047     \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4048     \HyTmp@optlist
4049     \ifx\HyTmp@found Y%
4050     \advance\count@ by 1 %
4051     \else
4052     \@onelevel@sanitize\comma@entry
4053     \PackageWarning{hyperref}{%
4054     \string\ChoiceBox: Ignoring value ‘\comma@entry’,%
4055     \MessageBreak
4056     it cannot be found in the choices%
4057     }%
4058     \fi
4059     \@gobble
4060     }%
4061     \def\HyTmp@optitem##1##2##3{%
4062     \ifnum##3=1 %
4063     (##2)%
4064     \fi
4065     }%
4066     \ifcase\count@
4067     \or

```

```

4068     \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4069   \else
4070     \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]]}%
4071     \ifx#1V%
4072       \def\HyTmp@optitem##1##2##3{%
4073         \ifnum##3=1 %
4074           \@firstofone{ ##1}%
4075         \fi
4076       }%
4077     \edef\HyTmp@optlist{\HyTmp@optlist}%
4078     \xdef\Fld@choices{%
4079       \Fld@choices
4080       /I[\expandafter\@firstofone\HyTmp@optlist]}%
4081     }%
4082   \fi
4083 \fi
4084 \fi
4085 }

```

19.3 Forms

\HyField@SetKeys

```

4086 \def\HyField@SetKeys{%
4087   \setkeys{Field}%
4088 }

4089 \newif\ifFld@checked
4090 \newif\ifFld@disabled
4091 \Fld@checkedfalse
4092 \Fld@disabledfalse
4093 \newcount\Fld@menulength
4094 \newdimen\Fld@Width
4095 \newdimen\Fld@charsize
4096 \Fld@charsize=10\p@
4097 \def\Fld@maxlen{0}
4098 \def\Fld@align{0}
4099 \def\Fld@color{0 0 0 rg}
4100 \def\Fld@bcolor{1 1 1}
4101 \def\Fld@bordercolor{1 0 0}
4102 \def\Fld@bordersep{1\p@}
4103 \def\Fld@borderwidth{1}
4104 \def\Fld@borderstyle{S}
4105 \def\Fld@cbsymbol{4}
4106 \def\Fld@rotation{0}
4107 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4108 \def\endForm{\@endForm}
4109 \newif\ifForm@html
4110 \Form@htmlfalse
4111 \def\Form@boolkey#1#2{%
4112   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4113 }
4114 \define@key{Form}{action}{%
4115   \hyper@normalise\Hy@DefFormAction{#1}%
4116 }
4117 \def\Hy@DefFormAction{\def\Form@action}
4118 \def\enc@html{html}
4119 \define@key{Form}{encoding}{%

```

```

4120 \def\Hy@tempa{#1}%
4121 \ifx\Hy@tempa\enc@html
4122   \Form@htmltrue
4123   \def\Fld@export{html}%
4124 \else
4125   \typeout{hyperref: form 'encoding' key set to #1 %
4126     -- unknown type%
4127   }%
4128   \Form@htmlfalse
4129 \fi
4130 }
4131 \define@key{Form}{method}{%
4132   \lowercase{\def\Hy@temp{#1}}%
4133   \@ifundefined{Form@method@\Hy@temp}{%
4134     \@onelevel@sanitize\Hy@temp
4135     \PackageError{hyperref}{%
4136       Unknown method '\Hy@temp'.\MessageBreak
4137       Known values are 'post' and 'get'%
4138     }\@ehc
4139   }{%
4140     \let\Form@method\Hy@temp
4141     \ifcase\@nameuse{Form@method@\Hy@temp} %
4142       \Fld@getmethodfalse
4143     \else
4144       \Fld@getmethodtrue
4145     \fi
4146   }%
4147 }
4148 \def\Form@method{}
4149 \@namedef{Form@method@post}{0}
4150 \@namedef{Form@method@get}{1}
4151 \def\Field@boolkey#1#2{%
4152   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4153 }
4154 \newtoks\Field@toks
4155 \Field@toks={ }%
4156 \def\Field@addtoks#1#2{%
4157   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
4158   \@processme
4159 }
4160 \def\Fld@checkequals#1=#2=#3\{\%
4161   \def\@currDisplay{#1}%
4162   \ifx\#2\%
4163     \def\@currValue{#1}%
4164   \else
4165     \def\@currValue{#2}%
4166   \fi
4167 }
4168 \define@key{Field}{loc}{%
4169   \def\Fld@loc{#1}%
4170 }
4171 \define@key{Field}{checked}[true]{%
4172   \lowercase{\Field@boolkey{#1}}{checked}%
4173 }
4174 \define@key{Field}{disabled}[true]{%
4175   \lowercase{\Field@boolkey{#1}}{disabled}%
4176 }

```



```

4177 \define@key{Field}{accesskey}{%
4178   \Field@addtoks{accesskey}{#1}%
4179 }
4180 \define@key{Field}{tabkey}{%
4181   \Field@addtoks{tabkey}{#1}%
4182 }
4183 \define@key{Field}{name}{%
4184   \def\Fld@name{#1}%
4185 }
4186 \define@key{Field}{width}{%
4187   \def\Fld@width{#1}%
4188   \Field@Width#1\setbox0=\hbox{m}%
4189 }
4190 \define@key{Field}{maxlen}{%
4191   \def\Fld@maxlen{#1}%
4192 }
4193 \define@key{Field}{menulength}{%
4194   \Fld@menulength=#1\relax
4195 }
4196 \define@key{Field}{height}{%
4197   \def\Fld@height{#1}%
4198 }
4199 \define@key{Field}{charsize}{%
4200   \Fld@charsize#1%
4201 }
4202 \define@key{Field}{borderwidth}{%
4203   \def\Fld@borderwidth{#1}%
4204 }
4205 \define@key{Field}{borderstyle}{%
4206   \def\Fld@borderstyle{#1}%
4207 }
4208 \define@key{Field}{bordersep}{%
4209   \def\Fld@bordersep{#1}%
4210 }
4211 \define@key{Field}{default}{%
4212   \def\Fld@default{#1}%
4213 }
4214 \define@key{Field}{align}{%
4215   \def\Fld@align{#1}%
4216 }
4217 \define@key{Field}{value}{%
4218   \def\Fld@value{#1}%
4219 }
4220 \define@key{Field}{checkboxsymbol}{%
4221   \def\Fld@cbsymbol{#1}%
4222 }
4223 \define@key{Field}{rotation}{%
4224   \def\Fld@rotation{#1}%
4225 }
4226 \define@key{Field}{backgroundcolor}{%
4227   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
4228 }
4229 \define@key{Field}{bordercolor}{%
4230   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
4231 }
4232 \define@key{Field}{color}{%
4233   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%

```

```

4234 }
4235 \def\Fld@format@code{}
4236 \def\Fld@validate@code{}
4237 \def\Fld@calculate@code{}
4238 \def\Fld@keystroke@code{}
4239 \def\Fld@onfocus@code{}
4240 \def\Fld@onblur@code{}
4241 \def\Fld@onmousedown@code{}
4242 \def\Fld@onmouseup@code{}
4243 \def\Fld@onenter@code{}
4244 \def\Fld@onexit@code{}
4245 \def\Hy@temp#1{%
4246   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
4247 }
4248 \def\Hy@@temp#1#2{%
4249   \ifHy@pdfa
4250     \define@key{Field}{#2}{%
4251       \PackageError{hyperref}{%
4252         PDF/A: Additional action ‘#2’ is prohibited%
4253       }\@ehc
4254     }%
4255   \else
4256     \define@key{Field}{#2}{%
4257       \def#1{##1}%
4258     }%
4259   \fi
4260 }
4261 \Hy@temp{keystroke}
4262 \Hy@temp{format}
4263 \Hy@temp{validate}
4264 \Hy@temp{calculate}
4265 \Hy@temp{onfocus}
4266 \Hy@temp{onblur}
4267 \Hy@temp{onenter}
4268 \Hy@temp{onexit}
4269 \def\Hy@temp#1{%
4270   \define@key{Field}{#1}{%
4271     \Field@addtoks{#1}{##1}%
4272   }%
4273 }
4274 \Hy@temp{onselect}
4275 \Hy@temp{onchange}
4276 \Hy@temp{ondblclick}
4277 \Hy@temp{onmousedown}
4278 \Hy@temp{onmouseup}
4279 \Hy@temp{onmouseover}
4280 \Hy@temp{onmousemove}
4281 \Hy@temp{onmouseout}
4282 \Hy@temp{onkeypress}
4283 \Hy@temp{onkeydown}
4284 \Hy@temp{onkeyup}
4285 \ifHy@pdfa
4286   \define@key{Field}{onclick}{%
4287     \PackageError{hyperref}{%
4288       PDF/A: Action ‘onclick’ is prohibited%
4289     }\@ehc
4290   }%

```

```

4291 \else
4292   \define@key{Field}{onclick}{%
4293     \def\Fld@onclick{#1}%
4294     \Field@addtoks{onclick}{#1}%
4295   }%
4296 \fi

4297 \DeclareRobustCommand\TextField{%
4298   \@ifnextchar[{\@TextField}{\@TextField[]}%
4299 }
4300 \DeclareRobustCommand\ChoiceMenu{%
4301   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
4302 }
4303 \DeclareRobustCommand\CheckBox{%
4304   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
4305 }
4306 \DeclareRobustCommand\PushButton{%
4307   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
4308 }
4309 \DeclareRobustCommand\Gauge{%
4310   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
4311 }
4312 \DeclareRobustCommand\Submit{%
4313   \@ifnextchar[{\@Submit}{\@Submit[]}%
4314 }
4315 \DeclareRobustCommand\Reset{%
4316   \@ifnextchar[{\@Reset}{\@Reset[]}%
4317 }
4318 \def\LayoutTextField#1#2{% label, field
4319   #1 #2%
4320 }
4321 \def\LayoutChoiceField#1#2{% label, field
4322   #1 #2%
4323 }
4324 \def\LayoutCheckField#1#2{% label, field
4325   #1 #2%
4326 }
4327 \def\LayoutPushButtonField#1{% button
4328   #1%
4329 }
4330 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4331 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4332 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4333 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4334 \def\MakeButtonField#1{%
4335   \sbox0{%
4336     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
4337   }%
4338   \@tempdima\ht0 %
4339   \advance\@tempdima by \Fld@borderwidth bp %
4340   \advance\@tempdima by \Fld@borderwidth bp %
4341   \ht0\@tempdima
4342   \@tempdima\dp0 %
4343   \advance\@tempdima by \Fld@borderwidth bp %
4344   \advance\@tempdima by \Fld@borderwidth bp %
4345   \dp0\@tempdima
4346   \box0\relax
4347 }

```

```

4348 \def\DefaultHeightofSubmit{14pt}
4349 \def\DefaultWidthofSubmit{2cm}
4350 \def\DefaultHeightofReset{14pt}
4351 \def\DefaultWidthofReset{2cm}
4352 \def\DefaultHeightofCheckBox{\baselineskip}
4353 \def\DefaultWidthofCheckBox{\baselineskip}
4354 \def\DefaultHeightofChoiceMenu{\baselineskip}
4355 \def\DefaultWidthofChoiceMenu{\baselineskip}
4356 \def\DefaultHeightofText{\baselineskip}
4357 \def\DefaultHeightofTextMultiline{4\baselineskip}
4358 \def\DefaultWidthofText{3cm}
4359 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
4360 \def\DefaultOptionsofReset{print,name=Reset,noexport}
4361 \def\DefaultOptionsofPushButton{print}
4362 \def\DefaultOptionsofCheckBox{print}
4363 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

4364 \def\DefaultOptionsofListBox{print}
4365 \def\DefaultOptionsofComboBox{print,edit,sort}
4366 \def\DefaultOptionsofPopdownBox{print}
4367 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

4368 \ifHy@figures
4369 \Hy@Info{Hyper figures ON}%
4370 \else
4371 \Hy@Info{Hyper figures OFF}%
4372 \fi
4373 \ifHy@nesting
4374 \Hy@Info{Link nesting ON}%
4375 \else
4376 \Hy@Info{Link nesting OFF}%
4377 \fi
4378 \ifHy@hyperindex
4379 \Hy@Info{Hyper index ON}%
4380 \else
4381 \Hy@Info{Hyper index OFF}%
4382 \fi
4383 \ifHy@backref
4384 \Hy@Info{backreferencing ON}%
4385 \else
4386 \Hy@Info{backreferencing OFF}%
4387 \fi
4388 \ifHy@colorlinks
4389 \Hy@Info{Link coloring ON}%
4390 \else
4391 \Hy@Info{Link coloring OFF}%
4392 \fi
4393 \ifHy@ocgcolorlinks
4394 \Hy@Info{Link coloring with OCG ON}%
4395 \else
4396 \Hy@Info{Link coloring with OCG OFF}%
4397 \fi
4398 \ifHy@pdfa
4399 \Hy@Info{PDF/A mode ON}%

```

```

4400 \else
4401   \Hy@Info{PDF/A mode OFF}%
4402 \fi

```

21 Low-level utility macros

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

```

4403 \edef\hyper@hash{\string#}
4404 \edef\hyper@tilde{\string~}
4405 \edef\hyper@quote{\string"}
4406 \let\@currentHref\@empty
4407 \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.

```

4408 \AfterBeginDocument{%
4409   \Hy@pdfstringtrue
4410   \PDF@SetupDoc
4411   \let\PDF@SetupDoc\@empty
4412   \Hy@DisableOption{pdfpagescrop}%
4413   \Hy@DisableOption{pdfpagemode}%
4414   \Hy@DisableOption{pdfnonfullscreenpagemode}%
4415   \Hy@DisableOption{pdfdirection}%
4416   \Hy@DisableOption{pdfviewarea}%
4417   \Hy@DisableOption{pdfviewclip}%
4418   \Hy@DisableOption{pdfprintarea}%
4419   \Hy@DisableOption{pdfprintclip}%
4420   \Hy@DisableOption{pdfprintscaling}%
4421   \Hy@DisableOption{pdfduplex}%
4422   \Hy@DisableOption{pdfpicktraybypdfsize}%
4423   \Hy@DisableOption{pdfprintpagerange}%
4424   \Hy@DisableOption{pdfnumcopies}%
4425   \Hy@DisableOption{pdfstartview}%
4426   \Hy@DisableOption{pdfstartpage}%
4427   \Hy@DisableOption{pdftoolbar}%
4428   \Hy@DisableOption{pdfmenubar}%
4429   \Hy@DisableOption{pdfwindowui}%
4430   \Hy@DisableOption{pdffitwindow}%
4431   \Hy@DisableOption{pdfcenterwindow}%
4432   \Hy@DisableOption{pdfdisplaydoctitle}%
4433   \Hy@DisableOption{pdfpagelayout}%
4434   \Hy@DisableOption{pdflang}%
4435   \Hy@DisableOption{baseurl}%
4436   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
4437   \Hy@pdfstringfalse
4438 }

```

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.

```

4439 \def\NoHyper{%
4440   \def\hyper@link@{##1}##2##3##4{##4}%
4441   \def\hyper@@anchor##1{ }%

```

```

4442 \global\let\hyper@livelink\hyper@link
4443 \gdef\hyper@link##1##2##3{##3}%
4444 \def\hyper@anchorstart##1{}%
4445 \let\hyper@anchorend\@empty
4446 \def\hyper@linkstart##1##2{}%
4447 \let\hyper@linkend\@empty
4448 \def\hyper@linkurl##1##2{##1}%
4449 \def\hyper@linkfile##1##2##3{##1}%
4450 \def\hyper@link@{##1}##2##3{}%
4451 \let\Hy@backout\@gobble
4452 }
4453 \def\stop@hyper{%
4454 \def\hyper@link@{##1}##2##3##4{##4}%
4455 \let\Hy@backout\@gobble
4456 \def\hyper@@anchor##1{}%
4457 \def\hyper@link##1##2##3{##3}%
4458 \def\hyper@anchorstart##1{}%
4459 \let\hyper@anchorend\@empty
4460 \def\hyper@linkstart##1##2{}%
4461 \let\hyper@linkend\@empty
4462 \def\hyper@linkurl##1##2{##1}%
4463 \def\hyper@linkfile##1##2##3{##1}%
4464 \def\hyper@link@{##1}##2##3{}%
4465 }
4466 \def\endNoHyper{%
4467 \global\let\hyper@link\hyper@livelink
4468 }
4469 </package>

```

23 Package nohyperref

This package is introduced by Sebastian Rahtz.

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

Some low-level commands:

```

4470 <{*nohyperref}
4471 \let\hyper@@anchor\@gobble
4472 \def\hyper@link#1#2#3{#3}%
4473 \let\hyper@anchorstart\@gobble
4474 \let\hyper@anchorend\@empty
4475 \let\hyper@linkstart\@gobbletwo
4476 \let\hyper@linkend\@empty
4477 \def\hyper@linkurl#1#2{#1}%
4478 \def\hyper@linkfile#1#2#3{#1}%
4479 \def\hyper@link@{#1}#2#3{}%
4480 \let\PDF@SetupDoc\@empty
4481 \let\PDF@FinishDoc\@empty
4482 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

4483 \def\Acrobatmenu#1#2{\leavevmode#2}
4484 \let\pdfstringdefDisableCommands\@gobbletwo
4485 \let\texorpdfstring\@firstoftwo
4486 \let\pdfbookmark\@undefined

```

```

4487 \newcommand\pdfbookmark[3] [] {}
4488 \let\phantomsection\@empty
4489 \let\hypersetup\@gobble
4490 \let\hyperbaseurl\@gobble
4491 \let\href\@gobble
4492 \let\hyperdef\@gobbletwo
4493 \let\hyperlink\@gobble
4494 \let\hypertarget\@gobble
4495 \def\hyperref{%
4496   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
4497 }
4498 \long\def\@gobbleopt[#1]{}
4499 \let\hyperpage\@empty
4500 \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}

```

4501 \package
4502 \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.

```

4503 \if@filesw
4504   \ifHy@typexml
4505     \immediate\closeout\@mainaux
4506     \immediate\openout\@mainaux\jobname.aux\relax
4507     \immediate\write\@auxout{<relaxxml>\relax}%
4508   \fi
4509   \immediate\write\@auxout{%
4510     \string\ifx\string\hyper@anchor\string\@undefined^^J%
4511     \global\let\string\oldcontentsline\string\contentsline^^J%
4512     \gdef\string\contentsline%
4513       \string#1\string#2\string#3\string#4{%
4514       \string\oldcontentsline%
4515       {\string#1}{\string#2}{\string#3}}^^J%
4516     \global\let\string\oldnewlabel\string\newlabel^^J%
4517     \gdef\string\newlabel\string#1\string#2{%
4518     \string\newlabelxx{\string#1}\string#2}^^J%
4519     \gdef\string\newlabelxx%
4520     \string#1\string#2\string#3\string#4\string#5\string#6{%
4521     \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.

```

4522   \string\AtEndDocument{%
4523     \let\string\contentsline\string\oldcontentsline^^J%
4524     \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.

```

4525   \string\else^^J%
4526   \global\let\string\hyper@last\relax^^J%

```

```

4527     \string\fi^^J%
4528   }%
4529   \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.

```

4530   \ifx\hyper@last\@undefined
4531     \def\@starttoc#1{%
4532       \begingroup
4533         \makeatletter
4534         \IfFileExists{\jobname.#1}{%
4535           \Hy@WarningNoLine{%
4536             old #1 file detected, not used; run LaTeX again%
4537           }%
4538         }{%
4539           \if@filesw
4540             \expandafter\newwrite\csname tf@#1\endcsname
4541             \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
4542           \fi
4543           \@nobreakfalse
4544         \endgroup
4545       }%
4546     \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
4547   \fi
4548 }

```

25 Title strings

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

```

4549 \ifHy@usetitle
4550   \let\HyOrg@title\title
4551   \let\HyOrg@author\author
4552   \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
4553   \def\Hy@scanopttitle[#1]{%
4554     \gdef\Hy@title{#1}%
4555     \HyOrg@title[{#1}]%
4556   }%
4557   \def\Hy@scantitle#1{%
4558     \gdef\Hy@title{#1}%
4559     \HyOrg@title{#1}%
4560   }%
4561   \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
4562   \def\Hy@scanoptauthor[#1]{%
4563     \gdef\Hy@author{#1}%
4564     \HyOrg@author[{#1}]%
4565   }%
4566   \def\Hy@scanauthor#1{%
4567     \gdef\Hy@author{#1}%
4568     \HyOrg@author{#1}%
4569   }%

```


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.

```

4570 \begingroup
4571 \def\process@me#1\@nil#2{%
4572 \expandafter\let\expandafter\x\csname @#2\endcsname
4573 \edef\y{\expandafter\strip@prefix\meaning\x}%
4574 \def\c##1##2\@nil{%
4575 \ifx\\##1\\%
4576 \else
4577 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
4578 \expandafter{\x}%
4579 \fi
4580 }%
4581 \expandafter\c\y\relax#1\@nil
4582 }%
4583 \expandafter\process@me\string\@latex@\@nil{title}%
4584 \expandafter\process@me\string\@latex@\@nil{author}%
4585 \endgroup
4586 \fi
4587 \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.

```

4588 \def\Hy@UseMaketitleString#1{%
4589 \@ifundefined{Hy@#1}{-}{%
4590 \begingroup
4591 \let\Hy@saved@hook\pdfstringdefPreHook
4592 \pdfstringdefDisableCommands{%
4593 \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
4594 \let\newline\\%
4595 }%
4596 \expandafter\ifx\csname @pdf#1\endcsname\@empty
4597 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
4598 \csname Hy@#1\endcsname\@empty
4599 }%
4600 \fi
4601 \global\let\pdfstringdefPreHook\Hy@saved@hook
4602 \endgroup
4603 }%
4604 }
4605 \def\Hy@newline@title#1{ #1}
4606 \def\Hy@newline@author#1{, #1}
4607 \def\Hy@UseMaketitleInfos{%
4608 \Hy@UseMaketitleString{title}%
4609 \Hy@UseMaketitleString{author}%
4610 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```
4611 \RequirePackage{atbegshi}[2007/09/09]
4612 \def\Hy@EveryPageHook{}
4613 \def\Hy@EveryPageBoxHook{}
4614 \def\Hy@FirstPageHook{}
4615 \AtBeginShipout{%
4616   \Hy@EveryPageHook
4617   \ifx\Hy@EveryPageBoxHook\@empty
4618   \else
4619     \setbox\AtBeginShipoutBox=\vbox{%
4620       \offinterlineskip
4621       \Hy@EveryPageBoxHook
4622       \box\AtBeginShipoutBox
4623     }%
4624   \fi
4625 }
4626 \AtBeginShipoutFirst{%
4627   \Hy@FirstPageHook
4628 }
4629 \g@addto@macro\Hy@FirstPageHook{%
4630   \PDF@FinishDoc
4631   \gdef\PDF@FinishDoc{}}%
4632 }
```

27.1 PDF /PageLabels

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

```
4633 \ifHy@pagelabels
4634   \begingroup\expandafter\expandafter\expandafter\endgroup
4635   \expandafter\ifx\csname thepage\endcsname\relax
4636     \Hy@pagelabelsfalse
4637     \Hy@WarningNoLine{%
4638       Option 'pdfpagelabels' is turned off\MessageBreak
4639       because \string\thepage\space is undefined%
4640     }%
4641     \csname fi\endcsname
4642     \csname iffalse\expandafter\endcsname
4643   \fi
```

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

```
4644 \def\thispdfpagelabel#1{%
4645   \gdef\HyPL@thisLabel{#1}%
4646 }%
4647 \global\let\HyPL@thisLabel\relax
```

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

```
4648 \def\HyPL@Labels{}
```

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

```
4649 \newcount\Hy@abspage
4650 \Hy@abspage=0 %
```

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

```
4651 \def\HyPL@LastType{init}%
4652 \def\HyPL@LastNumber{0}%
4653 \def\HyPL@LastPrefix{}
```

Definitions for the PDF names of the \LaTeX pendants.

```
4654 \def\HyPL@arabic{D}%
4655 \def\HyPL@Roman{R}%
4656 \def\HyPL@roman{r}%
4657 \def\HyPL@Alph{A}%
4658 \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.

```
4659 \def\HyPL@EveryPage{%
4660   \begingroup
4661   \ifx\HyPL@thisLabel\relax
4662     \let\HyPL@page\thepage
4663   \else
4664     \let\HyPL@page\HyPL@thisLabel
4665     \global\let\HyPL@thisLabel\relax
4666   \fi
4667   \let\HyPL@Type\relax
4668   \ifnum\the\c@page>0 %
4669     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
4670   \fi
4671   \let\Hy@temp Y%
4672   \ifx\HyPL@Type\HyPL@LastType
4673   \else
4674     \let\Hy@temp N%
4675   \fi
4676   \ifx\HyPL@Type\relax
4677     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
4678   \else
4679     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
4680   \fi
4681   \ifx\HyPL@Prefix\HyPL@LastPrefix
4682   \else
4683     \let\Hy@temp N%
4684   \fi
4685   \if Y\Hy@temp
4686     \advance\c@page by -1 %
4687     \ifnum\HyPL@LastNumber=\the\c@page\relax
4688     \else
4689       \let\Hy@temp N%
4690     \fi
4691     \Hy@StepCount\c@page
4692   \fi
4693   \if N\Hy@temp
4694     \ifx\HyPL@Type\relax
4695       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
4696     \else
4697       \HyPL@StorePageLabel{%
4698         \ifx\HyPL@Prefix\@empty
4699         \else
4700           /P(\HyPL@Prefix)%
4701         \fi
```

```

4702         /S/\csname HyPL\HyPL@Type\endcsname
4703         \ifnum\the\c@page=1 %
4704         \else
4705         \space/St \the\c@page
4706         \fi
4707     }%
4708     \fi
4709 \fi
4710 \xdef\HyPL@LastNumber{\the\c@page}%
4711 \global\let\HyPL@LastType\HyPL@Type
4712 \global\let\HyPL@LastPrefix\HyPL@Prefix
4713 \endgroup
4714 \Hy@GlobalStepCount\Hy@abspage
4715 }%

```

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

```

4716 \def\HyPL@CheckThePage#1\@nil{%
4717     \HyPL@@CheckThePage{#1}\csname\endcsname\c@page\@nil
4718 }%

```

`\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`.

```

4719 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
4720     \def\Hy@tempa{#4}%
4721     \def\Hy@tempb{\csname\endcsname\c@page}%
4722     \ifx\Hy@tempa\Hy@tempb
4723         \expandafter\ifx\csname HyPL#3\endcsname\relax
4724         \else
4725             \def\HyPL@Type{#3}%
4726             \def\HyPL@Prefix{#2}%
4727         \fi
4728     \else
4729         \begingroup
4730             \let\Hy@next\endgroup
4731             \let\HyPL@found\@undefined
4732             \def\arabic{\HyPL@Format{arabic}}%
4733             \def\Roman{\HyPL@Format{Roman}}%
4734             \def\roman{\HyPL@Format{roman}}%
4735             \def\Alph{\HyPL@Format{Alph}}%
4736             \def\alph{\HyPL@Format{alph}}%
4737             \protected@edef\Hy@temp{#1}%
4738             \ifx\HyPL@found\relax
4739                 \toks@{\expandafter{\Hy@temp}}%
4740             \edef\Hy@next{\endgroup
4741                 \noexpand\HyPL@@@CheckThePage\the\toks@
4742                 \noexpand\HyPL@found\relax\noexpand\@nil
4743             }%
4744             \fi
4745             \Hy@next
4746         \fi
4747     }%

```

`\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`.

```

4748 \def\HyPL@Format#1#2{%
4749   \ifx\HyPL@found\undefined
4750     \expandafter\ifx\csname c@#2\endcsname\c@page
4751       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
4752     \else
4753       \expandafter\noexpand\csname#1\endcsname{#2}%
4754     \fi
4755   \else
4756     \expandafter\noexpand\csname#1\endcsname{#2}%
4757   \fi
4758 }%

```

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

```

4759 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
4760   \def\Hy@tempa{#3}%
4761   \def\Hy@tempb{\HyPL@found\relax}%
4762   \ifx\Hy@tempa\Hy@tempb
4763     \def\HyPL@Type{#2}%
4764     \def\HyPL@Prefix{#1}%
4765   \fi
4766 }%

```

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

```

4767 \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`.

```

4768 \def\HyPL@Useless{0<</S/D>>}%
4769 \@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.

```

4770 \def\HyPL@SetPageLabels{%
4771   \@onelevel@sanitize\HyPL@Labels
4772   \ifx\HyPL@Labels\@empty
4773     \else
4774       \ifx\HyPL@Labels\HyPL@Useless
4775       \else
4776         \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
4777       \fi
4778     \fi
4779 }%

```

```

4780 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
4781 \fi

```

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

```

4782 \Hy@DisableOption{pdfpagelabels}
4783 </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

```
4784 <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.

```
4785 <*vTeX>
4786 \providecommand*{\XR@ext}{pdf}
4787 \edef\Hy@VTeXversion{%
4788   \ifx\VTeXversion\@undefined
4789     \z@
4790   \else
4791     \ifx\VTeXversion\relax
4792       \z@
4793     \else
4794       \VTeXversion
4795     \fi
4796   \fi
4797 }
4798 \begingroup
4799   \ifnum\Hy@VTeXversion<660 %
4800     \gdef\Hy@PutCatalog#1{%
4801       \Hy@WarningNoLine{%
4802         VTeX 6.59g or above required for pdfpagelabels%
4803       }%
4804     }%
4805   \else
4806     \gdef\Hy@PutCatalog#1{%
4807       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
4808     }%
4809     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
4810       \ifx\#2\%
4811         \else
4812           \immediate\special{!pdfpagelabels #2}%
4813         \fi
4814       }%
4815     \fi
4816 \endgroup
4817 </vTeX>
4818 <*pdfTeX | vTeX>
```

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

```
4819 \ifHy@pagelabels
4820   \def\HyPL@StorePageLabel#1{%
4821     \toks@\expandafter{\HyPL@Labels}%
4822     \xdef\HyPL@Labels{%
4823       \the\toks@
4824       \the\Hy@abspage<<#1>>%
4825     }%
4826   }%
```

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.

```
4827 \@ifclassloaded{revtex4}{%
4828   \g@addto@macro\clear@document{\HyPL@SetPageLabels}%
}
```

```

4829 }{%
4830   \AtEndDocument{\clearpage\HyPL@SetPageLabels}%
4831 }%

4832 \fi
4833 </pdfTeX | vTeX>

```

27.1.2 pdfmarkbase, dvipdfm

```

4834 <*pdfmarkbase>
4835 \begingroup
4836   \toks@{\expandafter{\Hy@FirstPageHook}}%
4837   \xdef\Hy@FirstPageHook{%
4838     \noexpand\headerps@out{%
4839       systemdict /pdfmark known%
4840       {%
4841         userdict /?pdfmark systemdict /exec get put%
4842       }{%
4843         userdict /?pdfmark systemdict /pop get put %
4844         userdict /pdfmark systemdict /cleartomark get put%
4845       }%
4846       ifelse%
4847     }%
4848     \the\toks@
4849   }%
4850 \endgroup
4851 </pdfmarkbase>

\Hy@PutCatalog

4852 <dvipdfm>\def\Hy@PutCatalog#1{\@pdfmark{docview << #1 >>}}
4853 <*pdfmarkbase>
4854 \def\Hy@PutCatalog#1{%
4855   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
4856 }
4857 </pdfmarkbase>

4858 <*pdfmarkbase | dvipdfm>
4859 \ifHy@pagelabels

```

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

```

4860 \def\HyPL@StorePageLabel#1{%
4861   \if@filesw
4862     \begingroup
4863       \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
4864       \immediate\write\@mainaux{%
4865         \string\HyPL@Entry{\Hy@tempa}%
4866       }%
4867     \endgroup
4868   \fi
4869 }%

```

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.

```

4870 \AfterBeginDocument{%
4871   \if@filesw
4872     \immediate\write\@mainaux{%
4873       \string\providecommand\string*\string\HyPL@Entry[1]{}%
4874     }%

```

```

4875 \fi
4876 \ifx\HyPL@Labels\@empty
4877 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
4878 \else
4879 \HyPL@SetPageLabels
4880 \fi
4881 \let\HyPL@Entry\@gobble
4882 }%

\HyPL@Entry

4883 \def\HyPL@Entry#1{%
4884 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
4885 \HyPL@Labels
4886 #1%
4887 }%
4888 }%

4889 \fi
4890 </pdfmarkbase | dvipdfm>
4891 <*package>
4892 \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 it's 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

```

4893 \def\Hy@CounterExists#1{%
4894 \begingroup\expandafter\expandafter\expandafter\endgroup
4895 \expandafter\ifx\csname c@#1\endcsname\relax
4896 \expandafter\@gobble
4897 \else
4898 \begingroup\expandafter\expandafter\expandafter\endgroup
4899 \expandafter\ifx\csname the#1\endcsname\relax
4900 \expandafter\expandafter\expandafter\@gobble
4901 \else
4902 \expandafter\expandafter\expandafter\@firstofone
4903 \fi
4904 \fi
4905 }
4906 \Hy@CounterExists{section}{%

```



```

4907 \newcommand\theHequation{\theHsection.\arabic{equation}}%
4908 }
4909 \Hy@CounterExists{part}{%
4910 \newcommand\theHpart{\arabic{part}}%
4911 }
4912 \@ifundefined{thechapter}{%
4913 \newcommand\theHsection {\arabic{section}}%
4914 \newcommand\theHfigure {\arabic{figure}}%
4915 \newcommand\theHtable {\arabic{table}}%
4916 }{%
4917 \newcommand\theHchapter {\arabic{chapter}}%
4918 \newcommand\theHfigure {\theHchapter.\arabic{figure}}%
4919 \newcommand\theHtable {\theHchapter.\arabic{table}}%
4920 \newcommand\theHsection {\theHchapter.\arabic{section}}%
4921 }
4922 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
4923 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
4924 \newcommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
4925 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
4926 \newcommand\theHtheorem {\theHsection.\arabic{theorem}}
4927 \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.

```

4928 \let\H@item\item
4929 \newcounter{Item}
4930 \def\theHItem{\arabic{Item}}
4931 \def\item{%
4932 \@hyper@itemfalse
4933 \if@nmbrlist\@hyper@itemtrue\fi
4934 \H@item
4935 }
4936 \newcommand\theHenumi {\theHItem}
4937 \newcommand\theHenumii {\theHItem}
4938 \newcommand\theHenumiii {\theHItem}
4939 \newcommand\theHenumiv {\theHItem}
4940 \newcommand\theHHfootnote {\arabic{Hfootnote}}
4941 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
4942 \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.

```

4943 \let\H@refstepcounter\refstepcounter
4944 \edef\name@of@eq{equation}%
4945 \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.

```

4946 \newif\if@hyper@item
4947 \newif\if@skiphyperref
4948 \@hyper@itemfalse
4949 \@skiphyperreffalse
4950 \def\refstepcounter#1{%
4951 \ifHy@pdfstring
4952 \else

```

```

4953 \H@refstepcounter{#1}%
4954 \edef\This@name{#1}%
4955 \ifx\This@name\name@of@slide
4956 \else
4957 \if@skiphyperref
4958 \else
4959 \if@hyper@item
4960 \stepcounter{Item}%
4961 \hyper@refstepcounter{Item}%
4962 \@hyper@itemfalse
4963 \else
4964 \hyper@refstepcounter{#1}%
4965 \fi
4966 \fi
4967 \fi
4968 \fi
4969 }

```

AMS^LTEX 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.

```

4970 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

4971 \def\hyper@refstepcounter#1{%
4972 \edef\This@name{#1}%
4973 \ifx\This@name\name@of@eq
4974 \ifundefined{theHequation}{%
4975 \make@stripped@name{\theequation}%
4976 \let\theHequation\newname
4977 }{}%
4978 \fi
4979 \ifundefined{theH#1}{%
4980 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
4981 }{}%
4982 \hyper@makecurrent{#1}%
4983 \ifmeasuring@
4984 \else
4985 \Hy@raisedlink{%
4986 \hyper@anchorstart{\@currentHref}\hyper@anchorend
4987 }%
4988 \fi
4989 }

```

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`.

```

4990 \begingroup\expandafter\expandafter\expandafter\endgroup
4991 \expandafter\ifx\csname chapter\endcsname\relax
4992 \def\Hy@chapterstring{section}%
4993 \else
4994 \def\Hy@chapterstring{chapter}%
4995 \fi
4996 \def\Hy@appendixstring{appendix}

```

```

4997 \def\Hy@chapapp{\Hy@chapterstring}
4998 \let\HyOrg@appendix\appendix
4999 \def\appendix{%
5000   \@ifundefined{chapter}%
5001     {\gdef\theHsection{\Alph{section}}}%
5002     {\gdef\theHchapter{\Alph{chapter}}}%
5003   \xdef\Hy@chapapp{\Hy@appendixstring}%
5004   \HyOrg@appendix
5005 }

```

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

```

5006 \def\hyper@makecurrent#1{%
5007   \begingroup
5008     \edef\Hy@param{#1}%
5009     \ifx\Hy@param\Hy@chapterstring
5010       \let\Hy@param\Hy@chapapp
5011     \fi
5012     \ifHy@hypertextnames
5013       \let\@number\@firstofone
5014       \@ifundefined{latin@Alph}{-}{%
5015         \ifx\@Alph\greek@Alph
5016           \def\@Alph{Alph\@arabic}%
5017         \fi
5018       }%
5019       \ifx\@Alph\@Alph@bul
5020         \def\@Alph{Alph\@arabic}%
5021       \fi
5022       \ifx\@alph\@alph@bul
5023         \def\@alph{alph\@arabic}%
5024       \fi
5025     \ifHy@naturalnames
5026       \let\textlatin\@firstofone
5027       \xdef\@currentHlabel{\csname the#1\endcsname}%
5028     \else
5029       \xdef\@currentHlabel{\csname theH#1\endcsname}%
5030     \fi
5031     \xdef\@currentHref{%
5032       \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5033     }%
5034     \else
5035       \Hy@GlobalStepCount\Hy@linkcounter
5036       \xdef\@currentHref{\Hy@param.\the\Hy@linkcounter}%
5037     \fi
5038   \endgroup
5039 }

5040 \@ifpackageloaded{fancyvrb}{%
5041   \def\FV@StepLineNo{%
5042     \FV@SetLineNo
5043     \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
5044     \FV@StepLineNo
5045   }%
5046 }{}

```

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 hypertexnames 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`

```

5047 \AtBeginDocument{%
5048   \@ifclassloaded{revtex4}{%
5049     \namedef{ver@lastpage.sty}{1994/06/25}%
5050   }{}%
5051   \@ifpackageloaded{lastpage}{%
5052     \ifHy@pageanchor
5053     \else
5054       \Hy@WarningNoLine{%
5055         The \string\pageref{LastPage} link doesn't work\MessageBreak
5056         with disabled option 'pageanchor'%
5057       }%
5058     \fi
5059     \def\lastpage@putlabel{%
5060       \addtocounter{page}{-1}%
5061       \if@filesw
5062         \begingroup
5063           \let\@number\@firstofone
5064           \ifHy@pageanchor
5065             \ifHy@hypertexnames
5066               \ifHy@plainpages
5067                 \def\Hy@temp{\arabic{page}}%
5068               \else
5069                 \Hy@unicodedefalse
5070                 \pdfstringdef\Hy@temp{\thepage}%
5071               \fi
5072             \else
5073               \def\Hy@temp{\the\Hy@pagecounter}%
5074             \fi
5075           \fi
5076           \immediate\write\@auxout{%
5077             \string\newlabel
5078             {LastPage}{\thepage}{\thepage}{\thepage}{\thepage}{\thepage}%
5079             \ifHy@pageanchor page.\Hy@temp\fi}{}}%
5080         }%
5081       \endgroup
5082     \fi
5083     \addtocounter{page}{1}%
5084   }%
5085   \@ifclassloaded{revtex4}{%
5086     \begingroup
5087       \toks@\expandafter{\lastpage@putlabel}%
5088       \edef\x{\endgroup
5089         \def\noexpand\lastpage@putlabel{%
5090           \noexpand\stepcounter{page}%
5091           \the\toks@
5092           \noexpand\addtocounter{page}\noexpand\m@ne
5093         }%

```

```

5094         }%
5095         \x
5096     }{}%
5097 }{}%
5098 }
5099 </package>
5100 <*check>
5101 \checkpackage{lastpage}[1994/06/25]
5102 \checkcommand\def\lastpage@putlabel{%
5103     \addtocounter{page}{-1}%
5104     \immediate\write\@auxout{%
5105         \string\newlabel{LastPage}{{}\{thepage}}%
5106     }%
5107     \addtocounter{page}{1}%
5108 }
5109 </check>
5110 <*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.

```

5111 \def\hypergetref#1{\getrefbykeydefault{#1}{}{??}}
5112 \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:

```

5113 \ifpackageloaded{titlesec}{%
5114     \def\ttl@Hy@steplink#1{%
5115         \Hy@GlobalStepCount\Hy@linkcounter
5116         \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5117         \def\ttl@Hy@saveanchor{%
5118             \Hy@raisedlink{%
5119                 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5120             }%
5121         }%
5122     }%
5123     \def\ttl@Hy@refstepcounter#1{%
5124         \let\ttl@b\Hy@raisedlink
5125         \def\Hy@raisedlink##1{%
5126             \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
5127         }%
5128         \refstepcounter{#1}%
5129         \let\Hy@raisedlink\ttl@b
5130     }%
5131 }{}

```

Package titletoc support:

```

5132 \@ifpackageloaded{titletoc}{%
5133     \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
5134 }{}

```

32 Package varioref support

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

```
5135 \def\Hy@varioref@undefined{{??}{??}{}}{}{}
5136 \@ifpackageloaded{varioref}{%
5137   \def\vref@pagenum#1#2{%
5138     \ifundefined{r@#2}{%
5139       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
5140     }{}%
5141     \edef#1{\getpagerefnumber{#2}}%
5142   }%
5143 }
```

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

```
5144 \@ifpackageloaded{longtable}{%
5145   \begingroup
5146     \def\y{\LT@array}%
5147     \ifundefined{scr@LT@array}{}{\def\y{\scr@LT@array}}%
5148     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%
5149       \expandafter\endgroup
5150       \expandafter\def\y[#1]##2{%
5151         \H@refstepcounter{#1}%
5152         \hyper@makecurrent{table}%
5153         \let\Hy@LT@currentHlabel\@currentHlabel
5154         \let\Hy@LT@currentHref\@currentHref
5155         #2\@sharp####4%
5156       }%
5157     }%
5158   \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil
```

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

```
5159   \begingroup
5160     \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%
5161       \endgroup
5162       \def\LT@start{%
5163         #1%
5164         \let\@currentHlabel\Hy@LT@currentHlabel
5165         \let\@currentHref\Hy@LT@currentHref
5166         \Hy@raisedlink{%
5167           \hyper@anchorstart{\@currentHref}\hyper@anchorend
5168         }%
5169         \ifvoid\LT@firsthead\copy
5170           #2%
5171         }%
5172       }%
5173     \expandafter\x\LT@start\@nil
5174   }
```

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.

```

5175 \let\new@refstepcounter\refstepcounter
5176 \let\H@equation\equation
5177 \let\H@endequation\endequation

5178 \@ifpackageloaded{amsmath}{%
5179   \long\def\Hy@temp{%
5180     \incr@eqnum
5181     \mathdisplay@push
5182     \st@rredfalse \global\@eqnswtrue
5183     \mathdisplay{equation}%
5184   }%
5185   \ifx\Hy@temp\equation
5186     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
5187       \csname iftrue\endcsname
5188   \else
5189     \long\def\equation{%
5190       \mathdisplay@push
5191       \st@rredfalse \global\@eqnswtrue
5192       \mathdisplay{equation}%
5193       \incr@eqnum
5194     }%
5195   \fi
5196 \fi
5197 }{%
5198 \def\equation{%
5199   \let\refstepcounter\H@refstepcounter
5200   \H@equation
5201   \@ifundefined{theHequation}{%
5202     \make@stripped@name{theequation}%
5203     \let\theHequation\newname
5204   }{%
5205     \hyper@makecurrent{equation}%
5206     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
5207     \let\refstepcounter\new@refstepcounter
5208   }%
5209 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
5210 }
```

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.

```

5211 \newif\if@eqnstar
5212 \@eqnstarfalse
5213 \let\H@eqnarray\eqnarray
5214 \let\H@endeqnarray\endeqnarray
5215 \def\eqnarray{%
5216   \let\Hy@reserved@a\relax
5217   \def\@currentHref{}%
```

```

5218 \H@eqnarray
5219 \if@eqnstar
5220 \else
5221   \ifx\\ \@currentHref\\%
5222   \else
5223     \ifundefined{theHequation}{%
5224       \make@stripped@name{\theequation}%
5225       \let\theHequation\newname
5226     }{}%
5227     \hyper@makecurrent{equation}%
5228     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
5229   \fi
5230 \fi
5231 }
5232 \def\endeqnarray{%
5233   \H@endeqnarray
5234 }

```

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.

```

5235 \@namedef{eqnarray*}{%
5236   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
5237 }
5238 \@namedef{endeqnarray*}{%
5239   \nonumber\endeqnarray\@eqnstarfalse
5240 }

```

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

```

5241 \@ifundefined{subeqnarray}{%
5242   \let\H@subeqnarray\subeqnarray
5243   \let\H@endsubeqnarray\endsubeqnarray
5244   \def\subeqnarray{%
5245     \let\Hy@reserved@a\relax
5246     \H@subeqnarray
5247     \@ifundefined{theHequation}{%
5248       \make@stripped@name{\theequation}%
5249       \let\theHequation\newname
5250     }{}%
5251     \hyper@makecurrent{equation}%
5252     \hyper@anchorstart{\@currentHref}{\hyper@anchorend
5253   }%
5254   \def\endsubeqnarray{%
5255     \H@endsubeqnarray
5256   }%
5257   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
5258 }

```

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

```

5259 \def\make@stripped@name#1{%
5260   \begingroup
5261     \escapechar\m@ne
5262     \global\let\newname\@empty
5263     \protected@edef\Hy@tempa{#1}%
5264     \edef\@tempb{%
5265       \noexpand\@tfor\noexpand\Hy@tempa:=%
5266       \expandafter\strip@prefix\meaning\Hy@tempa
5267     }%
5268     \@tempb\do{%

```



```

5269     \if{\Hy@tempa\else
5270     \if}\Hy@tempa\else
5271     \xdef\newname{\newname\Hy@tempa}%
5272     \fi
5273     \fi
5274   }%
5275 \endgroup
5276 }

Support for amsmath's subequations:
5277 \begingroup\expandafter\expandafter\expandafter\endgroup
5278 \expandafter\ifx\csname subequations\endcsname\relax
5279 \else
5280 \let\HyOrg@subequations\subequations
5281 \def\subequations{%
5282   \stepcounter{equation}%
5283   \protected@edef\theHparentequation{%
5284     \ifundefined{theHequation}\theequation\theHequation
5285   }%
5286   \addtocounter{equation}{-1}%
5287   \HyOrg@subequations
5288   \def\theHequation{\theHparentequation\alph{equation}}%
5289   \ignorespaces
5290 }%
5291 \fi

```

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.

```

5292 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
5293 \ifHy@hyperfootnotes
5294   \newcounter{Hfootnote}%
5295   \let\H@@footnotetext\@footnotetext
5296   \let\H@@footnotemark\@footnotemark
5297   \def\@xfootnotenext[#1]{%
5298     \begingroup
5299       \csname c@\@mpfn\endcsname #1\relax
5300       \unrestored@protected@xdef\@thefnmark{\thempfn}%
5301     \endgroup
5302     \ifx\@footnotetext\@mpfootnotetext
5303       \expandafter\H@@mpfootnotetext
5304     \else
5305       \expandafter\H@@footnotetext
5306     \fi
5307   }%
5308   \def\@xfootnotemark[#1]{%
5309     \begingroup
5310       \c@footnote #1\relax
5311       \unrestored@protected@xdef\@thefnmark{\thefnmark}%
5312     \endgroup
5313     \H@@footnotemark
5314   }%

```

```

5315 \let\H@mpfootnotetext\@mpfootnotetext
5316 \long\def\@mpfootnotetext#1{%
5317   \H@mpfootnotetext{%
5318     \ifHy@nesting
5319       \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5320     \else
5321       \Hy@raisedlink{%
5322         \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5323       }#1%
5324     \fi
5325   }%
5326 }%
5327 \long\def\@footnotetext#1{%
5328   \H@footnotetext{%
5329     \ifHy@nesting
5330       \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5331     \else
5332       \Hy@raisedlink{%
5333         \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5334       }%
5335       \let\@currentHlabel\Hy@footnote@currentHlabel
5336       \let\@currentHref\Hy@footnote@currentHref
5337       \let\@currentlabelname\@empty
5338       #1%
5339     \fi
5340   }%
5341 }%

```

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.

```

5342 \def\@footnotemark{%
5343   \leavevmode
5344   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
5345   \stepcounter{Hfootnote}%
5346   \global\let\Hy@saved@currentHlabel\@currentHlabel
5347   \global\let\Hy@saved@currentHref\@currentHref
5348   \hyper@makecurrent{Hfootnote}%
5349   \global\let\Hy@footnote@currentHlabel\@currentHlabel
5350   \global\let\Hy@footnote@currentHref\@currentHref
5351   \global\let\@currentHlabel\Hy@saved@currentHlabel
5352   \global\let\@currentHref\Hy@saved@currentHref
5353   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
5354   \@makefnmark
5355   \hyper@linkend
5356   \ifhmode\spacefactor\x@sf\fi
5357   \relax
5358 }%

```

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

```

5359 \@ifpackageloaded{longtable}{%
5360   \CheckCommand*\LT@p@ftntext}[1]{%
5361     \edef\@tempa{%
5362       \the\LT@p@ftn

```

```

5363     \noexpand\footnotetext[\the\c@footnote]%
5364 }%
5365     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
5366 }%
5367 \long\def\LT@p@ftntext#1{%
5368     \edef\@tempa{%
5369         \the\LT@p@ftn
5370         \begingroup
5371             \noexpand\c@footnote=\the\c@footnote\relax
5372             \noexpand\protected@xdef
5373                 \noexpand\@thefnmark{\noexpand\thempfn}%
5374             \noexpand\protected@xdef\noexpand\@thefnmark{%
5375                 \noexpand\thempfn
5376             }%
5377             \expandafter\expandafter\expandafter\noexpand
5378             \expandafter\expandafter\expandafter\Hy@LT@footnotetext
5379             \expandafter\expandafter\expandafter{%
5380                 \expandafter\Hy@footnote@currentHref\expandafter
5381                 }\expandafter{\Hy@footnote@currentHlabel}%
5382     }%
5383     \global\LT@p@ftn\expandafter{%
5384         \@tempa{#1}%
5385     \endgroup
5386 }%
5387 }%
5388 \long\def\Hy@LT@footnotetext#1#2#3{%
5389     \H@@footnotetext{%
5390         \ifHy@nesting
5391             \hyper@@anchor{#1}{#3}%
5392         \else
5393             \Hy@raisedlink{%
5394                 \hyper@@anchor{#1}{\relax}%
5395             }%
5396             \def\@currentHlabel{#2}%
5397             \def\@currentHref{#1}%
5398             \let\@currentlabelname\@empty
5399             #3%
5400         \fi
5401     }%
5402 }%
5403 }-%

```

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

```

5404 \ifpackageloaded{fancyvrb}{%
5405     \def\V@@footnotetext{%
5406         \insert\footins\bgroup
5407         \csname reset@font\endcsname
5408         \footnotesize
5409         \interlinepenalty\interfootnotelinepenalty
5410         \splittopskip\footnotesep
5411         \splitmaxdepth\dp\strutbox
5412         \floatingpenalty \@MM
5413         \hsize\columnwidth
5414         \@parboxrestore
5415         \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
5416         \@makefntext{}%
5417         \rule{\z@}{\footnotesep}%
5418         \bgroup

```

```

5419 \aftergroup\V@@@footnotetext
5420 \Hy@raisedlink{%
5421 \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5422 }%
5423 \let\@currentHlabel\Hy@footnote@currentHlabel
5424 \let\@currentHref\Hy@footnote@currentHref
5425 \let\@currentlabelname\@empty
5426 \ignorespaces
5427 }%
5428 }{}%

```

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.

```

5429 \let\HyOrg@maketitle\maketitle
5430 \def\maketitle{%
5431 \let\Hy@saved@footnotemark\@footnotemark
5432 \let\Hy@saved@footnotetext\@footnotetext
5433 \let\@footnotemark\H@@footnotemark
5434 \let\@footnotetext\H@@footnotetext
5435 \@ifnextchar[\Hy@maketitle@optarg{% ]
5436 \HyOrg@maketitle
5437 \Hy@maketitle@end
5438 }%
5439 }%
5440 \def\Hy@maketitle@optarg[#1]{%
5441 \HyOrg@maketitle[#{#1}]%
5442 \Hy@maketitle@end
5443 }%
5444 \def\Hy@maketitle@end{%
5445 \ifx\@footnotemark\H@@footnotemark
5446 \let\@footnotemark\Hy@saved@footnotemark
5447 \fi
5448 \ifx\@footnotetext\H@@footnotetext
5449 \let\@footnotetext\Hy@saved@footnotetext
5450 \fi
5451 }%

```

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

```

5452 \def\realfootnote{%
5453 \ifnextchar[\@xfootnote{%
5454 \stepcounter{\@mpfn}%
5455 \protected@xdef\@thefnmark{\thempfn}%
5456 \H@@footnotemark\H@@footnotetext
5457 }%
5458 }%
5459 \fi
5460 \Hy@DisableOption{hyperfootnotes}
5461 \</package>
5462 \<*check>
5463 \checklatex
5464 \checkcommand\def\@xfootnotenext[#1]{%
5465 \begingroup
5466 \csname c@\@mpfn\endcsname #1\relax
5467 \unrestored@protected@xdef\@thefnmark{\thempfn}%
5468 \endgroup
5469 \@footnotetext

```

```

5470 }
5471 \checkcommand\def\xfootnotemark[#1]{%
5472   \begingroup
5473     \c@footnote #1\relax
5474     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5475   \endgroup
5476   \@footnotemark
5477 }
5478 \checkcommand\def\@footnotemark{%
5479   \leavevmode
5480   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
5481   \@makefnmark
5482   \ifhmode\spacefactor\x@sf\fi
5483   \relax
5484 }
5485 \</check>
5486 \<*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.

```

5487 \def\caption{%
5488   \ifx\@captype\@undefined
5489     \@latex@error{\noexpand\caption outside float}\@ehd
5490     \expandafter\@gobble
5491   \else
5492     \H@refstepcounter\@captype
5493     \let\Hy@tempa\@caption
5494     \@ifundefined{float@caption}{%
5495       }{%
5496         \expandafter\ifx\csname @float@c@\@captype\endcsname
5497           \float@caption
5498         \let\Hy@tempa\Hy@float@caption
5499       \fi
5500     }%
5501     \expandafter\@firstofone
5502   \fi
5503   {\@dblarg{\Hy@tempa\@captype}}}%
5504 }
5505 \long\def\@caption#1[#2]#3{%
5506   \expandafter\ifx\csname if@capstart\expandafter\endcsname
5507     \csname iftrue\endcsname
5508     \global\let\@currentHref\hc@currentHref
5509   \else
5510     \hyper@makecurrent{\@captype}%
5511   \fi
5512   \def\@currentlabelname{#2}%
5513   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
5514     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
5515   }%
5516   \begingroup
5517     \@parboxrestore
5518     \if@minipage
5519       \setminipage
5520     \fi

```

```

5521 \normalsize
5522 \expandafter\ifx\csname if@capstart\expandafter\endcsname
5523 \csname iftrue\endcsname
5524 \global\@capstartfalse
5525 \makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
5526 \else
5527 \makecaption{\csname fnum@#1\endcsname}{%
5528 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

5529 \ifHy@nesting
5530 \hyper@@anchor{\@currentHref}{#3}%
5531 \else
5532 \Hy@raisedlink{\hyper@@anchor{\@currentHref}{\relax}}#3%
5533 \fi
5534 }%
5535 \fi
5536 \par
5537 \endgroup
5538 }

```

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.

```

5539 \let\Hy@float@caption\@caption
5540 \ifpackageloaded{float}{%
5541 \def\Hy@float@caption{%
5542 \ifx\Hy@float@currentHref\@undefined
5543 \hyper@makecurrent{\@cuptype}%
5544 \global\let\Hy@float@currentHref\@currentHref
5545 \else
5546 \let\@currentHref\Hy@float@currentHref
5547 \fi
5548 \float@caption
5549 }%
5550 \let\HyOrg@float@makebox\float@makebox
5551 \renewcommand{\float@makebox}[1]{%
5552 \HyOrg@float@makebox{%
5553 #1\relax
5554 \ifx\Hy@float@currentHref\@undefined
5555 \else
5556 \hyper@@anchor{\Hy@float@currentHref}{\relax}%
5557 \global\let\Hy@float@currentHref\@undefined
5558 \fi
5559 }%
5560 }%
5561 }{}

5562 </package>
5563 <*check>
5564 \checklatex[1999/06/01 - 2000/06/01]
5565 \checkcommand\def\caption{%
5566 \ifx\@cuptype\@undefined
5567 \@latex@error{noexpand\caption outside float}\@ehd
5568 \expandafter\@gobble
5569 \else
5570 \refstepcounter\@cuptype
5571 \expandafter\@firstofone
5572 \fi
5573 {\@dblarg{\@caption\@cuptype}}%

```

```

5574 }
5575 \checkcommand\long\def\caption#1[#2]#3{%
5576   \par
5577   \addcontentsline{\csname ext@#1\endcsname}{#1}%
5578   {\protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
5579   \begingroup
5580     \parboxrestore
5581     \if@minipage
5582       \setminipage
5583     \fi
5584     \normalsize
5585     \makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
5586   \endgroup
5587 }
5588 </check>
5589 <*package>

```

37 Bibliographic references

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

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

```

5590 \def\hyper@natlinkstart#1{%
5591   \Hy@backout{#1}%
5592   \hyper@linkstart{cite}{cite.#1}%
5593   \def\hyper@nat@current{#1}%
5594 }
5595 \def\hyper@natlinkend{%
5596   \hyper@linkend
5597 }
5598 \def\hyper@natlinkbreak#1#2{%
5599   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
5600 }
5601 \def\hyper@natanchorstart#1{%
5602   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
5603 }
5604 \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.

```

5605 \ifundefined{NAT@parse}{%
5606   \providecommand*\@extra@binfo{}%
5607   \providecommand*\@extra@b@citeb{}%
5608   \def\bibcite#1#2{%
5609     \@newl@bel{b}{#1\@extra@binfo}{%
5610       \hyper@link{cite}{cite.#1\@extra@b@citeb}{#2}%
5611     }%
5612   }%
5613   \gdef\@extra@binfo{}%

```

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

```

5614 \let\Hy@bibtex\bibtex
5615 \begingroup
5616   \@ifundefined{bbl@cite@choice}{\%
5617     \g@addto@macro\bbl@cite@choice{\%
5618       \let\bibtex\Hy@bibtex
5619     }%
5620   }%
5621 \endgroup

```

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

```

5622 \providecommand*\@BIBLABEL{\@biblabel}%
5623 \def\@bibitem[#1]#2{%
5624   \@skiphyperreftrue
5625   \H@item[%
5626     \ifx\Hy@raisedlink\@empty
5627       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
5628       \@BIBLABEL{#1}%
5629       \hyper@anchorend
5630     \else
5631       \Hy@raisedlink{%
5632         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
5633       }%
5634       \@BIBLABEL{#1}%
5635     \fi
5636     \hfill
5637   ]%
5638   \@skiphyperreffalse
5639   \if@filesw
5640     \begingroup
5641       \let\protect\noexpand
5642       \immediate\write\@auxout{%
5643         \string\bibtex{#2}{#1}%
5644       }%
5645     \endgroup
5646   \fi
5647   \ignorespaces
5648 }%

```

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

```

5649 \def\@bibitem#1{%
5650   \@skiphyperreftrue\H@item\@skiphyperreffalse
5651   \Hy@raisedlink{%
5652     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
5653   }%
5654   \if@filesw
5655     \begingroup
5656       \let\protect\noexpand
5657       \immediate\write\@auxout{%
5658         \string\bibtex{#1}{\the\value{\@listctr}}%
5659       }%
5660     \endgroup
5661   \fi
5662   \ignorespaces
5663 }%
5664 }{}

```



```

5665 </package>
5666 <*check>
5667 \checklatex
5668 \checkcommand\def\@lbibitem[#1]#2{%
5669   \item[\@biblabel{#1}\hfill]%
5670   \if@filesw
5671     {%
5672       \let\protect\noexpand
5673       \immediate\write\@auxout{%
5674         \string\bibcite{#2}{#1}%
5675       }%
5676     }%
5677   \fi
5678   \ignorespaces
5679 }
5680 \checkcommand\def\@bibitem#1{%
5681   \item
5682   \if@filesw
5683     \immediate\write\@auxout{%
5684       \string\bibcite{#1}{\the\value{\@listctr}}%
5685     }%
5686   \fi
5687   \ignorespaces
5688 }
5689 </check>
5690 <*package>

```

RevTeX (bless its little heart) takes over `\bibcite` and looks at the result to measure something. Make this a hypertext link and it goes ape. Therefore, make an anodyne result first, call its business, then go back to the real thing.

```

5691 \@ifclassloaded{revtex}{%
5692   \Hy@Info{*** compatibility with revtex **** }%
5693   \def\revtex@checking#1#2{%
5694     \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
5695     \expandafter\def\csname b@#1\endcsname{#2}%
5696     \@SetMaxRnhefLabel{#1}%
5697     \expandafter\let\csname b@#1\endcsname\T@temp
5698   }%

```

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

```

5699 \ifundefined{CITE}{\def\CITE{\@cite}}{}%
5700 \providecommand*{\@extra@b@citeb}{}%
5701 \def\CITE[#1]#2{%
5702   \let\@citea\@empty
5703   \leavevmode
5704   \unskip
5705   $^{}%
5706   \scriptstyle
5707   \CITE{%
5708     \@for\@citeb:=#2\do{%
5709       \@citea
5710       \def\@citea{\penalty\@m }%
5711       \edef\@citeb{\expandafter\@firstofone\@citeb}%
5712       \if@filesw
5713         \immediate\write\@auxout{\string\citation{\@citeb}}%
5714       \fi
5715       \@ifundefined{b@\@citeb\extra@b@citeb}{}%

```

```

5716         \mbox{\reset@font\bfseries ?}%
5717         \G@refundefinedtrue
5718         \@latex@warning{%
5719             Citation ‘\@citeb’ on page \thepage \space undefined%
5720         }%
5721     }{%
5722         {\csname b@\@citeb\@extra@b@citeb\endcsname}%
5723     }%
5724 }%
5725 }{#1}%
5726 }$%
5727 }%

```

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.

```

5728 \def\@citex[#1]#2{%
5729     \let\@citea\@empty
5730     \@cite{%
5731         \@for\@citeb:=#2\do{%
5732             \@citea
5733             \def\@citea{,\penalty\@m\ }%
5734             \edef\@citeb{\expandafter\@firstofone\@citeb}%
5735             \if@filesw
5736                 \immediate\write\@auxout{\string\citation{\@citeb}}%
5737             \fi
5738             \@ifundefined{b@\@citeb\@extra@b@citeb}{%
5739                 \mbox{\reset@font\bfseries ?}%
5740                 \G@refundefinedtrue
5741                 \@latex@warning{%
5742                     Citation ‘\@citeb’ on page \thepage \space undefined%
5743                 }%
5744             }{%
5745                 \hbox{\csname b@\@citeb\@extra@b@citeb\endcsname}%
5746             }%
5747         }%
5748     }{#1}%
5749 }%
5750 }{}

```

37.1 Package harvard

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

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

```

5751 \@ifpackageloaded{harvard}{%
5752     \AtBeginDocument{%
5753         \Hy@Info{*** compatibility with harvard *** }%
5754         \Hy@raiselinksfalse
5755         \def\harvardcite#1#2#3#4{%
5756             \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
5757             \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
5758             \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
5759             \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
5760         }%

```

```

5761 \def\HAR@citetoaux#1{%
5762 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
5763 \ifHy@backref
5764 \ifx\@empty\@currentlabel
5765 \else
5766 \@bsphack
5767 \if@filesw
5768 \protected@write\@auxout{}\fi%
5769 \string\@writefile{brf}{%
5770 \string\backcite{#1}{%
5771 {\thepage}{\@currentlabel}{\@currentHref}%
5772 }%
5773 }%
5774 }%
5775 \fi
5776 \@esphack
5777 \fi
5778 \fi
5779 }%
5780 \def\harvarditem{%
5781 \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
5782 }%
5783 \def\@harvarditem[#1]#2#3#4#5\par{%
5784 \item[]%
5785 \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
5786 \if@filesw
5787 \begingroup
5788 \def\protect##1{\string ##1\space}%
5789 \ifthenelse{\equal{#1}{\null}}%
5790 {\def\next{{#4}{#2}{#2}{#3}}}%
5791 {\def\next{{#4}{#2}{#1}{#3}}}%
5792 \immediate\write\@auxout{\string\harvardcite\codeof\next}%
5793 \endgroup
5794 \fi
5795 \protect\hspace*{-\labelwidth}%
5796 \protect\hspace*{-\labelsep}%
5797 \ignorespaces
5798 #5%
5799 \ifHy@backref
5800 \newblock
5801 \backref{\csname br@#4\endcsname}%
5802 \fi
5803 \par
5804 }%

```

\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:

```

5805 \long\def\HAR@checkcitations#1#2#3#4{%
5806 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
5807 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
5808 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
5809 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
5810 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
5811 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
5812 \else
5813 \@tempswatrue

```

```

5814         \fi
5815         \else
5816         \@tempswatrue
5817         \fi
5818     \else
5819         \@tempswatrue
5820     \fi
5821 }%
5822 }%

5823 }{}

```

37.2 Package chicago

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

```

5824 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

5825 \def\citeN{%
5826     \def\@citesep{-1000}%
5827     \def\@cite##1##2{##1}%
5828     \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
5829     \@citedata@opt
5830 }%

```

`\shortciteN`

```

5831 \def\shortciteN{%
5832     \def\@citesep{-1000}%
5833     \def\@cite##1##2{##1}%
5834     \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
5835     \@citedata@opt
5836 }%

```

`\@citedata@opt`

```

5837 \def\@citedata@opt{%
5838     \let\@cite@opt\@empty
5839     \@ifnextchar [{%
5840         \@tempswatrue
5841         \@citedatax@opt
5842     }{%
5843         \@tempswafalse
5844         \@citedatax[]%
5845     }%
5846 }%

```

`\@citedatax@opt`

```

5847 \def\@citedatax@opt[#1]{%
5848     \def\@cite@opt{, #1}%
5849     \@citedatax[{#1}]%
5850 }%

5851 }{}

```

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.

```
5852 \def\Hy@EveryPageAnchor{%
5853   \Hy@DistillerDestFix
5854   \ifHy@pageanchor
5855     \ifHy@hypertextnames
5856     \ifHy@plainpages
5857       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
5858     \else
5859       \begingroup
5860         \let\@number\@firstofone
5861         \Hy@unicodedefalse
5862         \pdfstringdef\@theH@page{\thepage}%
5863       \endgroup
5864       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@theH@page}}%
5865     \fi
5866   \else
5867     \Hy@GlobalStepCount\Hy@pagecounter
5868     \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\Hy@pagecounter}}%
5869   \fi
5870   \vbox to 0pt{%
5871     \kern\voffset
5872     \kern\topmargin
5873     \kern-1bp\relax
5874     \hbox to 0pt{%
5875       \kern\hoffset
5876       \kern\ifodd\value{page}%
5877         \oddsidemargin
5878       \else
5879         \evensidemargin
5880       \fi
5881       \kern-1bp\relax
5882       \Hy@TempPageAnchor
5883       \hss
5884     }%
5885   \vss
5886 }%
5887 \fi
5888 }
5889 \g@addto@macro\Hy@EveryPageBoxHook{%
5890   \Hy@EveryPageAnchor
5891 }
```

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.

```
5892 \begingroup\expandafter\expandafter\expandafter\endgroup
```

```

5893 \expandafter\ifx\csname chapter\endcsname\relax
5894   \def\toclevel@part{0}%
5895 \else
5896   \def\toclevel@part{-1}%
5897 \fi
5898 \def\toclevel@chapter{0}
5899 \def\toclevel@section{1}
5900 \def\toclevel@subsection{2}
5901 \def\toclevel@subsubsection{3}
5902 \def\toclevel@paragraph{4}
5903 \def\toclevel@subparagraph{5}
5904 \def\toclevel@figure{0}
5905 \def\toclevel@table{0}
5906 \@ifpackageloaded{listings}{%
5907   \providecommand*\theHlstlisting{\thelstlisting}%
5908   \providecommand*\toclevel@lstlisting{0}%
5909 }{}
5910 \@ifpackageloaded{listing}{%
5911   \providecommand*\theHlisting{\thelisting}%
5912   \providecommand*\toclevel@listing{0}%
5913 }{}
5914 \def\addcontentsline#1#2#3{% toc extension, type, tag
5915   \begingroup
5916     \let\label@gobble
5917     \let\textlatin@firstofone
5918     \ifx\@currentHref\@empty
5919       \Hy@Warning{%
5920         No destination for bookmark of \string\addcontentsline,%
5921         \MessageBreak destination is added%
5922       }%
5923     \phantomsection
5924   \fi
5925   \expandafter\ifx\csname toclevel@#2\endcsname\relax
5926     \begingroup
5927       \def\Hy@tempa{#1}%
5928       \ifx\Hy@tempa\Hy@bookmarkstype
5929         \Hy@WarningNoLine{%
5930           bookmark level for unknown #2 defaults to 0%
5931         }%
5932       \else
5933         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
5934       \fi
5935     \endgroup
5936   \expandafter\gdef\csname toclevel@#2\endcsname{0}%
5937   \fi
5938   \edef\Hy@toclevel{\csname toclevel@#2\endcsname}%
5939   \Hy@writebookmark{\csname the#2\endcsname}%
5940     {#3}%
5941     {\@currentHref}%
5942     {\Hy@toclevel}%
5943     {#1}%
5944   \ifHy@verbose
5945     \def\Hy@tempa{#3}%
5946     \@onelevel@sanitize\Hy@tempa
5947     \typeout{pdfTeX: bookmark at \the\inputlineno: %
5948       {\csname the#2\endcsname}%
5949       {\Hy@tempa}%

```

```

5950      {\@currentHref}%
5951      {\Hy@toclevel}%
5952      {#1}%
5953    }%
5954  \fi
5955  \addtocontents{#1}{%
5956    \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
5957  }%
5958  \endgroup
5959 }
5960 \def\contentsline#1#2#3#4{%
5961   \ifx\#4\%
5962     \csname l@#1\endcsname{#2}{#3}%
5963   \else
5964     \ifcase\Hy@linktoc % none
5965       \csname l@#1\endcsname{#2}{#3}%
5966     \or % section
5967       \csname l@#1\endcsname{%
5968         \hyper@linkstart{link}{#4}{#2}\hyper@linkend
5969       }{#3}%
5970     \or % page
5971       \csname l@#1\endcsname{#2}{%
5972         \hyper@linkstart{link}{#4}{#3}\hyper@linkend
5973       }%
5974     \else % all
5975       \csname l@#1\endcsname{%
5976         \hyper@linkstart{link}{#4}{#2}\hyper@linkend
5977       }{%
5978         \hyper@linkstart{link}{#4}{#3}\hyper@linkend
5979       }%
5980     \fi
5981   \fi
5982 }
5983 </package>
5984 <*check>
5985 \checklatex
5986 \checkcommand\def\addcontentsline#1#2#3{%
5987   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
5988 }
5989 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
5990 </check>
5991 <*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.

```

5992 \let\H@definecounter\@definecounter
5993 \def\@definecounter#1{%
5994   \H@definecounter{#1}%
5995   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5996 }

```

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.

```

5997 \let\H@newctr\@newctr

```

```

5998 \def\@newctr#1[#2]{%
5999   \H@newctr#1[#2]}%
6000 \expandafter\def\csname theH#1\endcsname{%
6001   \csname the\@ifundefined{theH#2}{H}#2\endcsname.\arabic{#1}%
6002 }%
6003 }

```

41 AMS \LaTeX compatibility

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

Version 6.77p uses a patch by Ross Moore.

```

6004 \@ifpackageloaded{amsmath}{%
6005   \def\Hy@make@anchor{%
6006     \Hy@GlobalStepCount\Hy@linkcounter
6007     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6008     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6009   }%
6010   \def\Hy@make@df@tag@@#1{%
6011     \gdef\df@tag{%
6012       \maketag@@@{\Hy@make@anchor#1}%
6013       \def\@currentlabel{#1}%
6014     }%
6015   }%
6016   \def\Hy@make@df@tag@@@#1{%
6017     \gdef\df@tag{%
6018       \tagform@{\Hy@make@anchor#1}%
6019       \toks@{@xp{\p@equation{#1}}}%
6020       \edef\@currentlabel{\the\toks@}%
6021     }%
6022   }%
6023   \let\HyOrg@make@df@tag@@\make@df@tag@@
6024   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
6025   \let\make@df@tag@@\Hy@make@df@tag@@
6026   \let\make@df@tag@@@\Hy@make@df@tag@@@
6027 }{}

```

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

```

6028 \@ifpackagewith{hyperref}{pdf $\TeX$ }{%
6029   \let\H@seteqlabel\@seteqlabel
6030   \def\@seteqlabel#1{%
6031     \H@seteqlabel{#1}%
6032     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6033     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6034   }%
6035 }{}

```

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@tagform0{\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.

```

6036 \let\HyOrg@addtoreset\@addtoreset
6037 \def\@addtoreset#1#2{%
6038   \HyOrg@addtoreset{#1}{#2}%
6039   \expandafter\xdef\csname theH#1\endcsname{%
6040     \expandafter\noexpand
6041     \csname the\@ifundefined{theH#2}{}H#2\endcsname
6042     .\noexpand\the\noexpand\value{#1}%
6043   }%
6044 }

```

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

```

6045 </package>
6046 <*check>
6047 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
6048 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
6049   \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6050     \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6051       \@addtoreset{#2}{#3}%
6052       \@xp\xdef\csname the#2\endcsname{%
6053         \@xp@nx\csname the#3\endcsname .\@nx#1{#2}%
6054       }%
6055     }%
6056   }%
6057 }%
6058 </check>
6059 <*package>
6060 \@ifpackageloaded{amsmath}{%
6061   \@ifpackagelater{amsmath}[1999/12/14]{%
6062     \renewcommand*{\numberwithin}[3][\arabic]{%
6063       \@ifundefined{c@#2}{\@nocounterr{#2}}{%
6064         \@ifundefined{c@#3}{\@nocnterr{#3}}{%
6065           \HyOrg@addtoreset{#2}{#3}%
6066           \@xp\xdef\csname the#2\endcsname{%
6067             \@xp@nx\csname the#3\endcsname .\@nx#1{#2}%
6068           }%
6069           \@xp\xdef\csname theH#2\endcsname{%
6070             \@xp@nx
6071             \csname the\@ifundefined{theH#3}{}H#3\endcsname
6072             .\@nx#1{#2}%
6073           }%
6074         }%
6075       }%
6076     }%
6077   }{%
6078     \Hy@WarningNoLine{%
6079       \string\numberwithin\space of package 'amsmath' %
6080       only fixed\MessageBreak

```

```

6081     for version 2000/06/06 v2.12 or newer%
6082   }%
6083 }%
6084 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

6085 \ifHy@figures
6086   \let\Hy@Gin@setfile\Gin@setfile
6087   \def\Gin@setfile#1#2#3{%
6088     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
6089   }%
6090 \fi
6091 \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.

```

6092 \ifHy@hyperindex
6093   \def\HyInd@ParenLeft{({}%
6094   \def\HyInd@ParenRight{)}}%
6095   \Hy@nextfalse
6096   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
6097   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
6098   \begingroup
6099     \lccode'\|=\expandafter'\HyInd@EncapChar\relax
6100   \lowercase{\endgroup
6101     \ifHy@next
6102       \let\HyInd@org@wrindex\@wrindex
6103       \def\@wrindex#1#2{\HyInd@wrindex{#1}#2||\}%
6104       \def\HyInd@wrindex#1#2|#3|#4\{\%
6105         \ifx\|#3\%
6106           \HyInd@org@wrindex{#1}{#2|hyperpage}%
6107         \else
6108           \def\Hy@temp@A{#3}%
6109           \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6110             \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6111             \relax
6112           \HyInd@org@wrindex{#1}{#2|#3}%
6113         \else
6114           \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
6115         \fi
6116       \fi
6117     }%
6118   \else

```

```

6119 \def\@wrindex#1{\@wrindex#1||\}%
6120 \def\@wrindex#1|#2|#3\{\%
6121 \if@filesw
6122 \ifx\#2\%
6123 \protected@write\@indexfile{}\%
6124 \string\indexentry{#1|hyperpage}{\thepage}%
6125 }%
6126 \else
6127 \def\Hy@temp@A{#2}%
6128 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6129 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6130 \relax
6131 \protected@write\@indexfile{}\%
6132 \string\indexentry{#1|#2}{\thepage}%
6133 }%
6134 \else
6135 \protected@write\@indexfile{}\%
6136 \string\indexentry{#1|#2hyperpage}{\thepage}%
6137 }%
6138 \fi
6139 \fi
6140 \fi
6141 \endgroup
6142 \@esphack
6143 }%
6144 \fi
6145 }%
6146 \fi
6147 \Hy@DisableOption{hyperindex}
6148 \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.

```

6149 \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.

```

6150 \def\hyperpage#1{\%
6151 \HyInd@hyperpage#1\nohyperpage{}\@nil
6152 }
6153 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{\%
6154 \HyInd@@hyperpage{#1}%
6155 #2%
6156 \def\Hy@temp{#3}%
6157 \ifx\Hy@temp\@empty
6158 \else
6159 \Hy@ReturnAfterFi{\%
6160 \HyInd@hyperpage#3\@nil
6161 }%
6162 \fi
6163 }
6164 \def\HyInd@@hyperpage#1{\@hyperpage#1---\}%
6165 \def\@hyperpage#1--#2--#3\{\%
6166 \ifx\#2\%
6167 \@commahyperpage{#1}%
6168 \else
6169 \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%

```

```

6170 \fi
6171 }
6172 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
6173 \def\@commahyperpage#1, #2,#3\{\%
6174 \ifx\#2\%
6175 \HyInd@pagelink{#1}%
6176 \else
6177 \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
6178 \fi
6179 }

```

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

```

6180 \def\HyInd@pagelink#1{%
6181 \begingroup
6182 \toks@={}%
6183 \HyInd@removespaces#1 \@nil
6184 \endgroup
6185 }
6186 \def\HyInd@removespaces#1 #2\@nil{%
6187 \toks@=\expandafter{\the\toks@#1}%
6188 \ifx\#2\%
6189 \edef\x{\the\toks@}%
6190 \ifx\x\@empty
6191 \else
6192 \hyperlink{page.\the\toks@}{\the\toks@}%
6193 \fi
6194 \else
6195 \Hy@ReturnAfterFi{%
6196 \HyInd@removespaces#2\@nil
6197 }%
6198 \fi
6199 }

```

44 Compatibility with foiltex

```

6200 \@ifclassloaded{foils}{%
6201 \providecommand*\ext@table{lot}%
6202 \providecommand*\ext@figure{lof}%
6203 }{}

```

45 Compatibility with seminar slide package

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

```

6204 \@ifclassloaded{seminar}{%
6205 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}%
6206 }{%
6207 \Hy@seminarslidesfalse
6208 }
6209 \@ifpackageloaded{slidesec}{%
6210 \newcommand\theHslidesection {\arabic{slidesection}}%
6211 \newcommand\theHslidesubsection{%
6212 \theHslidesection.\arabic{slidesubsection}}%
6213 }%
6214 \def\slide@heading[#1]#2{%

```

```

6215 \H@refstepcounter{slidesection}%
6216 \@addtoreset{slidesubsection}{slidesection}%
6217 \addtocontents{los}{%
6218   \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
6219   {\@SCTR}{slideheading.\theslidesection}%
6220 }%
6221 \def\Hy@tempa{#2}%
6222 \ifx\Hy@tempa\@empty
6223 \else
6224   {%
6225     \edef\@currentlabel{%
6226       \csname p@slidesection\endcsname\theslidesection
6227     }%
6228     \makeslideheading{#2}%
6229   }%
6230 \fi
6231 \gdef\theslideheading{#1}%
6232 \gdef\theslidesubheading{}%
6233 \ifHy@bookmarksnumbered
6234   \def\Hy@slidetitle{\theslidesection\space #1}%
6235 \else
6236   \def\Hy@slidetitle{#1}%
6237 \fi
6238 \ifHy@hypertextnames
6239   \ifHy@naturalnames
6240     \hyper@@anchor{slideheading.\theslidesection}{\relax}%
6241     \Hy@writebookmark
6242       {\theslidesection}%
6243       {\Hy@slidetitle}%
6244       {slideheading.\theslidesection}%
6245       {1}%
6246       {toc}%
6247   \else
6248     \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
6249     \Hy@writebookmark
6250       {\theslidesection}%
6251       {\Hy@slidetitle}%
6252       {slideheading.\theHslidesection}%
6253       {1}%
6254       {toc}%
6255   \fi
6256 \else
6257   \Hy@GlobalStepCount\Hy@linkcounter
6258   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6259   \Hy@writebookmark
6260     {\theslidesection}%
6261     {\Hy@slidetitle}%
6262     {slideheading.\the\Hy@linkcounter}%
6263     {1}%
6264     {toc}%
6265 \fi
6266 }%
6267 \def\slide@subheading[#1]#2{%
6268   \H@refstepcounter{slidesubsection}%
6269   \addtocontents{los}{%
6270     \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
6271     {\@SCTR}{slideheading.\theslidesubsection}%

```

```

6272 }%
6273 \def\Hy@tempa{#2}%
6274 \ifx\Hy@tempa\@empty
6275 \else
6276 {%
6277   \edef\@currentlabel{%
6278     \csname p@slidesubsection\endcsname\theslidesubsection
6279   }%
6280   \makeslidesubheading{#2}%
6281 }%
6282 \fi
6283 \gdef\theslidesubheading{#1}%
6284 \ifHy@bookmarksnumbered
6285   \def\Hy@slidetitle{\theslidesubsection\space #1}%
6286 \else
6287   \def\Hy@slidetitle{#1}%
6288 \fi
6289 \ifHy@hypertextnames
6290   \ifHy@naturalnames
6291     \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
6292     \Hy@writebookmark
6293       {\theslidesubsection}%
6294       {\Hy@slidetitle}%
6295       {slideheading.\theslidesubsection}%
6296       {2}%
6297       {toc}%
6298   \else
6299     \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
6300     \Hy@writebookmark
6301       {\theslidesubsection}%
6302       {\Hy@slidetitle}%
6303       {slideheading.\theHslidesubsection}%
6304       {2}%
6305       {toc}%
6306   \fi
6307 \else
6308   \Hy@GlobalStepCount\Hy@linkcounter
6309   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6310   \Hy@writebookmark
6311     {\theslidesubsection}%
6312     {\Hy@slidetitle}%
6313     {slideheading.\the\Hy@linkcounter}%
6314     {1}%
6315     {toc}%
6316 \fi
6317 }%
6318 \providecommand*\listslidenamename{List of Slides}%
6319 \def\listofslides{%
6320   \section*{%
6321     \listslidenamename
6322     \@mkboth{%
6323       \expandafter\MakeUppercase\listslidenamename
6324     }{%
6325       \expandafter\MakeUppercase\listslidenamename
6326     }%
6327   }%
6328   \def\l@slide##1##2##3##4{%

```

```

6329     \slide@undottedcline{%
6330         \slidenumberline{##3}{\hyperlink{##4}{##2}}%
6331     }{%
6332 }%
6333 \let\l@subslide\l@slide
6334 \@startlos
6335 }%
6336 \def\slide@contents{%
6337     \def\l@slide##1##2##3##4{%
6338         \slide@cline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
6339     }%
6340     \let\l@subslide\@gobblefour
6341     \@startlos
6342 }%
6343 \def\Slide@contents{%
6344     \def\l@slide##1##2##3##4{%
6345         \ifcase\lslide@flag
6346             \message{##1 ** \the\c@slide@section}%
6347             \ifnum##1>\c@slide@section
6348                 \def\lslide@flag{1}%
6349                 {%
6350                     \large
6351                     \slide@cline{%
6352                         \slidenumberline{$\rightarrow\bullet$}%
6353                         {\hyperlink{##4}{##2}}%
6354                     }{##3}%
6355                 }%
6356             \else
6357                 {%
6358                     \large
6359                     \slide@cline{%
6360                         \slidenumberline{$\surd;$\bullet$}%
6361                         {\hyperlink{##4}{##2}}%
6362                     }{##3}%
6363                 }%
6364             \fi
6365         \or
6366             \def\lslide@flag{2}%
6367             {%
6368                 \large
6369                 \slide@cline{%
6370                     \slidenumberline{$\bullet$}%
6371                     {\hyperlink{##4}{##2}}%
6372                 }{##3}%
6373             }%
6374         \or
6375             {%
6376                 \large
6377                 \slide@cline{%
6378                     \slidenumberline{$\bullet$}%
6379                     {\hyperlink{##4}{##2}}%
6380                 }{##3}%
6381             }%
6382         \fi
6383     }%
6384     \def\l@subslide##1##2##3##4{%
6385         \ifnum\lslide@flag=1 %

```

```

6386      \undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
6387      \fi
6388    }%
6389    \def\lslide@flag{0}%
6390    \@startlos
6391  }%
6392 }{}

```

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.)

```

6393 \ifHy@texht
6394   \expandafter\endinput
6395 \fi
6396 \let\real@setref\@setref
6397 \def\@setref#1#2#3{% csname, extract group, refname
6398   \ifx#1\relax
6399     \protect\G@refundefinedtrue
6400     \nfss@text{\reset@font\bfseries ??}%
6401     \@latex@warning{%
6402       Reference ‘#3’ on page \thepage \space undefined%
6403     }%
6404   \else
6405     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
6406   \fi
6407 }

```

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

```

6408 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
6409   \begingroup
6410     \toks0={\hyper@@link{#5}{#4}}%
6411     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
6412     \edef\x{\endgroup
6413       \the\toks0 {\the\toks1 }%
6414     }%
6415   \x
6416 }
6417 \def\@pagesetref#1#2#3{% csname, extract macro, ref
6418   \ifx#1\relax
6419     \protect\G@refundefinedtrue
6420     \nfss@text{\reset@font\bfseries ??}%
6421     \@latex@warning{%
6422       Reference ‘#3’ on page \thepage \space undefined%
6423     }%
6424   \else
6425     \protect\hyper@@link
6426     {\expandafter\@fifthoffive#1}%
6427     {page.\expandafter\@secondoffive#1}%
6428     {\expandafter\@secondoffive#1}%
6429   \fi
6430 }
6431 </package>
6432 <*check>
6433 \checklatex
6434 \checkcommand\def\@setref#1#2#3{%
6435   \ifx#1\relax
6436     \protect\G@refundefinedtrue

```



```

6437 \nfss@text{\reset@font\bfseries ??}%
6438 \latex@warning{%
6439   Reference '#3' on page \thepage\space undefined%
6440 }%
6441 \else
6442   \expandafter#2#1\null
6443 \fi
6444 }
6445 \</check>
6446 \<*package>

```

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

```

6447 \def\HyRef@StarSetRef#1{%
6448   \begingroup
6449   \Hy@safe@activestrue
6450   \edef\x{#1}%
6451   \@onelevel@sanitize\x
6452   \edef\x{\endgroup
6453     \noexpand\HyRef@@StarSetRef
6454     \expandafter\noexpand\csname r@\x\endcsname{\x}%
6455   }%
6456   \x
6457 }
6458 \def\HyRef@@StarSetRef#1#2#3{%
6459   \ifx#1\@undefined
6460     \let#1\relax
6461   \fi
6462   \real@setref#1#3{#2}%
6463 }
6464 \def\@refstar#1{%
6465   \HyRef@StarSetRef{#1}\@firstoffive
6466 }
6467 \def\@pagerefstar#1{%
6468   \HyRef@StarSetRef{#1}\@secondoffive
6469 }
6470 \AtBeginDocument{%
6471   \ifpackageloaded{varioref}{%
6472     \def\@Refstar#1{%
6473       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
6474     }%
6475     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
6476       \MakeUppercase#1%
6477     }%
6478     \DeclareRobustCommand*\Ref*{%
6479       \@ifstar\@Refstar\HyRef@Ref
6480     }%
6481     \def\HyRef@Ref#1{%
6482       \hyperref[#{#1}]{\Ref*{#1}}%
6483     }%
6484     \def\Vr@f#1{%
6485       \leavevmode\unskip\vref@space
6486       \hyperref[#{#1}]{%
6487         \Ref*{#1}%
6488         \let\vref@space\nobreakspace
6489         \vpageref[\unskip]{#1}%
6490       }%
6491     }%

```

```

6492 \def\vr@f#1{%
6493 \leavevmode\unskip\href@space
6494 \begingroup
6495 \let\T@pageref\@pagerefstar
6496 \hyperref[{#1}] {%
6497 \ref*{#1}%
6498 \vpageref[\unskip]{#1}%
6499 }%
6500 \endgroup
6501 }%
6502 }{}%
6503 }
6504 \DeclareRobustCommand*\autopageref{%
6505 \ifstar{%
6506 \HyRef@autopagerefname\pageref*%
6507 }\HyRef@autopageref
6508 }
6509 \def\HyRef@autopageref#1{%
6510 \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
6511 }
6512 \def\HyRef@autopagerefname{%
6513 \ifundefined{pageautorefname}{%
6514 \ifundefined{pagename}{%
6515 \Hy@Warning{No autoref name for 'page'}%
6516 }{%
6517 \pagename\nobreakspace
6518 }%
6519 }{%
6520 \pageautorefname\nobreakspace
6521 }%
6522 }
6523 \DeclareRobustCommand*\autoref{%
6524 \ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
6525 }
6526 \def\HyRef@autoref#1#2{%
6527 \begingroup
6528 \Hy@safe@activetrue
6529 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
6530 \endgroup
6531 }
6532 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
6533 \HyRef@ShowKeysRef{#2}%
6534 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
6535 \edef\HyRef@thisref{%
6536 \expandafter\@fourthoffive#1\@empty\@empty\@empty
6537 }%
6538 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
6539 \Hy@safe@activesfalse
6540 #3{%
6541 \expandafter\@fifthoffive#1\@empty\@empty\@empty
6542 }{%
6543 \expandafter\@fourthoffive#1\@empty\@empty\@empty
6544 }{%
6545 \HyRef@currentHtag
6546 \expandafter\@firstoffive#1\@empty\@empty\@empty
6547 \null
6548 }%

```

```

6549 \else
6550   \protect\G@refundefinedtrue
6551   \nfss@text{\reset@font\bfseries ??}%
6552   \@latex@warning{%
6553     Reference ‘#2’ on page \thepage\space undefined%
6554   }%
6555 \fi
6556 }
6557 \def\HyRef@testreftype#1.#2\\{%
6558   \@ifundefined{#1autorefname}{%
6559     \@ifundefined{#1name}{%
6560       \HyRef@StripStar#1\\*\\@nil{#1}%
6561       \@ifundefined{\HyRef@name autorefname}{%
6562         \@ifundefined{\HyRef@name name}{%
6563           \def\HyRef@currentHtag{%
6564             \Hy@Warning{No autoref name for ‘#1’}%
6565           }{%
6566             \edef\HyRef@currentHtag{%
6567               \expandafter\noexpand\csname\HyRef@name name\endcsname
6568               \noexpand~%
6569             }%
6570           }%
6571         }{%
6572           \edef\HyRef@currentHtag{%
6573             \expandafter\noexpand\csname\HyRef@name autorefname\endcsname
6574             \noexpand~%
6575           }%
6576         }%
6577       }{%
6578         \edef\HyRef@currentHtag{%
6579           \expandafter\noexpand\csname#1name\endcsname
6580           \noexpand~%
6581         }%
6582       }%
6583     }{%
6584       \edef\HyRef@currentHtag{%
6585         \expandafter\noexpand\csname#1autorefname\endcsname
6586         \noexpand~%
6587       }%
6588     }%
6589   }
6590 \def\HyRef@StripStar#1*\\#2@nil#3{%
6591   \def\HyRef@name{#2}%
6592   \ifx\HyRef@name\HyRef@CaseStar
6593     \def\HyRef@name{#1}%
6594   \else
6595     \def\HyRef@name{#3}%
6596   \fi
6597 }
6598 \def\HyRef@CaseStar{*\\}
6599 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

6600 \let\HyRef@ShowKeysRef\@gobble
6601 \def\HyRef@ShowKeysInit{%
6602   \begingroup\expandafter\expandafter\expandafter\endgroup

```

```

6603 \expandafter\ifx\csname SK@@label\endcsname\relax
6604 \else
6605   \ifx\SK@ref\@empty
6606   \else
6607     \def\HyRef@ShowKeysRef{%
6608       \SK@\SK@@ref
6609     }%
6610   \fi
6611 \fi
6612 }
6613 \@ifpackageloaded{showkeys}{%
6614   \HyRef@ShowKeysInit
6615 }{%
6616   \AtBeginDocument{%
6617     \@ifpackageloaded{showkeys}{%
6618       \HyRef@ShowKeysInit
6619     }{%
6620     }%
6621 }

```

Defaults for the names that `\autoref` uses.

```

6622 \providecommand*{\AMSautorefname}{\equationautorefname}
6623 \providecommand*{\Hfootnoteautorefname}{\footnoteautorefname}
6624 \providecommand*{\Itemautorefname}{\itemautorefname}
6625 \providecommand*{\itemautorefname}{item}
6626 \providecommand*{\equationautorefname}{Equation}
6627 \providecommand*{\footnoteautorefname}{footnote}
6628 \providecommand*{\itemautorefname}{item}
6629 \providecommand*{\figureautorefname}{Figure}
6630 \providecommand*{\tableautorefname}{Table}
6631 \providecommand*{\partautorefname}{Part}
6632 \providecommand*{\appendixautorefname}{Appendix}
6633 \providecommand*{\chapterautorefname}{chapter}
6634 \providecommand*{\sectionautorefname}{section}
6635 \providecommand*{\subsectionautorefname}{subsection}
6636 \providecommand*{\subsubsectionautorefname}{subsubsection}
6637 \providecommand*{\paragraphautorefname}{paragraph}
6638 \providecommand*{\subparagraphautorefname}{subparagraph}
6639 \providecommand*{\FancyVerbLineautorefname}{line}
6640 \providecommand*{\theoremautorefname}{Theorem}
6641 \providecommand*{\pageautorefname}{page}
6642 </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 pdfTeX offers `\pdfescapestring`.

```

6643 <*\pdfTeX | dvipdfm | vTeX | pdfmarkbase | dviwindo>
6644 \RequirePackage{pdfTeXcmds}[2007/11/11]

```

```

6645 \begingroup\expandafter\expandafter\expandafter\endgroup
6646 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
6647   \begingroup
6648     \catcode'\|=0 %
6649     \@makeother\|%
6650   \@firstofone{\endgroup
6651     |def|Hy@pstringdef#1#2{%
6652       |begingroup
6653         |edef~{|string~}%
6654         |xdef|Hy@gtemp{#2}%
6655       |endgroup
6656       |let#1|Hy@gtemp
6657       |@onelevel@sanitize#1%
6658       |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
6659       |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
6660       |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
6661     }%
6662     |def|Hy@ExchangeBackslash#1\#2|@nil{%
6663       #1%
6664       |ifx|\#2|\%%
6665       |else
6666         \\\%
6667         |Hy@ReturnAfterFi{%
6668           |Hy@ExchangeBackslash#2|@nil
6669         }%
6670       |fi
6671     }%
6672   }%
6673   \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
6674     #1%
6675     \ifx\#2\%%
6676     \else
6677       \@backslashchar(%
6678       \Hy@ReturnAfterFi{%
6679         \Hy@ExchangeLeftParenthesis#2\@nil
6680       }%
6681     \fi
6682   }%
6683   \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
6684     #1%
6685     \ifx\#2\%%
6686     \else
6687       \@backslashchar)%
6688       \Hy@ReturnAfterFi{%
6689         \Hy@ExchangeRightParenthesis#2\@nil
6690       }%
6691     \fi
6692   }%
6693 \else
6694   \def\Hy@pstringdef#1#2{%
6695     \begingroup
6696     \edef~{\string~}%
6697     \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
6698   \endgroup
6699   \let#1\Hy@gtemp
6700 }%
6701 \fi

```

```
6702 </pdfTeX | dvipdfm | vtex | pdfmarkbase | dviwindo>
```

46.2 pdfTeX

```
6703 <*pdfTeX>
6704 \providecommand*{\XR@ext}{pdf}
6705 \Hy@setbreaklinks{true}
```

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

Set PDF version if requested by option pdfversion.

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

```
6706 \let\Hy@pdfminorversion\relax
6707 \begingroup\expandafter\expandafter\expandafter\endgroup
6708 \expandafter\ifx\csname pdfminorversion\endcsname\relax
6709   \begingroup\expandafter\expandafter\expandafter\endgroup
6710   \expandafter\ifx\csname pdfoptionpdfminorversion\endcsname\relax
6711     \else
6712       \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
6713     \fi
6714   \else
6715     \def\Hy@pdfminorversion{\pdfminorversion}%
6716   \fi
6717 \ifundefined{Hy@pdfminorversion}{%
6718   \PackageInfo{hyperref}{%
6719     PDF version is not set, because pdfTeX is too old (<1.10a)%
6720   }%
6721 }%
6722 \ifHy@ocgcolorlinks
6723   \ifnum\Hy@pdfminorversion<5 %
6724     \setkeys{Hyp}{pdfversion=1.5}%
6725   \fi
6726 \fi
6727 \ifHy@setpdfversion
6728   \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
6729   \else
6730     \Hy@pdfminorversion=\Hy@pdfversion\relax
6731   \fi
6732   \PackageInfo{hyperref}{%
6733     \expandafter\string\Hy@pdfminorversion
6734     :=\number\Hy@pdfversion\space
6735   }%
6736 \fi
6737 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
6738 }
6739 \Hy@DisableOption{pdfversion}%
6740 \ifHy@ocgcolorlinks
6741   \immediate\pdfobj{%
6742     <<%
6743       /Type/OCG%
6744       /Name(View)%
6745       /Usage<<%
6746         /Print<<%
6747         /PrintState/OFF%
```

```

6748         >>%
6749         /View<<%
6750         /ViewState/ON%
6751         >>%
6752     >>%
6753 >>%
6754 }%
6755 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
6756 \immediate\pdfobj{%
6757     <<%
6758     /Type/OCG%
6759     /Name(Print)%
6760     /Usage<<%
6761     /Print<<%
6762     /PrintState/ON%
6763     >>%
6764     /View<<%
6765     /ViewState/OFF%
6766     >>%
6767     >>%
6768     >>%
6769 }%
6770 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
6771 \immediate\pdfobj{%
6772     [%
6773     \OBJ@OCG@view\space\OBJ@OCG@print
6774     ]%
6775 }%
6776 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
6777 \pdfcatalog{%
6778     /OCProperties<<%
6779     /OCGs \OBJ@OCGs
6780     /D<<%
6781     /OFF[\OBJ@OCG@print]%
6782     /AS[%
6783     <<%
6784     /Event/View%
6785     /OCGs \OBJ@OCGs
6786     /Category[/View]%
6787     >>%
6788     <<%
6789     /Event/Print%
6790     /OCGs \OBJ@OCGs
6791     /Category[/Print]%
6792     >>%
6793     <<%
6794     /Event/Export%
6795     /OCGs \OBJ@OCGs
6796     /Category[/Print]%
6797     >>%
6798     ]%
6799     >>%
6800     >>%
6801 }%
6802 \beginngroup
6803 \edef\x{\endgroup
6804     \pdfpageresources{%

```

```

6805      /Properties<<%
6806      /OCView \OBJ@OCG@view
6807      /OCPrint \OBJ@OCG@print
6808      >>%
6809  }%
6810 }%
6811 \x
6812 \AtBeginDocument{%
6813   \def\Hy@colorlink#1{%
6814     \begingroup
6815     \ifHy@ocgcolorlinks
6816       \def\Hy@ocgcolor{#1}%
6817       \setbox0=\color@hbox
6818     \else
6819       \HyColor@UseColor#1%
6820     \fi
6821   }%
6822   \def\Hy@endcolorlink{%
6823     \ifHy@ocgcolorlinks
6824       \color@endbox
6825     \mbox{%
6826       \pdfliteral page{/OC/OCPrint BDC}%
6827       \rlap{\copy0}%
6828       \pdfliteral page{EMC/OC/OCView BDC}%
6829     \begingroup
6830       \expandafter\HyColor@UseColor\Hy@ocgcolor
6831       \box0 %
6832     \endgroup
6833     \pdfliteral page{EMC}%
6834   }%
6835   \fi
6836 \endgroup
6837 }%
6838 }%
6839 \else
6840   \Hy@DisableOption{ocgcolorlinks}%
6841 \fi

```

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

```

6842 \def\setpdflinkmargin#1{\pdflinkmargin#1}
6843 \ifx\pdfstartlink\@undefined% less than version 14
6844   \let\pdfstartlink\pdfannotlink
6845   \let\pdflinkmargin\@tempdima
6846   \let\pdfxform\pdfform
6847   \let\pdflastxform\pdfastform
6848   \let\pdfrefxform\pdfrefform
6849 \else
6850   \pdflinkmargin1pt %
6851 \fi

```

First set up the default linking

```

6852 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

6853 \def\new@pdflink#1{%
6854   \ifHy@verbose
6855     \typeout{pdftex: define anchor at line \the\inputlineno: #1}%
6856   \fi
6857   \Hy@SaveLastskip

```



```

6858 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
6859 \Hy@DestName\Hy@pstringDest\@pdfview
6860 \Hy@RestoreLastskip
6861 }
6862 \let\pdf@endanchor\@empty

```

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

```

6863 \def\Hy@DestName#1#2{%
6864 \pdfdest name{#1}#2\relax
6865 }

```

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.

```

6866 \providecommand*\@pdfborder{0 0 1}
6867 \providecommand*\@pdfborderstyle{}
6868 \def\Hy@undefinedname{UNDEFINED}
6869 \def\find@pdflink#1#2{%
6870 \leavevmode
6871 \protected@edef\Hy@testname{#2}%
6872 \ifx\Hy@testname\@empty
6873 \let\Hy@testname\Hy@undefinedname
6874 \else
6875 \Hy@pstringdef\Hy@testname{%
6876 \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
6877 }%
6878 \fi
6879 \Hy@StartlinkName{%
6880 \ifHy@pdfa /F 4\fi
6881 \Hy@setpdfborder
6882 \ifx\@pdfhighlight\@empty
6883 \else
6884 /H\@pdfhighlight
6885 \fi
6886 \ifx\CurrentBorderColor\relax
6887 \else
6888 /C[\CurrentBorderColor]%
6889 \fi
6890 }\Hy@testname
6891 \expandafter\Hy@colorlink\csname @#1color\endcsname
6892 }
6893 \def\Hy@StartlinkName#1#2{%
6894 \pdfstartlink attr{#1}goto name{#2}\relax
6895 }
6896 \def\close@pdflink{\Hy@endcolorlink\pdfendlink}
6897 \def\hyper@anchor#1{\new@pdflink{#1}\anchor@spot\pdf@endanchor}
6898 \def\hyper@anchorstart#1{\new@pdflink{#1}\Hy@activeanchortrue}
6899 \def\hyper@anchorend{\pdf@endanchor\Hy@activeanchorfalse}
6900 \def\hyper@linkstart#1#2{%
6901 \@ifundefined{#1bordercolor}{%
6902 \let\CurrentBorderColor\relax
6903 }{%
6904 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
6905 }%
6906 \find@pdflink{#1}{#2}%

```

```

6907 }
6908 \def\hyper@linkend{\close@pdflink}
6909 \def\hyper@link#1#2#3{%
6910   \@ifundefined{@#1bordercolor}{%
6911     \let\CurrentBorderColor\relax
6912   }{%
6913     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
6914   }%
6915   \find@pdflink{#1}{#2}#3%
6916   \close@pdflink
6917 }
6918 \let\CurrentBorderColor\@linkbordercolor
6919 \def\hyper@linkurl#1#2{%
6920   \begingroup
6921     \Hy@pstringdef\Hy@pstringURI{#2}%
6922     \hyper@chars
6923     \leavevmode
6924     \pdfstartlink
6925     attr{%
6926       \Hy@setpdfborder
6927       \ifx\@pdfhighlight\@empty
6928       \else
6929         /H\@pdfhighlight
6930       \fi
6931       \ifx\@urlbordercolor\relax
6932       \else
6933         /C[\@urlbordercolor]%
6934       \fi
6935     }%
6936     user{%
6937       /Subtype/Link%
6938       \ifHy@pdfa /F 4\fi
6939       /A<<%
6940         /Type/Action%
6941         /S/URI%
6942         /URI(\Hy@pstringURI)%
6943       >>%
6944     }%
6945     \relax
6946     \Hy@colorlink\@urlcolor#1%
6947     \close@pdflink
6948   \endgroup
6949 }
6950 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
6951   \begingroup
6952     \Hy@pstringdef\Hy@pstringF{#2}%
6953     \Hy@pstringdef\Hy@pstringD{#3}%
6954     \leavevmode
6955     \pdfstartlink
6956     attr{%
6957       \Hy@setpdfborder
6958       \ifx\@pdfhighlight\@empty
6959       \else
6960         /H\@pdfhighlight
6961       \fi
6962       \ifx\@filebordercolor\relax
6963       \else

```

```

6964         /C[\@filebordercolor]%
6965     \fi
6966 }%
6967 user {%
6968     /Subtype/Link%
6969     \ifHy@pdfa /F 4\fi
6970     /A<<%
6971     /F(\Hy@pstringF)%
6972     /S/GoToR%
6973     \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}

```

```

6974     \ifx\#3\%
6975     /D[0 \@pdfstartview]%
6976     \else
6977     /D(\Hy@pstringD)%
6978     \fi
6979     >>%
6980 }%
6981 \relax
6982 \Hy@colorlink\@filecolor#1%
6983 \close@pdflink
6984 \endgroup
6985 }
6986 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
6987 \beginngroup
6988 \Hy@pstringdef\Hy@pstringF{#1}%
6989 \Hy@pstringdef\Hy@pstringP{#3}%
6990 \leavevmode
6991 \pdfstartlink
6992 attr{%
6993     \Hy@setpdfborder
6994     \ifx\@pdfhighlight\@empty
6995     \else
6996     /H\@pdfhighlight
6997     \fi
6998     \ifx\@runbordercolor\relax
6999     \else
7000     /C[\@runbordercolor]%
7001     \fi
7002 }%
7003 user {%
7004     /Subtype/Link%
7005     \ifHy@pdfa /F 4\fi
7006     /A<<%
7007     /F(\Hy@pstringF)%
7008     /S/Launch%
7009     \Hy@SetNewWindow

```

```

7010         \ifx\|#3\%
7011         \else
7012             /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
7013         \fi
7014     >>%
7015 }%
7016 \relax
7017 \Hy@colorlink\@runcolor#2%
7018 \close@pdflink
7019 \endgroup
7020 }

```

\@pdfproducer

```

7021 \ifx\@pdfproducer\relax
7022 \begingroup\expandafter\expandafter\expandafter\endgroup
7023 \expandafter\ifx\csname luatexversion\endcsname\relax
7024     \def\@pdfproducer{pdfTeX}%
7025     \ifx\eTeXversion\undefined
7026     \else
7027         \ifx\eTeXversion\relax
7028         \else
7029             \ifnum\eTeXversion>0 %
7030                 \def\@pdfproducer{pdfTeX}%
7031             \fi
7032         \fi
7033     \fi
7034     \ifx\pdfTeXversion\undefined
7035     \else
7036         \ifnum\pdfTeXversion<100 %
7037             \edef\@pdfproducer{%
7038                 \@pdfproducer
7039                 \the\pdfTeXversion.\pdfTeXrevision
7040             }%
7041         \else
7042             \ifnum\pdfTeXversion<130 %
7043                 \edef\@pdfproducer{%
7044                     \@pdfproducer-%
7045                     \expandafter\@car\the\pdfTeXversion\empty\@nil.%
7046                     \expandafter\@cdr\the\pdfTeXversion\empty\@nil.%
7047                     \pdfTeXrevision
7048                 }%
7049             \else
7050                 \ifnum\pdfTeXversion<140 %
7051                 \else
7052                     \def\@pdfproducer{pdfTeX}%
7053                 \fi
7054                 \edef\@pdfproducer{%
7055                     \@pdfproducer-%
7056                     \expandafter\@car\the\pdfTeXversion\empty\@nil.%
7057                     \expandafter\@cdr\the\pdfTeXversion\empty\@nil.%
7058                     \pdfTeXrevision
7059                 }%
7060             \fi
7061         \fi
7062     \fi
7063 \else
7064 \begingroup

```

```

7065     \count@=\luatexversion
7066     \divide\count@ by 100 %
7067     \edef\x{\the\count@}%
7068     \count@=-\x\relax
7069     \multiply\count@ by 100 %
7070     \advance\count@ by \luatexversion
7071     \edef\x{\endgroup
7072         \def\noexpand\@pdfproducer{%
7073             LuaTeX-\x.\the\count@.\luatexrevision
7074         }%
7075     }%
7076     \x
7077 \fi
7078 \fi

```

\PDF@SetupDox

```

7079 \def\PDF@SetupDoc{%
7080   \ifx\@pdfpagescrop\@empty
7081   \else
7082     \edef\process@me{%
7083       \pdfpagesattr={%
7084         /CropBox[\@pdfpagescrop]%
7085         \expandafter\ifx\expandafter\\\the\pdfpagesattr\\%
7086         \else
7087           ^^J\the\pdfpagesattr
7088         \fi
7089       }%
7090     }%
7091     \process@me
7092   \fi
7093   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
7094   \pdfcatalog{%
7095     /PageMode/\@pdfpagemode
7096     \ifx\@baseurl\@empty
7097     \else
7098       /URI<</Base(\Hy@pstringB)>>%
7099     \fi
7100   }%
7101   \ifx\@pdfstartpage\@empty
7102   \else
7103     \ifx\@pdfstartview\@empty
7104     \else
7105       openaction goto page\@pdfstartpage{\@pdfstartview}%
7106     \fi
7107   \fi
7108   \edef\Hy@temp{%
7109     \ifHy@toolbar\else /HideToolbar true\fi
7110     \ifHy@menubar\else /HideMenubar true\fi
7111     \ifHy>windowui\else /HideWindowUI true\fi
7112     \ifHy@fitwindow /FitWindow true\fi
7113     \ifHy@centerwindow /CenterWindow true\fi
7114     \ifHy@displaydoctitle /DisplayDocTitle true\fi
7115     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7116     \Hy@UseNameKey{Direction}\@pdfdirection
7117     \Hy@UseNameKey{ViewArea}\@pdfviewarea
7118     \Hy@UseNameKey{ViewClip}\@pdfviewclip
7119     \Hy@UseNameKey{PrintArea}\@pdfprintarea

```

```

7120 \Hy@UseNameKey{PrintClip}\@pdfprintclip
7121 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7122 \Hy@UseNameKey{Duplex}\@pdfduplex
7123 \ifx\@pdfpicktraybypdfsize\@empty
7124 \else
7125 /PickTrayByPDFSize \@pdfpicktraybypdfsize
7126 \fi
7127 \ifx\@pdfprintpagerange\@empty
7128 \else
7129 /PrintPageRange[\@pdfprintpagerange]%
7130 \fi
7131 \ifx\@pdfnumcopies\@empty
7132 \else
7133 /NumCopies \@pdfnumcopies
7134 \fi
7135 }%
7136 \pdfcatalog{%
7137 \ifx\Hy@temp\@empty
7138 \else
7139 /ViewerPreferences<<\Hy@temp>>%
7140 \fi
7141 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7142 \ifx\@pdflang\@empty
7143 \else
7144 /Lang(\@pdflang)%
7145 \fi
7146 }%
7147 }

```

\PDF@FinishDoc

```

7148 \def\PDF@FinishDoc{%
7149 \Hy@UseMaketitleInfos
7150 \pdfinfo{%
7151 /Author(\@pdfauthor)%
7152 /Title(\@pdftitle)%
7153 /Subject(\@pdfsubject)%
7154 /Creator(\@pdfcreator)%
7155 \ifx\@pdfcreationdate\@empty
7156 \else
7157 /CreationDate(\@pdfcreationdate)%
7158 \fi
7159 \ifx\@pdfmoddate\@empty
7160 \else
7161 /ModDate(\@pdfmoddate)%
7162 \fi
7163 \ifx\@pdfproducer\relax
7164 \else
7165 /Producer(\@pdfproducer)%
7166 \fi
7167 /Keywords(\@pdfkeywords)%
7168 }%
7169 \Hy@DisableOption{pdfauthor}%
7170 \Hy@DisableOption{pdftitle}%
7171 \Hy@DisableOption{pdfsubject}%
7172 \Hy@DisableOption{pdfcreator}%
7173 \Hy@DisableOption{pdfcreationdate}%
7174 \Hy@DisableOption{pdfmoddate}%

```

```

7175 \Hy@DisableOption{pdfproducer}%
7176 \Hy@DisableOption{pdfkeywords}%
7177 }

```

`\hyper@pagetransition` `\@pdfpagetransition` is initialized with `\relax`. So it indicates, if option `pdfpagetransition` is used. First previous `/Trans` entries are removed. If a new `/Trans` key exists, it is appended to `\pdfpageattr`.

```

7178 \def\hyper@pagetransition{%
7179 \ifx\@pdfpagetransition\relax
7180 \else
7181 \expandafter\Hy@RemoveTransPageAttr
7182 \the\pdfpageattr^^J/Trans{>>\END
7183 \ifx\@pdfpagetransition\@empty
7184 \else
7185 \edef\@processme{%
7186 \global\pdfpageattr{%
7187 \the\pdfpageattr
7188 ^^J/Trans << /S /\@pdfpagetransition\space >>%
7189 }%
7190 }%
7191 \@processme
7192 \fi
7193 \fi
7194 }

```

`\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.

```

7195 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
7196 \ifx\#2\%
7197 \global\pdfpageattr{#1}%
7198 \else
7199 \Hy@RemoveTransPageAttr#1#4\END
7200 \fi
7201 }

```

`\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`.

```

7202 \def\hyper@pageduration{%
7203 \ifx\@pdfpageduration\relax
7204 \else
7205 \expandafter\Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
7206 \ifx\@pdfpageduration\@empty
7207 \else
7208 \edef\@processme{%
7209 \global\pdfpageattr{%
7210 \the\pdfpageattr
7211 ^^J/Dur \@pdfpageduration\space
7212 }%
7213 }%
7214 \@processme
7215 \fi
7216 \fi
7217 }

```

`\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.

```

7218 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
7219   \ifx\#2\%
7220     \global\pdfpageattr{#1}%
7221   \else
7222     \Hy@RemoveDurPageAttr#1#4\END
7223   \fi
7224 }
```

`\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).

```

7225 \def\hyper@pagehidden{%
7226   \ifHy@useHidKey
7227     \expandafter\Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{ } \END
7228   \ifHy@pdfpagehidden
7229     \edef\@processme{%
7230       \global\pdfpageattr{%
7231         \the\pdfpageattr
7232         ^^J/Hid true % SPACE
7233       }%
7234     }%
7235     \@processme
7236   \fi
7237 \fi
7238 }
```

`\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.

```

7239 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
7240   \ifx\#2\%
7241     \global\pdfpageattr{#1}%
7242   \else
7243     \Hy@RemoveHidPageAttr#1#4\END
7244   \fi
7245 }
```

```

7246 \g@addto@macro\Hy@EveryPageHook{%
7247   \hyper@pagetransition
7248   \hyper@pageduration
7249   \hyper@pagehidden
7250 }

7251 \AtBeginDocument{%
7252   \ifHy@setpagesize
7253     \expandafter\@firstofone
7254   \else
7255     \expandafter\@gobble
7256   \fi
7257   {%
7258     \@ifclassloaded{seminar}{%
7259       \setlength{\pdfhorigin}{1truein}%

```



```

7260 \setlength{\pdfvorigin}{1truein}%
7261 \ifportrait
7262 \ifdim\paperwidth=\z@
7263 \else
7264 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
7265 \fi
7266 \ifdim\paperheight=\z@
7267 \else
7268 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
7269 \fi
7270 \else
7271 \ifdim\paperheight=\z@
7272 \else
7273 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
7274 \fi
7275 \ifdim\paperwidth=\z@
7276 \else
7277 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
7278 \fi
7279 \fi
7280 }{%
7281 \@ifundefined{stockwidth}{%
7282 \ifdim\paperwidth=\z@
7283 \else
7284 \setlength{\pdfpagewidth}{\paperwidth}%
7285 \fi
7286 \ifdim\paperheight=\z@
7287 \else
7288 \setlength{\pdfpageheight}{\paperheight}%
7289 \fi
7290 }{%
7291 \ifdim\stockwidth=\z@
7292 \else
7293 \setlength{\pdfpagewidth}{\stockwidth}%
7294 \fi
7295 \ifdim\stockheight=\z@
7296 \else
7297 \setlength{\pdfpageheight}{\stockheight}%
7298 \fi
7299 }%
7300 }%
7301 }%
7302 \Hy@DisableOption{setpagesize}%
7303 }
7304 \def\Acrobatmenu#1#2{%
7305 \Hy@Acrobatmenu{#1}{#2}{%
7306 \pdfstartlink
7307 attr{%
7308 \Hy@setpdfborder
7309 \ifx\@pdfhighlight\@empty
7310 \else
7311 /H\@pdfhighlight
7312 \fi
7313 \ifx\@menubordercolor\relax
7314 \else
7315 /C[\@menubordercolor]%
7316 \fi

```

```

7317     }%
7318     user{%
7319         /Subtype/Link%
7320         \ifHy@pdfa /F 4\fi
7321         /A<<%
7322         /S/Named/N/#1%
7323         >>%
7324     }%
7325     \relax
7326     \Hy@colorlink\@menucolor#2%
7327     \close@pdflink
7328 }%
7329 }
7330 </pdfTeX>
7331 <*hypertex>

```

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.

```

7332 \providecommand*{\XR@ext}{dvi}
7333 \def\PDF@FinishDoc{}
7334 \def\PDF@SetupDoc{%
7335   \ifx\@baseurl\@empty
7336   \else
7337     \special{html:<base href="\@baseurl">}}%
7338 \fi

```

```

7339 }
7340 \def\hyper@anchor#1{%
7341   \Hy@SaveLastskip
7342   \begingroup
7343     \let\protect=\string
7344     \hyper@chars
7345     \special{html:<a name=%
7346       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7347   \endgroup
7348   \Hy@activeanchortrue
7349   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7350   \special{html:</a>}%
7351   \Hy@activeanchorfalse
7352   \Hy@RestoreLastskip
7353 }
7354 \def\hyper@anchorstart#1{%
7355   \Hy@SaveLastskip
7356   \begingroup
7357     \hyper@chars
7358     \special{html:<a name=%
7359       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7360   \endgroup
7361   \Hy@activeanchortrue
7362 }
7363 \def\hyper@anchorend{%
7364   \special{html:</a>}%
7365   \Hy@activeanchorfalse
7366   \Hy@RestoreLastskip
7367 }
7368 \def\@urltype{url}
7369 \def\hyper@linkstart#1#2{%
7370   \expandafter\Hy@colorlink\csname @#1color\endcsname
7371   \def\Hy@tempa{#1}%
7372   \ifx\Hy@tempa\@urltype
7373     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7374   \else
7375     \begingroup
7376       \hyper@chars
7377       \special{html:<a href=%
7378         \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>}%
7379     \endgroup
7380   \fi
7381 }
7382 \def\hyper@linkend{%
7383   \special{html:</a>}%
7384   \Hy@endcolorlink
7385 }
7386 \def\hyper@linkfile#1#2#3{%
7387   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\\#3\fi}%
7388 }
7389 \def\hyper@linkurl#1#2{%
7390   \leavevmode
7391   \ifHy@raiselinks
7392     \setbox\@tempboxa=\color@hbox #1\color@endbox

```

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.

```

7393 \@linkdim\dp\@tempboxa
7394 \lower\@linkdim\hbox{%
7395 \hyper@chars
7396 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
7397 }%
7398 \Hy@colorlink\@urlcolor#1%
7399 \@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).

```

7400 \advance\@linkdim by -6.5\p@
7401 \raise\@linkdim\hbox{\special{html:</a>}}%
7402 \Hy@endcolorlink
7403 \else
7404 \begingroup
7405 \hyper@chars
7406 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
7407 \Hy@colorlink\@urlcolor#1%
7408 \special{html:</a>}}%
7409 \Hy@endcolorlink
7410 \endgroup
7411 \fi
7412 }

```

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

```

7413 \def\hyper@link#1#2#3{%
7414 \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}%
7415 }

7416 \def\hyper@image#1#2{%
7417 \begingroup
7418 \hyper@chars
7419 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
7420 \endgroup
7421 }
7422 </hypertext>
7423 <*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.

```

7424 \providecommand*\XR@ext{dvi}
7425 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
7426 \def\hyper@anchor#1{%
7427 \Hy@SaveLastskip
7428 \begingroup
7429 \let\protect=\string

```

```

7430 \special{mark: #1}%
7431 \endgroup
7432 \Hy@activeanchortrue
7433 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7434 \Hy@activeanchorfalse
7435 \Hy@RestoreLastskip
7436 }
7437 \def\hyper@anchorstart#1{%
7438 \Hy@SaveLastskip
7439 \special{mark: #1}%
7440 \Hy@activeanchortrue
7441 }
7442 \def\hyper@anchorend{%
7443 \Hy@activeanchorfalse
7444 \Hy@RestoreLastskip
7445 }
7446 \def\hyper@linkstart#1#2{%
7447 \expandafter\Hy@colorlink\csname @#1color\endcsname
7448 \special{button: %
7449 10000000 %
7450 \number\baselineskip\space
7451 #2%
7452 }%
7453 }
7454 \def\hyper@linkend{%
7455 \Hy@endcolorlink
7456 }
7457 \def\hyper@link#1#2#3{%
7458 \setbox\@tempboxa=\color@hbox #3\color@endbox
7459 \leavevmode
7460 \ifHy@raiselinks
7461 \@linkdim\dp\@tempboxa
7462 \lower\@linkdim\hbox{%
7463 \special{button: %
7464 \number\wd\@tempboxa\space
7465 \number\ht\@tempboxa\space
7466 #2%
7467 }%
7468 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7469 \Hy@endcolorlink
7470 }%
7471 \@linkdim\ht\@tempboxa
7472 \advance\@linkdim by -6.5\p@
7473 \raise\@linkdim\hbox{%}%
7474 \else
7475 \special{button: %
7476 \number\wd\@tempboxa\space
7477 \number\ht\@tempboxa\space
7478 #2%
7479 }%
7480 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7481 \Hy@endcolorlink
7482 \fi
7483 }
7484 \def\hyper@linkurl#1#2{%
7485 \begingroup
7486 \hyper@chars

```

```

7487 \leavevmode
7488 \setbox\@tempboxa=\color@hbox #1\color@endbox
7489 \ifHy@raiselinks
7490 \@linkdim\dp\@tempboxa
7491 \lower\@linkdim\hbox{%
7492 \special{button: %
7493 \number\wd\@tempboxa\space
7494 \number\ht\@tempboxa\space
7495 launch: \wwwbrowser\space
7496 #2%
7497 }%
7498 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7499 }%
7500 \@linkdim\ht\@tempboxa
7501 \advance\@linkdim by -6.5\p@
7502 \raise\@linkdim\hbox{}}%
7503 \else
7504 \special{button: %
7505 \number\wd\@tempboxa\space
7506 \number\ht\@tempboxa\space
7507 launch: \wwwbrowser\space
7508 #2%
7509 }%
7510 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7511 \fi
7512 \endgroup
7513 }
7514 \def\hyper@linkfile#1#2#3{%
7515 \begingroup
7516 \hyper@chars
7517 \leavevmode
7518 \setbox\@tempboxa=\color@hbox #1\color@endbox
7519 \ifHy@raiselinks
7520 \@linkdim\dp\@tempboxa
7521 \lower\@linkdim\hbox{%
7522 \special{button: %
7523 \number\wd\@tempboxa\space
7524 \number\ht\@tempboxa\space
7525 #3,%
7526 file: #2%
7527 }%
7528 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7529 }%
7530 \@linkdim\ht\@tempboxa
7531 \advance\@linkdim by -6.5\p@
7532 \raise\@linkdim\hbox{}}%
7533 \else
7534 \special{button: %
7535 \number\wd\@tempboxa\space
7536 \number\ht\@tempboxa\space
7537 #3,%
7538 file: #2%
7539 }%
7540 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7541 \fi
7542 \endgroup
7543 }

```

```

7544 \ifx\@pdfproducer\relax
7545   \def\@pdfproducer{dviwindo + Distiller}%
7546 \fi
7547 \def\PDF@FinishDoc{%
7548   \Hy@UseMaketitleInfos
7549   \special{PDF: Keywords \@pdfkeywords}%
7550   \special{PDF: Title \@pdftitle}%
7551   \special{PDF: Creator \@pdfcreator}%
7552   \ifx\@pdfcreationdate\@empty
7553   \else
7554     \special{PDF: CreationDate \@pdfcreationdate}%
7555   \fi
7556   \ifx\@pdfmoddate\@empty
7557   \else
7558     \special{PDF: ModDate \@pdfmoddate}%
7559   \fi
7560   \special{PDF: Author \@pdfauthor}%
7561   \ifx\@pdfproducer\relax
7562   \else
7563     \special{PDF: Producer \@pdfproducer}%
7564   \fi
7565   \special{PDF: Subject \@pdfsubject}%
7566   \Hy@DisableOption{pdfauthor}%
7567   \Hy@DisableOption{pdftitle}%
7568   \Hy@DisableOption{pdfsubject}%
7569   \Hy@DisableOption{pdfcreator}%
7570   \Hy@DisableOption{pdfcreationdate}%
7571   \Hy@DisableOption{pdfmoddate}%
7572   \Hy@DisableOption{pdfproducer}%
7573   \Hy@DisableOption{pdfkeywords}%
7574 }
7575 \def\PDF@SetupDoc{%
7576   \ifx\@baseurl\@empty
7577   \else
7578     \special{PDF: Base \@baseurl}%
7579   \fi
7580   \ifx\@pdfpagescrop\@empty\else
7581     \special{PDF: BBox \@pdfpagescrop}%
7582   \fi
7583   \def\Hy@temp{}%
7584   \ifx\@pdfstartpage\@empty
7585   \else
7586     \ifx\@pdfstartview\@empty
7587     \else
7588       \edef\Hy@temp{%
7589         ,Page=\@pdfstartpage
7590         ,View=\@pdfstartview
7591       }%
7592     \fi
7593   \fi
7594   \edef\Hy@temp{%
7595     \noexpand\pdfmark{%
7596       pdfmark=/DOCVIEW,%
7597       PageMode=/\@pdfpagemode
7598     }\Hy@temp
7599   }%
7600 }%

```

```

7601 \Hy@temp
7602 \ifx\@pdfpagescrop\@empty
7603 \else
7604 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
7605 \fi
7606 \edef\Hy@temp{%
7607 \ifHy@toolbar\else /HideToolbar true\fi
7608 \ifHy@menubar\else /HideMenubar true\fi
7609 \ifHy>windowui\else /HideWindowUI true\fi
7610 \ifHy@fitwindow /FitWindow true\fi
7611 \ifHy@centerwindow /CenterWindow true\fi
7612 \ifHy@displaydoctitle /DisplayDocTitle true\fi
7613 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7614 \Hy@UseNameKey{Direction}\@pdfdirection
7615 \Hy@UseNameKey{ViewArea}\@pdfviewarea
7616 \Hy@UseNameKey{ViewClip}\@pdfviewclip
7617 \Hy@UseNameKey{PrintArea}\@pdfprintarea
7618 \Hy@UseNameKey{PrintClip}\@pdfprintclip
7619 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7620 \Hy@UseNameKey{Duplex}\@pdfduplex
7621 \ifx\@pdfpicktraybypdfsize\@empty
7622 \else
7623 /PickTrayByPDFSize \@pdfpicktraybypdfsize
7624 \fi
7625 \ifx\@pdfprintpagerange\@empty
7626 \else
7627 /PrintPageRange[\@pdfprintpagerange]%
7628 \fi
7629 \ifx\@pdfnumcopies\@empty
7630 \else
7631 /NumCopies \@pdfnumcopies
7632 \fi
7633 }%
7634 \pdfmark{pdfmark=/PUT,%
7635 Raw={%
7636 \string{Catalog\string}<<%
7637 \ifx\Hy@temp\@empty
7638 \else
7639 /ViewerPreferences<<\Hy@temp>>%
7640 \fi
7641 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7642 \ifx\@pdflang\@empty
7643 \else
7644 /Lang(\@pdflang)%
7645 \fi
7646 >>%
7647 }%
7648 }%
7649 }
7650 </dviwindo>
7651 <*dvipdfm>

```

46.5 dvipdfm dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

7652 \providecommand*{\XR@ext}{pdf}
7653 \Hy@setbreaklinks{true}

```



```

7654 \newsavebox{\pdfm@box}
7655 \def\@pdfm@mark#1{\special{pdf:#1}}
7656 \def\@pdfm@dest#1{%
7657   \Hy@SaveLastskip
7658   \beginngroup
7659     \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7660     \def\x{XYZ}%
7661     \ifx\x\@pdfview
7662       \def\x{XYZ @xpos @ypos null}%
7663     \else
7664       \def\x{FitH}%
7665       \ifx\x\@pdfview
7666         \def\x{FitH @ypos}%
7667       \else
7668         \def\x{FitBH}%
7669         \ifx\x\@pdfview
7670           \def\x{FitBH @ypos}%
7671         \else
7672           \def\x{FitV}%
7673           \ifx\x\@pdfview
7674             \def\x{FitV @xpos}%
7675           \else
7676             \def\x{FitBV}%
7677             \ifx\x\@pdfview
7678               \def\x{FitBV @xpos}%
7679             \else
7680               \def\x{Fit}%
7681               \ifx\x\@pdfview
7682                 \let\x\@pdfview
7683             \else
7684               \def\x{FitB}%
7685               \ifx\x\@pdfview
7686                 \let\x\@pdfview
7687             \else
7688               \def\x{FitR}%
7689               \ifx\x\@pdfview
7690                 \Hy@Warning{'pdfview=FitR' is not supported}%
7691                 \def\x{XYZ @xpos @ypos null}%
7692             \else
7693               \@onelevel@sanitize\@pdfview
7694               \Hy@Warning{Unknown value '\@pdfview' for pdfview}%
7695               \def\x{XYZ @xpos @ypos null}%
7696             \fi
7697           \fi
7698         \fi
7699       \fi
7700     \fi
7701   \fi
7702 \fi
7703 \fi
7704 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
7705 \endgroup
7706 \Hy@RestoreLastskip
7707 }
7708 \providecommand*\@pdfview{XYZ}
7709 \providecommand*\@pdfborder{0 0 1}
7710 \providecommand*\@pdfborderstyle{}

```

```

7711 \def\hyper@anchor#1{%
7712   \@pdfm@dest{#1}%
7713 }
7714 \def\hyper@anchorstart#1{%
7715   \Hy@activeanchortrue
7716   \@pdfm@dest{#1}%
7717 }
7718 \def\hyper@anchorend{%
7719   \Hy@activeanchorfalse
7720 }

7721 \ifHy@ocgcolorlinks
7722   \def\OBJ@OCG@view{@OCG@view}%
7723   \@pdfm@mark{%
7724     obj \OBJ@OCG@view <<%
7725       /Type/OCG%
7726       /Name(View)%
7727       /Usage<<%
7728         /Print<<%
7729         /PrintState/OFF%
7730       >>%
7731       /View<<%
7732       /ViewState/ON%
7733     >>%
7734   >>%
7735   >>%
7736 }%
7737 \@pdfm@mark{close \OBJ@OCG@view}%
7738 \def\OBJ@OCG@print{@OCG@print}%
7739 \@pdfm@mark{%
7740   obj \OBJ@OCG@print <<%
7741     /Type/OCG%
7742     /Name(Print)%
7743     /Usage<<%
7744     /Print<<%
7745     /PrintState/ON%
7746   >>%
7747   /View<<%
7748   /ViewState/OFF%
7749   >>%
7750   >>%
7751   >>%
7752 }%
7753 \@pdfm@mark{close \OBJ@OCG@print}%
7754 \def\OBJ@OCGs{@OCGs}%
7755 \@pdfm@mark{%
7756   obj \OBJ@OCGs [%
7757     \OBJ@OCG@view\space\OBJ@OCG@print
7758   ]%
7759 }%
7760 \@pdfm@mark{close \OBJ@OCGs}%
7761 \@pdfm@mark{%
7762   put @catalog <<%
7763     /OCProperties<<%
7764     /OCGs \OBJ@OCGs
7765     /D<<%
7766     /OFF[\OBJ@OCG@print]%
7767     /AS[%

```

```

7768         <<%
7769             /Event/View%
7770             /OCGs \OBJ@OCGs
7771             /Category[/View]%
7772         >>%
7773         <<%
7774             /Event/Print%
7775             /OCGs \OBJ@OCGs
7776             /Category[/Print]%
7777         >>%
7778         <<%
7779             /Event/Export%
7780             /OCGs \OBJ@OCGs
7781             /Category[/Print]%
7782         >>%
7783     ]%
7784 >>%
7785 >>%
7786 >>%
7787 }%
7788 \@pdfm@mark{%
7789     put @resources <<%
7790         /Properties<<%
7791             /OCView \OBJ@OCG@view
7792             /OCPrint \OBJ@OCG@print
7793         >>%
7794     >>%
7795 }%
7796 \AtBeginDocument{%
7797     \def\Hy@colorlink#1{%
7798         \begingroup
7799             \ifHy@ocgcolorlinks
7800                 \def\Hy@ocgcolor{#1}%
7801                 \setbox0=\color@hbox
7802             \else
7803                 \HyColor@UseColor#1%
7804             \fi
7805         }%
7806         \def\Hy@endcolorlink{%
7807             \ifHy@ocgcolorlinks
7808                 \color@endbox
7809                 \mbox{%
7810                     \@pdfm@mark{content /OC/OCPrint BDC}%
7811                     \rlap{\copy0}%
7812                     \@pdfm@mark{content EMC/OC/OCView BDC}%
7813                     \begingroup
7814                         \expandafter\HyColor@UseColor\Hy@ocgcolor
7815                         \box0 %
7816                     \endgroup
7817                     \@pdfm@mark{content EMC}%
7818                 }%
7819             \fi
7820         \endgroup
7821     }%
7822 }%
7823 \else
7824     \Hy@DisableOption{ocgcolorlinks}%

```

```

7825 \fi
7826 \def\Hy@undefinedname{UNDEFINED}
7827 \def\hyper@linkstart#1#2{%
7828   \protected@edef\Hy@testname{#2}%
7829   \ifx\Hy@testname\empty
7830     \let\Hy@testname\Hy@undefinedname
7831   \else
7832     \Hy@pstringdef\Hy@testname{%
7833       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7834     }%
7835   \fi
7836   \@pdfm@mark{%
7837     bann<<%
7838     /Type/Annot%
7839     /Subtype/Link%
7840     \ifHy@pdfa /F 4\fi
7841     \Hy@setpdfborder
7842     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
7843     \else
7844       /C[\csname @#1bordercolor\endcsname]%
7845     \fi
7846     /A<<%
7847     /S/GoTo%
7848     /D(\Hy@testname)%
7849     >>%
7850     >>%
7851   }%
7852   \expandafter\Hy@colorlink\csname @#1color\endcsname
7853 }
7854 \def\hyper@linkend{%
7855   \Hy@endcolorlink
7856   \@pdfm@mark{eann}%
7857 }
7858 \def\hyper@link#1#2#3{%
7859   \hyper@linkstart{#1}{#2}#3\hyper@linkend
7860 }
7861 \def\hyper@linkfile#1#2#3{%
7862   \Hy@pstringdef\Hy@pstringF{#2}%
7863   \Hy@pstringdef\Hy@pstringD{#3}%
7864   \leavevmode
7865   \@pdfm@mark{%
7866     bann<<%
7867     /Type/Annot%
7868     /Subtype/Link%
7869     \ifHy@pdfa /F 4\fi
7870     \Hy@setpdfborder
7871     \ifx\@filebordercolor\relax
7872     \else
7873       /C[\@filebordercolor]%
7874     \fi
7875     /A<<%
7876     /S/GoToR%
7877     /F(\Hy@pstringF)%
7878     /D\ifx\#3\[\[0 \@pdfstartview\else(\Hy@pstringD)\fi
7879     \Hy@SetNewWindow
7880     >>%
7881     >>%

```

```

7882 }%
7883 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7884 \@pdfm@mark{eann}%
7885 }
7886 \def\hyper@linkurl#1#2{%
7887 \Hy@pstringdef\Hy@pstringURI{#2}%
7888 \leavevmode
7889 \@pdfm@mark{%
7890   bann<<%
7891     /Type/Annot%
7892     /Subtype/Link%
7893     \ifHy@pdfa /F 4\fi
7894     \Hy@setpdfborder
7895     \ifx\@urlbordercolor\relax
7896     \else
7897       /C[\@urlbordercolor]%
7898     \fi
7899     /A<<%
7900     /S/URI%
7901     /URI(\Hy@pstringURI)%
7902     >>%
7903   >>%
7904 }%
7905 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7906 \@pdfm@mark{eann}%
7907 }
7908 \def\Acrobatmenu#1#2{%
7909 \Hy@Acrobatmenu{#1}{#2}{%
7910   \@pdfm@mark{%
7911     bann<<%
7912       /Type/Annot%
7913       /Subtype/Link%
7914       \ifHy@pdfa /F 4\fi
7915       /A<<%
7916       /S/Named%
7917       /N/#1%
7918     >>%
7919     \Hy@setpdfborder
7920     \ifx\@menubordercolor\relax
7921     \relax
7922     /C[\@menubordercolor]%
7923     \fi
7924   >>%
7925 }%
7926 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
7927 \@pdfm@mark{eann}%
7928 }%
7929 }
7930 \ifx\@pdfproducer\relax
7931 \def\@pdfproducer{dvipdfm}%

```

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

```

7932 \begingroup\expandafter\expandafter\expandafter\endgroup
7933 \expandafter\ifx\csname XeTeXversion\endcsname\relax
7934 \else
7935 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
7936 \fi
7937 \fi

```

```

7938 \def\PDF@FinishDoc{%
7939   \Hy@UseMaketitleInfos
7940   \@pdfm@mark{%
7941     docinfo<<%
7942       /Title(\@pdftitle)%
7943       /Subject(\@pdfsubject)%
7944       /Creator(\@pdfcreator)%
7945       \ifx\@pdfcreationdate\@empty
7946       \else
7947         /CreationDate(\@pdfcreationdate)%
7948       \fi
7949       \ifx\@pdfmoddate\@empty
7950       \else
7951         /ModDate(\@pdfmoddate)%
7952       \fi
7953       /Author(\@pdfauthor)%
7954       \ifx\@pdfproducer\relax
7955       \else
7956         /Producer(\@pdfproducer)%
7957       \fi
7958       /Keywords(\@pdfkeywords)%
7959     >>%
7960   }%
7961   \Hy@DisableOption{pdfauthor}%
7962   \Hy@DisableOption{pdftitle}%
7963   \Hy@DisableOption{pdfsubject}%
7964   \Hy@DisableOption{pdfcreator}%
7965   \Hy@DisableOption{pdfcreationdate}%
7966   \Hy@DisableOption{pdfmoddate}%
7967   \Hy@DisableOption{pdfproducer}%
7968   \Hy@DisableOption{pdfkeywords}%
7969 }

7970 \def\PDF@SetupDoc{%
7971   \edef\Hy@temp{%
7972     \ifHy@toolbar\else /HideToolbar true\fi
7973     \ifHy@menubar\else /HideMenubar true\fi
7974     \ifHy>windowui\else /HideWindowUI true\fi
7975     \ifHy@fitwindow /FitWindow true\fi
7976     \ifHy@centerwindow /CenterWindow true\fi
7977     \ifHy@displaydoctitle /DisplayDocTitle true\fi
7978     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7979     \Hy@UseNameKey{Direction}\@pdfdirection
7980     \Hy@UseNameKey{ViewArea}\@pdfviewarea
7981     \Hy@UseNameKey{ViewClip}\@pdfviewclip
7982     \Hy@UseNameKey{PrintArea}\@pdfprintarea
7983     \Hy@UseNameKey{PrintClip}\@pdfprintclip
7984     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7985     \Hy@UseNameKey{Duplex}\@pdfduplex
7986     \ifx\@pdfpicktraybypdfsize\@empty
7987     \else
7988       /PickTrayByPDFSize \@pdfpicktraybypdfsize
7989     \fi
7990     \ifx\@pdfprintpagerange\@empty
7991     \else
7992       /PrintPageRange[\@pdfprintpagerange]%
7993     \fi
7994     \ifx\@pdfnumcopies\@empty

```

```

7995     \else
7996         /NumCopies \@pdfnumcopies
7997     \fi
7998 }%
7999 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8000 \@pdfm@mark{%
8001     docview<<%
8002         \ifx\@pdfstartpage\@empty
8003         \else
8004             \ifx\@pdfstartview\@empty
8005             \else
8006                 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
8007             \fi
8008         \fi
8009         \ifx\@baseurl\@empty
8010         \else
8011             /URI<</Base(\Hy@pstringB)>>%
8012         \fi
8013         /PageMode/\@pdfpagemode
8014         \ifx\Hy@temp\@empty
8015         \else
8016             /ViewerPreferences<<\Hy@temp>>%
8017         \fi
8018         \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8019         \ifx\@pdflang\@empty
8020         \else
8021             /Lang(\@pdflang)%
8022         \fi
8023     >>%
8024 }%
8025 \ifx\@pdfpagescrop\@empty
8026 \else
8027     \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
8028 \fi
8029 }

8030 \AtBeginShipoutFirst{%
8031     \ifx\special@paper\@empty\else
8032         \ifHy@setpagesize
8033             \special{papersize=\special@paper}%
8034         \fi
8035     \fi
8036     \Hy@DisableOption{setpagesize}%
8037 }
8038 </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.

```

8039 <*\texhtml>
8040 \providecommand*{\XR@ext}{htm}
8041 \RequirePackage{vtexhtml}
8042 \newif\if@Localurl
8043 \def\PDF@FinishDoc{}
8044 \def\PDF@SetupDoc{%
8045     \ifx\@baseurl\@empty

```

```

8046 \else
8047 \special{!direct <base href="\@baseurl">}%
8048 \fi
8049 }
8050 \def\@urltype{url}
8051 \def\hyper@link#1#2#3{%
8052 \leavevmode
8053 \special{!direct <a href=%
8054 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
8055 #3%
8056 \special{!direct </a>}%
8057 }
8058 \def\hyper@linkurl#1#2{%
8059 \begingroup
8060 \hyper@chars
8061 \leavevmode
8062 \MathBSuppress=1\relax
8063 \special{!direct <a href=%
8064 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
8065 #1%
8066 \MathBSuppress=0\relax
8067 \special{!direct </a>}%
8068 \endgroup
8069 }
8070 \def\hyper@linkfile#1#2#3{%
8071 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
8072 }
8073 \def\hyper@linkstart#1#2{%
8074 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
8075 \@Localurltrue
8076 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
8077 \else
8078 \@Localurlfalse
8079 \begingroup
8080 \hyper@chars
8081 \special{!aref \HyperDestNameFilter{#2}}%
8082 \endgroup
8083 \fi
8084 }
8085 \def\hyper@linkend{%
8086 \if@Localurl
8087 \special{!endaref}%
8088 \else
8089 \special{!direct </a>}%
8090 \fi
8091 }
8092 \def\hyper@anchorstart#1{%
8093 \Hy@SaveLastskip
8094 \begingroup
8095 \hyper@chars
8096 \special{!aname #1}%
8097 \special{!direct <a name=%
8098 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8099 \endgroup
8100 \Hy@activeanchortrue
8101 }
8102 \def\hyper@anchorend{%

```



```

8103 \special{!direct </a>}%
8104 \Hy@activeanchorfalse
8105 \Hy@RestoreLastskip
8106 }
8107 \def\hyper@anchor#1{%
8108 \Hy@SaveLastskip
8109 \begingroup
8110 \let\protect=\string
8111 \hyper@chars
8112 \leavevmode
8113 \special{!aname #1}%
8114 \special{!direct <a name=%
8115 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8116 \endgroup
8117 \Hy@activeanchortrue
8118 \bgroup\anchor@spot\egroup
8119 \special{!direct </a>}%
8120 \Hy@activeanchorfalse
8121 \Hy@RestoreLastskip
8122 }
8123 \def\@Form[#1]{\typeout{Sorry, TeXpider does not yet support FORMs}}
8124 \def\@endForm{}
8125 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
8126 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
8127 }
8128 \def\@TextField[#1]#2{% parameters, label
8129 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
8130 }
8131 \def\@CheckBox[#1]#2{% parameters, label
8132 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
8133 }
8134 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
8135 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
8136 }
8137 \def\@PushButton[#1]#2{% parameters, label
8138 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
8139 }
8140 \def\@Reset[#1]#2{%
8141 \typeout{Sorry, TeXpider does not yet support FORMs}%
8142 }
8143 \def\@Submit[#1]#2{%
8144 \typeout{Sorry, TeXpider does not yet support FORMs}%
8145 }
8146 </vtexhtml>
8147 <*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.

```

8148 \ifx\mediaheight\@undefined
8149 \else
8150 \ifx\mediaheight\relax
8151 \else
8152 \ifHy@setpagesize
8153 \providecommand*{\VTeXInitMediaSize}{%
8154 \@ifundefined{stockwidth}{%
8155 \ifdim\paperheight>0pt %

```

```

8156         \setlength\mediaheight\paperheight
8157     \fi
8158     \ifdim\paperheight>0pt %
8159         \setlength\mediawidth\paperwidth
8160     \fi
8161 }{%
8162     \ifdim\stockheight>0pt %
8163         \setlength\mediaheight\stockheight
8164     \fi
8165     \ifdim\stockwidth>0pt %
8166         \setlength\mediawidth\stockwidth
8167     \fi
8168 }%
8169 }%
8170 \AtBeginDocument{\VTeXInitMediaSize}%
8171 \fi
8172 \Hy@DisableOption{setpagesize}%
8173 \fi
8174 \fi

```

Older versions of VTeX require xyz in lower case.

```

8175 \providecommand*\@pdfview{xyz}
8176 \providecommand*\@pdfborder{0 0 1}
8177 \providecommand*\@pdfborderstyle{}
8178 \let\CurrentBorderColor\@linkbordercolor
8179 \def\hyper@anchor#1{%
8180     \Hy@SaveLastskip
8181     \begingroup
8182         \let\protect=\string
8183         \hyper@chars
8184         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8185     \endgroup
8186     \Hy@activeanchortrue
8187     \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8188     \Hy@activeanchorfalse
8189     \Hy@RestoreLastskip
8190 }
8191 \def\hyper@anchorstart#1{%
8192     \Hy@SaveLastskip
8193     \begingroup
8194         \hyper@chars
8195         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8196     \endgroup
8197     \Hy@activeanchortrue
8198 }
8199 \def\hyper@anchorend{%
8200     \Hy@activeanchorfalse
8201     \Hy@RestoreLastskip
8202 }
8203 \def\@urltype{url}
8204 \def\Hy@undefinedname{UNDEFINED}
8205 \def\hyper@linkstart#1#2{%
8206     \Hy@pstringdef\Hy@pstringURI{#2}%
8207     \expandafter\Hy@colorlink\csname @#1color\endcsname
8208     \@ifundefined{#@#1bordercolor}{%
8209         \let\CurrentBorderColor\relax
8210     }{%
8211         \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%

```

```

8212 }%
8213 \def\Hy@tempa{#1}%
8214 \ifx\Hy@tempa \@urltype
8215   \special{!%
8216     aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8217     a=<%
8218       \ifHy@pdfa /F 4\fi
8219       \Hy@setpdfborder
8220       \ifx\CurrentBorderColor\relax
8221       \else
8222         /C [\CurrentBorderColor]%
8223       \fi
8224     >%
8225   }%
8226 \else
8227   \protected@edef\Hy@testname{#2}%
8228   \ifx\Hy@testname \@empty
8229     \let\Hy@testname\Hy@undefinedname
8230   \fi
8231   \special{!%
8232     aref \expandafter\HyperDestNameFilter
8233     \expandafter{\Hy@testname};;%
8234     a=<%
8235       \ifHy@pdfa /F 4\fi
8236       \Hy@setpdfborder
8237       \ifx\CurrentBorderColor\relax
8238       \else
8239         /C [\CurrentBorderColor]%
8240       \fi
8241     >%
8242   }%
8243 \fi
8244 }
8245 \def\hyper@linkend{%
8246   \special{!endaref}%
8247   \Hy@endcolorlink
8248 }
8249 \def\hyper@linkfile#1#2#3{%
8250   \leavevmode
8251   \special{!%
8252     aref <%
8253       \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
8254       f=#2>#3;%
8255       a=<%
8256         \ifHy@pdfa /F 4\fi
8257         \Hy@setpdfborder
8258         \ifx\@filebordercolor\relax
8259         \else
8260           /C [\@filebordercolor]%
8261         \fi
8262       >%
8263     }%
8264     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8265     \special{!endaref}%
8266   }
8267 \def\hyper@linkurl#1#2{%
8268   \begingroup

```

```

8269 \Hy@pstringdef\Hy@pstringURI{#2}%
8270 \hyper@chars
8271 \leavevmode
8272 \special{!%
8273   aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8274   a=<%
8275     \ifHy@pdfa /F 4\fi
8276     \Hy@setpdfborder
8277     \ifx\@urlbordercolor\relax
8278     \else
8279       /C [\@urlbordercolor]%
8280     \fi
8281   >%
8282 }%
8283 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8284 \special{!endaref}%
8285 \endgroup
8286 }
8287 \def\hyper@link#1#2#3{%
8288   \@ifundefined{#@#1bordercolor}{%
8289     \let\CurrentBorderColor\relax
8290   }{%
8291     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8292   }%
8293   \leavevmode
8294   \protected@edef\Hy@testname{#2}%
8295   \ifx\Hy@testname\@empty
8296     \let\Hy@testname\Hy@undefinedname
8297   \fi
8298   \special{!%
8299     aref \expandafter\HyperDestNameFilter
8300       \expandafter{\Hy@testname};%
8301     a=<%
8302       \ifHy@pdfa /F 4\fi
8303       \Hy@setpdfborder
8304       \ifx\CurrentBorderColor\relax
8305       \else
8306         /C [\CurrentBorderColor]%
8307       \fi
8308     >%
8309   }%
8310   \expandafter\Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
8311   \special{!endaref}%
8312 }
8313 \def\hyper@image#1#2{%
8314   \hyper@linkurl{#2}{#1}%
8315 }
8316 \def\@hyper@launch run:#1\#2#3{%
8317   \Hy@pstringdef\Hy@pstringF{#1}%
8318   \Hy@pstringdef\Hy@pstringP{#3}%
8319   \leavevmode
8320   \special{!aref %
8321     <u=%
8322       /Type/Action%
8323       /S/Launch%
8324       /F(\Hy@pstringF)%
8325       \Hy@SetNewWindow

```

```

8326 \ifx\#3\else /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>\fi%
8327 >;%
8328 a=<%
8329 \ifHy@pdfa /F 4\fi
8330 \Hy@setpdfborder
8331 \ifx\@runbordercolor\relax
8332 \else
8333 /C[\@runbordercolor]%
8334 \fi
8335 >%
8336 }%
8337 \Hy@colorlink\@runcolor#2\Hy@endcolorlink
8338 \special{!endaref}%
8339 }
8340 \def\Acrobatmenu#1#2{%
8341 \Hy@Acrobatmenu{#1}{#2}{%
8342 \special{!%
8343 aref <u=/S /Named /N /#1>;%
8344 a=<%
8345 \ifHy@pdfa /F 4\fi
8346 \Hy@setpdfborder
8347 \ifx\@menubordercolor\relax
8348 \else
8349 /C[\@menubordercolor]%
8350 \fi
8351 >%
8352 }%
8353 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
8354 \special{!endaref}%
8355 }%
8356 }

```

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.

```

8357 \ifnum\Hy@VTeXversion<702 %
8358 \else
8359 \def\hyper@pagetransition{%
8360 \ifx\@pdfpagetransition\relax
8361 \else
8362 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

8363 \else
8364 \hvtex@parse@trans\@pdfpagetransition
8365 \fi
8366 \fi
8367 }%

```

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

Syntax of \TeX `\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:

```

8368 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
8369 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
8370 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
8371 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
8372 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
8373 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
8374 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

8375 \def\hvtex@par@dimension{/Dm}%
8376 \def\hvtex@par@direction{/Di}%
8377 \def\hvtex@par@duration{/D}%
8378 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```

8379 \def\hvtex@gettoken{\expandafter\hvtex@gettoken@\hvtex@buffer\@nil}%

```

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

```

8380 \def\hvtex@gettoken#1 #2\@nil{%
8381   \edef\hvtex@token{#1}%
8382   \edef\hvtex@buffer{#2}%
8383 }%
8384 \def\hvtex@parse@trans#1{%

```

Initializing code:

```

8385 \let\hvtex@trans@code\@empty
8386 \let\hvtex@param@dimension\@empty
8387 \let\hvtex@param@direction\@empty
8388 \let\hvtex@param@duration\@empty
8389 \let\hvtex@param@motion\@empty
8390 \edef\hvtex@buffer{#1\space}%

```

First token is the PDF transition name without escape.

```

8391 \hvtex@gettoken
8392 \ifx\hvtex@token\@empty

```

Leading space(s)?

```

8393 \ifx\hvtex@buffer\@empty

```

The buffer is empty, nothing to do.

```

8394 \else
8395 \hvtex@gettoken
8396 \fi
8397 \fi
8398 \csname hvtex@trans@effect@\hvtex@token\endcsname

```

Now is time to parse optional parameters.

```

8399 \hvtex@trans@params
8400 }%

```

Reentrant macro to parse optional parameters.

```

8401 \def\hvtex@trans@params{%
8402   \ifx\hvtex@buffer\@empty
8403   \else
8404     \hvtex@gettoken
8405     \let\hvtex@trans@par\hvtex@token
8406     \ifx\hvtex@buffer\@empty
8407     \else
8408       \hvtex@gettoken
8409       \ifx\hvtex@trans@par\hvtex@par@duration

```

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

```

8410       \let\hvtex@param@duration\hvtex@token
8411     \else \ifx\hvtex@trans@par\hvtex@par@motion

```

/M can be either /I or /O

```

8412       \expandafter\edef\expandafter\hvtex@param@motion
8413       \expandafter{\expandafter\@gobble\hvtex@token}%
8414     \else \ifx\hvtex@trans@par\hvtex@par@dimension

```

/Dm can be either /H or /V

```

8415       \expandafter\edef\expandafter\hvtex@param@dimension
8416       \expandafter{\expandafter\@gobble\hvtex@token}%
8417     \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).

```

8418       \let\hvtex@param@direction\hvtex@token
8419       \fi\fi\fi\fi
8420     \fi
8421   \fi
8422   \ifx\hvtex@buffer\@empty
8423     \let\next\hvtex@produce@trans
8424   \else
8425     \let\next\hvtex@trans@params
8426   \fi
8427   \next
8428 }%

```

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

```

8429 \def\hvtex@produce@trans{%
8430   \let\vtex@trans@special\@empty
8431   \if S\hvtex@trans@code
8432     \edef\vtex@trans@special{\hvtex@trans@code
8433       \hvtex@param@dimension\hvtex@param@motion}%
8434   \else\if B\hvtex@trans@code
8435     \edef\vtex@trans@special{%
8436       \hvtex@trans@code\hvtex@param@dimension
8437     }%
8438   \else\if X\hvtex@trans@code
8439     \edef\vtex@trans@special{%
8440       \hvtex@trans@code\hvtex@param@motion
8441     }%
8442   \else\if W\hvtex@trans@code
8443     \edef\vtex@trans@special{%
8444       \hvtex@trans@code\hvtex@param@direction
8445     }%
8446   \else\if D\hvtex@trans@code

```

```

8447 \let\vtex@trans@special\hvtex@trans@code
8448 \else\if R\hvtex@trans@code
8449 \let\vtex@trans@special\hvtex@trans@code
8450 \else\if G\hvtex@trans@code
8451 \edef\vtex@trans@special{%
8452 \hvtex@trans@code\hvtex@param@direction
8453 }%
8454 \fi\fi\fi\fi\fi\fi\fi
8455 \ifx\vtex@trans@special\@empty
8456 \else
8457 \ifx\hvtex@param@duration\@empty
8458 \else
8459 \setlength{\dimen@}{\hvtex@param@duration\p}%

```

I'm not guilty of possible overflow.

```

8460 \multiply\dimen@\@m
8461 \edef\vtex@trans@special{%
8462 \vtex@trans@special,\strip@pt\dimen@
8463 }%
8464 \fi

```

And all the mess is just for this.

```

8465 \special{!trans \vtex@trans@special}%
8466 \fi
8467 }%
8468 \def\hyper@pageduration{%
8469 \ifx\@pdfpageduration\relax
8470 \else
8471 \ifx\@pdfpageduration\@empty
8472 \special{!duration-}%
8473 \else
8474 \special{!duration \@pdfpageduration}%
8475 \fi
8476 \fi
8477 }%
8478 \def\hyper@pagehidden{%
8479 \ifHy@useHidKey
8480 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
8481 \fi
8482 }%
8483 \g@addto@macro\Hy@EveryPageBoxHook{%
8484 \hyper@pagetransition
8485 \hyper@pageduration
8486 \hyper@pagehidden
8487 }%
8488 \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


```

8489 \ifx\@pdfproducer\relax
8490   \def\@pdfproducer{VTeX}%
8491   \ifnum\Hy@VTeXversion>\z@
8492     \count@\VTeXversion
8493     \divide\count@ 100 %
8494     \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
8495     \multiply\count@ -100 %
8496     \advance\count@\VTeXversion
8497     \edef\@pdfproducer{%
8498       \@pdfproducer
8499       .\ifnum\count@<10 0\fi\the\count@
8500     \ifx\VTeXOS\undefined\else
8501       \ifnum\VTeXOS>0 %
8502         \ifnum\VTeXOS<6 %
8503           \space(%
8504           \ifcase\VTeXOS
8505             \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
8506           \fi
8507         )%
8508       \fi
8509     \fi
8510     \fi
8511     ,\space
8512     \ifnum\OpMode=\@ne PDF\else PS\fi
8513     \space backend%
8514     \ifx\gexmode\undefined\else
8515       \ifnum\gexmode>\z@\space with GeX\fi
8516     \fi
8517   }%
8518 \fi
8519 \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).

```

8520 \def\PDF@SetupDoc{%
8521   \ifx\@pdfpagescrop\@empty
8522   \else
8523     \special{!pdfinfo b=<\@pdfpagescrop>}%
8524   \fi
8525   \ifx\@pdfstartpage\@empty
8526   \else
8527     \ifx\@pdfstartview\@empty
8528     \else
8529       \special{!onopen Page\@pdfstartpage}%
8530     \fi

```

```

8531 \fi
8532 \special{!pdfinfo p=<\/\@pdfpagemode>}%
8533 \ifx\@baseurl\@empty
8534 \else
8535 \special{!pdfinfo u=<<<\/Base (\@baseurl)>>>}%
8536 \fi
8537 \special{!pdfinfo v=<<<%
8538 \ifHy@toolbar\else /HideToolbar true\fi
8539 \ifHy@menubar\else /HideMenubar true\fi
8540 \ifHy>windowui\else /HideWindowUI true\fi
8541 \ifHy@fitwindow /FitWindow true\fi
8542 \ifHy@centerwindow /CenterWindow true\fi
8543 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8544 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8545 \Hy@UseNameKey{Direction}\@pdfdirection
8546 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8547 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8548 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8549 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8550 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8551 \Hy@UseNameKey{Duplex}\@pdfduplex
8552 \ifx\@pdfpicktraybypdfsize\@empty
8553 \else
8554 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8555 \fi
8556 \ifx\@pdfprintpagerange\@empty
8557 \else
8558 /PrintPageRange[\@pdfprintpagerange]%
8559 \fi
8560 \ifx\@pdfnumcopies\@empty
8561 \else
8562 /NumCopies \@pdfnumcopies
8563 \fi
8564 >>>}%
8565 \ifx\@pdfpagelayout\@empty
8566 \else
8567 \special{!pdfinfo l=<\/\@pdfpagelayout\space>}%
8568 \fi
8569 }%
8570 \def\PDF@FinishDoc{%
8571 \Hy@UseMaketitleInfos
8572 \special{!pdfinfo a=<\/\@pdfauthor>}%
8573 \special{!pdfinfo t=<\/\@pdftitle>}%
8574 \special{!pdfinfo s=<\/\@pdfsubject>}%
8575 \special{!pdfinfo c=<\/\@pdfcreator>}%
8576 \ifx\@pdfproducer\relax
8577 \else
8578 \special{!pdfinfo r=<\/\@pdfproducer>}%
8579 \fi
8580 \special{!pdfinfo k=<\/\@pdfkeywords>}%
8581 \Hy@DisableOption{pdfauthor}%
8582 \Hy@DisableOption{pdftitle}%
8583 \Hy@DisableOption{pdfsubject}%
8584 \Hy@DisableOption{pdfcreator}%
8585 \Hy@DisableOption{pdfcreationdate}%
8586 \Hy@DisableOption{pdfmoddate}%
8587 \Hy@DisableOption{pdfproducer}%

```

```

8588 \Hy@DisableOption{pdfkeywords}%
8589 }
8590 \end{vtex}

```

46.7 Fix for Adobe bug number 466320

If a destination occurs at the very begin of a page, the destination is moved to the previous page by Adobe Distiller 5. As workaround Adobe suggests:

```

/showpage {
  //showpage
  clippath stroke erasepage
} bind def

```

But unfortunately this fix generates an empty page at the end of the document. Therefore another fix is used by writing some clipped text.

```

8591 \dviwindo\def\literalps@out#1{\special{ps:#1}}%
8592 \package\providecommand*\Hy@DistillerDestFix{}
8593 \pdfmark | dviwindo
8594 \def\Hy@DistillerDestFix{%
8595   \begin{group}
8596     \let\x\literalps@out

```

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

```

8597   \ifnum \@ifundefined{OpMode}{0}{%
8598     \@ifundefined{gexmode}{0}{%
8599       \ifnum\gexmode>0 \OpMode\else 0\fi
8600     }>1 %
8601   \def\x##1{%
8602     \immediate\special{!=##1}%
8603   }%
8604 \fi
8605 \x{%
8606   /product where{%
8607     pop %
8608     product(Distiller)search{%
8609       pop pop pop %
8610       version(.)search{%
8611         exch pop exch pop%
8612         (3011)eq{%
8613           gsave %
8614           newpath 0 0 moveto closepath clip%
8615           /Courier findfont 10 scalefont setfont %
8616           72 72 moveto(.)show %
8617           grestore%
8618         }if%
8619       }{pop}ifelse%
8620     }{pop}ifelse%
8621   }if%
8622 }%
8623 \endgroup
8624 }
8625 \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

```

8626 (*pdfmark)
8627 \Hy@breaklinks@unsupported
8628 \def\hyper@anchor#1{%
8629   \Hy@SaveLastskip
8630   \beginngroup
8631     \pdfmark[\anchor@spot]{%
8632       pdfmark=/DEST,%
8633       linktype=anchor,%
8634       View=/\@pdfview \@pdfviewparams,%
8635       DestAnchor={#1}%
8636     }%
8637   \endgroup
8638   \Hy@RestoreLastskip
8639 }
8640 \@ifundefined{hyper@anchorstart}{-}{\endinput}
8641 \def\hyper@anchorstart#1{%
8642   \Hy@SaveLastskip
8643   \literalps@out{H.S}%
8644   \xdef\hyper@currentanchor{#1}%
8645   \Hy@activeanchortrue
8646 }
8647 \def\hyper@anchorend{%
8648   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
8649   \pdfmark{%
8650     pdfmark=/DEST,%
8651     linktype=anchor,%
8652     View=/\@pdfview \@pdfviewparams,%
8653     DestAnchor=\hyper@currentanchor,%
8654   }%
8655   \Hy@activeanchorfalse
8656   \Hy@RestoreLastskip
8657 }
8658 \def\hyper@linkstart#1#2{%
8659   \ifHy@breaklinks
8660   \else
8661     \leavevmode\hbox\bgroup
8662     \fi
8663     \expandafter\Hy@colorlink\csize @#1color\endcsize
8664     \literalps@out{H.S}%
8665     \xdef\hyper@currentanchor{#2}%
8666     \gdef\hyper@currentlinktype{#1}%
8667 }
8668 \def\hyper@linkend{%
8669   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
8670   \@ifundefined{@\hyper@currentlinktype bordercolor}{%
8671     \let\Hy@tempcolor\relax

```

```

8672 }{%
8673   \edef\Hy@tempcolor{%
8674     \csname @\hyper@currentlinktype bordercolor\endcsname
8675   }%
8676 }%
8677 \pdfmark{%
8678   pdfmark=/ANN,%
8679   linktype=link,%
8680   Subtype=/Link,%
8681   PDFAFlags=4,%
8682   Dest=\hyper@currentanchor,%
8683   AcroHighlight=\@pdfhighlight,%
8684   Border=\@pdfborder,%
8685   BorderStyle=\@pdfborderstyle,%
8686   Color=\Hy@tempcolor,%
8687   Raw=H.B%
8688 }%
8689 \Hy@endcolorlink
8690 \ifHy@breaklinks
8691 \else
8692   \egroup
8693 \fi
8694 }

```

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.

```

8695 \begingroup
8696   \catcode'P=12 %
8697   \catcode'T=12 %
8698   \lowercase{\endgroup
8699   \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
8700 }
8701 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

8702 \def\hyper@pagetransition{%
8703   \ifx\@pdfpagetransition\relax
8704   \else
8705     \ifx\@pdfpagetransition\@empty
8706       % 1. Does an old entry have to be deleted?
8707       % 2. If 1=yes, how to delete?
8708     \else
8709       \pdfmark{%
8710         pdfmark=/PUT,%
8711         Raw={%
8712           \string{ThisPage\string}%
8713           <</Trans << /S /\@pdfpagetransition\space >> >>%
8714         }%
8715       }%
8716     \fi
8717 \fi
8718 }

```

\hyper@pageduration

```

8719 \def\hyper@pageduration{%
8720   \ifx\@pdfpageduration\relax

```

```

8721 \else
8722   \ifx\@pdfpageduration\@empty
8723     % 1. Does an old entry have to be deleted?
8724     % 2. If 1=yes, how to delete?
8725   \else
8726     \pdfmark{%
8727       pdfmark=/PUT,%
8728       Raw={%
8729         \string{ThisPage\string}%
8730         <</Dur \@pdfpageduration>>%
8731       }%
8732     }%
8733   \fi
8734 \fi
8735 }

```

\hyper@pagehidden

```

8736 \def\hyper@pagehidden{%
8737   \ifHy@useHidKey
8738     \pdfmark{%
8739       pdfmark=/PUT,%
8740       Raw={%
8741         \string{ThisPage\string}%
8742         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
8743       }%
8744     }%
8745   \fi
8746 }

8747 \g@addto@macro\Hy@EveryPageBoxHook{%
8748   \hyper@pagetransition
8749   \hyper@pageduration
8750   \hyper@pagehidden
8751 }

8752 \def\hyper@image#1#2{%
8753   \hyper@linkurl{#2}{#1}%
8754 }

8755 \def\Hy@undefinedname{UNDEFINED}
8756 \def\hyper@link#1#2#3{%
8757   \@ifundefined{#1bordercolor}{%
8758     \let\Hy@tempcolor\relax
8759   }{%
8760     \edef\Hy@tempcolor{\csname #1bordercolor\endcsname}%
8761   }%
8762   \begin{group}
8763     \protected@edef\Hy@testname{#2}%
8764     \ifx\Hy@testname\@empty
8765       \let\Hy@testname\Hy@undefinedname
8766     \fi
8767     \pdfmark[#{3}]{%
8768       Color=\Hy@tempcolor,%
8769       linktype={#1},%
8770       AcroHighlight=\@pdfhighlight,%
8771       Border=\@pdfborder,%
8772       BorderStyle=\@pdfborderstyle,%
8773       pdfmark=/ANN,%
8774       Subtype=/Link,%

```

```

8775         PDFAFlags=4,%
8776         Dest=\Hy@testname
8777     }%
8778 \endgroup
8779 }
8780 \newtoks\pdf@docset
8781 \def\PDF@FinishDoc{%
8782     \Hy@UseMaketitleInfos
8783     \let\Hy@temp\@empty
8784     \ifx\@pdfcreationdate\@empty
8785     \else
8786         \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
8787     \fi
8788     \ifx\@pdfmoddate\@empty
8789     \else
8790         \expandafter\def\expandafter\Hy@temp\expandafter{%
8791             \Hy@temp
8792             ModDate=\@pdfmoddate,%
8793         }%
8794     \fi
8795     \ifx\@pdfproducer\relax
8796     \else
8797         \expandafter\def\expandafter\Hy@temp\expandafter{%
8798             \Hy@temp
8799             Producer=\@pdfproducer,%
8800         }%
8801     \fi
8802     \expandafter
8803     \pdfmark\expandafter{%
8804         \Hy@temp
8805         pdfmark=/DOCINFO,%
8806         Title=\@pdftitle,%
8807         Subject=\@pdfsubject,%
8808         Creator=\@pdfcreator,%
8809         Author=\@pdfauthor,%
8810         Keywords=\@pdfkeywords
8811     }%
8812     \Hy@DisableOption{pdfauthor}%
8813     \Hy@DisableOption{pdftitle}%
8814     \Hy@DisableOption{pdfsubject}%
8815     \Hy@DisableOption{pdfcreator}%
8816     \Hy@DisableOption{pdfcreationdate}%
8817     \Hy@DisableOption{pdfmoddate}%
8818     \Hy@DisableOption{pdfproducer}%
8819     \Hy@DisableOption{pdfkeywords}%
8820 }
8821 \def\PDF@SetupDoc{%
8822     \def\Hy@temp{}%
8823     \ifx\@pdfstartpage\@empty
8824     \else
8825         \ifx\@pdfstartview\@empty
8826         \else
8827             \edef\Hy@temp{%
8828                 ,Page=\@pdfstartpage
8829                 ,View=\@pdfstartview
8830             }%
8831         \fi

```

```

8832 \fi
8833 \edef\Hy@temp{%
8834     \noexpand\pdfmark{%
8835         pdfmark=/DOCVIEW,%
8836         PageMode=/\@pdfpagemode
8837         \Hy@temp
8838     }%
8839 }%
8840 \Hy@temp
8841 \ifx\@pdfpagescrop\@empty
8842 \else
8843     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
8844 \fi
8845 \edef\Hy@temp{%
8846     \ifHy@toolbar\else /HideToolbar true\fi
8847     \ifHy@menubar\else /HideMenubar true\fi
8848     \ifHy>windowui\else /HideWindowUI true\fi
8849     \ifHy@fitwindow /FitWindow true\fi
8850     \ifHy@centerwindow /CenterWindow true\fi
8851     \ifHy@displaydoctitle /DisplayDocTitle true\fi
8852     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8853     \Hy@UseNameKey{Direction}\@pdfdirection
8854     \Hy@UseNameKey{ViewArea}\@pdfviewarea
8855     \Hy@UseNameKey{ViewClip}\@pdfviewclip
8856     \Hy@UseNameKey{PrintArea}\@pdfprintarea
8857     \Hy@UseNameKey{PrintClip}\@pdfprintclip
8858     \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8859     \Hy@UseNameKey{Duplex}\@pdfduplex
8860     \ifx\@pdfpicktraybypdfsize\@empty
8861     \else
8862         /PickTrayByPDFSize \@pdfpicktraybypdfsize
8863     \fi
8864     \ifx\@pdfprintpagerange\@empty
8865     \else
8866         /PrintPageRange[\@pdfprintpagerange]%
8867     \fi
8868     \ifx\@pdfnumcopies\@empty
8869     \else
8870         /NumCopies \@pdfnumcopies
8871     \fi
8872 }%
8873 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8874 \pdfmark{%
8875     pdfmark=/PUT,%
8876     Raw={%
8877         \string{Catalog\string}<<%
8878         \ifx\Hy@temp\@empty
8879         \else
8880             /ViewerPreferences<<\Hy@temp>>%
8881         \fi
8882         \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8883         \ifx\@pdflang\@empty
8884         \else
8885             /Lang(\@pdflang)%
8886         \fi
8887         \ifx\@baseurl\@empty
8888         \else

```



```

8889      /URI<</Base(\Hy@pstringB)>>%
8890      \fi
8891      >>%
8892      }%
8893      }%
8894  }
8895  </pdfmark>
8896  <*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.

```

8897 \newif\ifHy@pdfmarkerror
8898 \def\pdfmark{\@ifnextchar [{\pdfmark@}{\pdfmark@[]}}
8899 \def\pdfmark@[#1]#2{%
8900   \Hy@pdfmarkerrorfalse
8901   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
8902   \@processme
8903   \let\pdf@type\relax
8904   \setkeys{PDF}{#2}%
8905   \ifHy@pdfmarkerror
8906   \else
8907     \ifx\pdf@type\relax
8908       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
8909       \ifx\#1\%
8910         \else
8911           \pdf@rect{#1}%
8912         \fi
8913       \else
8914         \ifx\#1\%
8915           \literalps@out{%
8916             [\the\pdf@toks\space\pdf@type\space pdfmark%
8917             ]%
8918           \else
8919             \@ifundefined{@\pdf@linktype color}{%
8920               \Hy@colorlink\@linkcolor
8921             }{%
8922               \expandafter\Hy@colorlink
8923                 \csname @\pdf@linktype color\endcsname
8924             }%
8925             \pdf@rect{#1}%
8926             \literalps@out{%
8927               [\the\pdf@toks\space\pdf@type\space pdfmark%
8928               ]%
8929             \Hy@endcolorlink
8930           \fi
8931         \fi
8932       \fi
8933 }

```

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}

8934 \newsavebox{\pdf@box}
8935 \providecommand*{\Hy@setouterhbox}{\sbox}
8936 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
8937 \def\Hy@DEST{/DEST}
8938 \def\pdf@rect#1{%
8939   \leavevmode
8940   \ifHy@breaklinks
8941     \Hy@setouterhbox\pdf@box{#1}%
8942   \else
8943     \sbox\pdf@box{#1}%
8944   \fi
8945   \dimen@ht\pdf@box
8946   \ifdim\dp\pdf@box=\z@
8947     \literalps@out{H.S}%
8948   \else
8949     \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
8950   \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...).

```

8951   \ifHy@breaklinks
8952     \expandafter\Hy@breaklinksunhbox
8953   \else
8954     \expandafter\box
8955   \fi
8956   \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

8957   \ifdim\dimen@=\z@
8958     \literalps@out{H.R}%
8959   \else
8960     \raise\dimen@\hbox{\literalps@out{H.R}}%
8961   \fi
8962   \ifx\pdf@type\Hy@DEST
8963   \else
8964     \pdf@addtoksx{H.B}%
8965   \fi
8966 }

```

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.

```

8967 \newtoks\pdf@toks
8968 \newtoks\pdf@defaulttoks
8969 \pdf@defaulttoks={}
8970 \def\pdf@addtoks#1#2{%
8971   \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
8972   \@processme
8973 }
8974 \def\pdf@addtoksx#1{%

```

```

8975 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
8976 \@processme
8977 }
8978 \def\PDFdefaults#1{%
8979 \pdf@defaulttoks={#1}%
8980 }

```

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

```

8981 % what is the type of pdfmark?
8982 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
8983 % what is the link type?
8984 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
8985 \def\pdf@linktype{link}
8986 % parameter is a stream of PDF
8987 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
8988 % parameter is a name
8989 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
8990 % parameter is a array
8991 \define@key{PDF}{Border}{%
8992 \edef\Hy@temp{#1}%
8993 \ifx\Hy@temp\@empty
8994 \else
8995 \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
8996 \fi
8997 }
8998 \let\Hy@BorderArrayPatch\@empty
8999 % parameter is a dictionary
9000 \define@key{PDF}{BorderStyle}{%
9001 \edef\Hy@temp{#1}%
9002 \ifx\Hy@temp\@empty
9003 \else
9004 \pdf@addtoks{<<#1>>}{BS}%
9005 \fi
9006 }
9007 % parameter is a array
9008 \define@key{PDF}{Color}{%
9009 \ifx\relax#1\relax
9010 \else
9011 \pdf@addtoks{[#1]}{Color}% hash-ok
9012 \fi
9013 }
9014 % parameter is a string
9015 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
9016 % parameter is a integer
9017 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
9018 % parameter is a array
9019 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
9020 % parameter is a string
9021 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
9022 % parameter is a string or file
9023 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
9024 % parameter is a destination
9025 \define@key{PDF}{Dest}{%
9026 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9027 \ifx\Hy@pstringDest\@empty
9028 \Hy@pdfmarkerrortrue
9029 \Hy@Warning{Destination with empty name ignored}%
9030 \else

```

```

9031 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9032 \fi
9033 }
9034 \define@key{PDF}{DestAnchor}{%
9035 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9036 \ifx\Hy@pstringDest\empty
9037 \Hy@pdfmarkerrortrue
9038 \Hy@Warning{Destination with empty name ignored}%
9039 \else
9040 \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9041 \fi
9042 }
9043 % parameter is a string
9044 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
9045 % parameter is a string
9046 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
9047 % parameter is a int
9048 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
9049 \define@key{PDF}{PDFAFlags}{%
9050 \ifHy@pdfa
9051 \pdf@addtoks{#1}{F}%
9052 \fi
9053 }
9054 % parameter is a name
9055 \define@key{PDF}{AcroHighlight}{%
9056 \begingroup
9057 \edef\x{#1}%
9058 \expandafter\endgroup\ifx\x\empty
9059 \else
9060 \pdf@addtoks{#1}{H}%
9061 \fi
9062 }
9063 % parameter is a string
9064 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
9065 % parameter is a string
9066 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
9067 % parameter is a string
9068 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9069 % parameter is a string
9070 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
9071 % parameter is a Boolean
9072 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
9073 % parameter is a integer or name
9074 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
9075 % parameter is a name
9076 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
9077 % parameter is a string
9078 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
9079 % parameter is a array
9080 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
9081 % parameter is a integer
9082 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
9083 % parameter is a name
9084 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
9085 % parameter is a string
9086 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
9087 % parameter is a string

```

```

9088 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
9089 % parameter is a string
9090 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
9091 % parameter is an array
9092 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
9093 % parameter is a string
9094 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

9095 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
9096 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
9097 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
9098 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9099 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}
9100 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
9101 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
9102 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9103 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
9104 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
9105 </pdfmarkbase>
9106 <*pdfmark>
9107 \def\Acrobatmenu#1#2{%
9108   \Hy@Acrobatmenu{#1}{#2}{%
9109     \pdfmark[#{#2}]{%
9110       linktype=menu,%
9111       pdfmark=/ANN,%
9112       AcroHighlight=\@pdfhighlight,%
9113       Border=\@pdfborder,%
9114       BorderStyle=\@pdfborderstyle,%
9115       Action={<< /Subtype /Named /N /#1 >>},%
9116       Subtype=/Link,%
9117       PDFAFflags=4%
9118     }%
9119   }%
9120 }

```

And now for some useful examples:

```

9121 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
9122 \def\PDFNextPage@[#1]#2{%
9123   \pdfmark[#{#2}]{%
9124     #1,%
9125     Border=\@pdfborder,%
9126     BorderStyle=\@pdfborderstyle,%
9127     Color=.2 .1 .5,%
9128     pdfmark=/ANN,%
9129     Subtype=/Link,%
9130     PDFAFflags=4,%
9131     Page=/Next%
9132   }%
9133 }
9134 \def\PDFPreviousPage{%
9135   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
9136 }
9137 \def\PDFPreviousPage@[#1]#2{%
9138   \pdfmark[#{#2}]{%
9139     #1,%
9140     Border=\@pdfborder,%
9141     BorderStyle=\@pdfborderstyle,%

```

```

9142     Color=.4 .4 .1,%
9143     pdfmark=/ANN,%
9144     Subtype=/Link,%
9145     PDFAFlags=4,%
9146     Page=/Prev%
9147 }%
9148 }
9149 \def\PDFOpen#1{%
9150   \pdfmark{#1,pdfmark=/DOCVIEW}%
9151 }

```

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

```

9152 \def\hyper@linkurl#1#2{%
9153   \begingroup
9154     \Hy@pstringdef\Hy@pstringURI{#2}%
9155     \hyper@chars
9156     \leavevmode
9157     \pdfmark[{#1}]{%
9158       pdfmark=/ANN,%
9159       linktype=url,%
9160       AcroHighlight=\@pdfhighlight,%
9161       Border=\@pdfborder,%
9162       BorderStyle=\@pdfborderstyle,%
9163       Color=\@urlbordercolor,%
9164       Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
9165       Subtype=/Link,%
9166       PDFAFlags=4%
9167     }%
9168   \endgroup
9169 }
9170 \def\hyper@linkfile#1#2#3{%
9171   \begingroup
9172     \Hy@pstringdef\Hy@pstringF{#2}%
9173     \Hy@pstringdef\Hy@pstringD{#3}%
9174     \leavevmode
9175     \pdfmark[{#1}]{%
9176       pdfmark=/ANN,%
9177       Subtype=/Link,%
9178       PDFAFlags=4,%
9179       AcroHighlight=\@pdfhighlight,%
9180       Border=\@pdfborder,%
9181       BorderStyle=\@pdfborderstyle,%
9182       linktype=file,%
9183       Color=\@filebordercolor,%
9184       Action={%
9185         <<%
9186           /S/GoToR%
9187           \Hy@SetNewWindow
9188           /F(\Hy@pstringF)%
9189           /D\ifx\#3\0 \@pdfstartview\else(\Hy@pstringD)cvn\fi
9190         >>%
9191       }%
9192     }%
9193   \endgroup
9194 }
9195 \def\@hyper@launch run:#1\#2#3{%
9196   \begingroup
9197     \Hy@pstringdef\Hy@pstringF{#1}%

```

```

9198 \Hy@pstringdef\Hy@pstringP{#3}%
9199 \leavevmode
9200 \pdfmark[#{#2}]{%
9201   pdfmark=/ANN,%
9202   Subtype=/Link,%
9203   PDFAFlags=4,%
9204   AcroHighlight=\@pdfhighlight,%
9205   Border=\@pdfborder,%
9206   BorderStyle=\@pdfborderstyle,%
9207   linktype=run,%
9208   Color=\@runbordercolor,%
9209   Action={%
9210     <<%
9211       /S/Launch%
9212       \Hy@SetNewWindow
9213       /F(\Hy@pstringF)%
9214       \ifx\#3\%
9215       \else
9216       /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9217       \fi
9218     >>%
9219   }%
9220 }%
9221 \endgroup
9222 }
9223 </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.

```

9224 < *dvips>
9225 \providecommand*{\XR@ext}{pdf}
9226 \def\Hy@raisedlink{}
9227 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
9228 \def\headerps@out#1{\special{! #1}}%
9229 \input{pdfmark.def}%
9230 \ifx\@pdfproducer\relax
9231   \def\@pdfproducer{dvips + Distiller}%
9232 \fi
9233 \providecommand*\@pdfborder{0 0 1}
9234 \providecommand*\@pdfborderstyle{}
9235 \providecommand*\@pdfview{XYZ}
9236 \providecommand*\@pdfviewparams{ H.V}
9237 \def\Hy@BorderArrayPatch{BorderArrayPatch}
9238 \g@addto@macro\Hy@FirstPageHook{%
9239   \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.

```
9240    /DvipsToPDF{72.27 mul Resolution div} def%
9241    /PDFToDvips{72.27 div Resolution mul} def%
9242    /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.

```
9243    /BorderArrayPatch{%
9244        [exch{%
9245            dup dup type/integertype eq exch type/realtype eq or%
9246            {BPToDvips}if%
9247        }forall]%
9248    }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.

```
9249    /HyperBorder {1 PDFToDvips} def%
9250    /H.V {pdf@hoff pdf@voff null} def%
9251    /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

```
9252    /H.S {%
9253        currentpoint %
9254        HyperBorder add /pdf@lly exch def %
9255        dup DvipsToPDF 72 add /pdf@hoff exch def %
9256        HyperBorder sub /pdf@llx exch def%
9257    } 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`

```
9258    /H.L {%
9259        2 sub dup%
9260        /HyperBasePt exch def %
9261        PDFToDvips /HyperBaseDvips exch def %
9262        currentpoint %
9263        HyperBaseDvips sub /pdf@ury exch def%
9264        /pdf@urx exch def%
9265    } def%
9266    /H.A {%
9267        H.L %
9268    % |pdf@voff| = the distance from the top of the page to a point
9269    % |\baselineskip| above the current point in PDF coordinates
9270        currentpoint exch pop %
9271        vsize 72 sub exch DvipsToPDF %
9272        HyperBasePt sub % baseline skip
```



```

9273      sub /pdf@voff exch def%
9274    } def%
9275    /H.R {%
9276      currentpoint %
9277      HyperBorder sub /pdf@ury exch def %
9278      HyperBorder add /pdf@urx exch def %
9279    % | /pdf@voff| = the distance from the top of the page to the current point, in
9280    % PDF coordinates
9281      currentpoint exch pop vsize 72 sub %
9282      exch DvipsToPDF sub /pdf@voff exch def%
9283    } def%
9284  }%
9285 }
9286 \AfterBeginDocument{%
9287   \ifx\special@paper\@empty\else
9288     \ifHy@setpagesize
9289       \special{papersize=\special@paper}%
9290     \fi
9291   \fi
9292   \Hy@DisableOption{setpagesize}%
9293 }
9294 </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.

```

9295 < *vtexpdfmark>
9296 \providecommand*{\XR@ext}{pdf}
9297 \def\Hy@raisedlink{}
9298 \def\literalps@out#1{\special{pS:#1}}%
9299 \def\headerps@out#1{\immediate\special{pS:#1}}%
9300 \input{pdfmark.def}%
9301 \ifx\@pdfproducer\relax
9302   \ifnum\OpMode=\@ne
9303     \def\@pdfproducer{VTeX}%
9304   \else
9305     \def\@pdfproducer{VTeX + Distiller}%
9306   \fi
9307 \fi
9308 \providecommand*\@pdfborder{0 0 1}
9309 \providecommand*\@pdfborderstyle{}
9310 \providecommand*\@pdfview{XYZ}
9311 \providecommand*\@pdfviewparams{ H.V}
9312 \g@addto@macro\Hy@FirstPageHook{%
9313   \headerps@out{%
9314     /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.

```

9315   /HyperBorder {1} def%
9316   /H.V {pdf@hoff pdf@voff null} def%
9317   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

9318    /H.S {%
9319        currentpoint %
9320        HyperBorder sub%
9321        /pdf@lly exch def %
9322        dup 72 add /pdf@hoff exch def %
9323        HyperBorder sub%
9324        /pdf@llx exch def%
9325    } def%

```

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

```

9326    /H.L {%
9327        2 sub%
9328        /HyperBasePt exch def %
9329        currentpoint %
9330        HyperBasePt add HyperBorder add%
9331        /pdf@ury exch def %
9332        HyperBorder add%
9333        /pdf@urx exch def%
9334    } def%
9335    /H.A {%
9336        H.L %
9337        currentpoint exch pop %
9338        vsize 72 sub exch %
9339        HyperBasePt add add%
9340        /pdf@voff exch def%
9341    } def%

```

$\text{pdf@ury} = Y_c + \text{HyperBorder}$, $\text{pdf@urx} = X_c + \text{HyperBorder}$

```

9342    /H.R {%
9343        currentpoint %
9344        HyperBorder add%
9345        /pdf@ury exch def %
9346        HyperBorder add%
9347        /pdf@urx exch def %
9348        currentpoint exch pop vsize 72 sub add%
9349        /pdf@voff exch def%
9350    } def%
9351 }%
9352 }
9353 </vtxpdfmark>

```

46.11 Textures

```

9354 <*textures>
9355 \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.

```
9356 \begingroup
9357   \obeylines %
9358   \gdef\Hy@ps@CR{\noexpand
9359     }%
9360 \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`.

```
9361 \def\literalps@out#1{%
9362   \special{postscript 0 0 transform}%
9363   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
9364 }%
9365 %
```

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.

```
9366 \def\headerps@out#1{%
9367   \special{%
9368     prepostscript TeXdict begin\Hy@ps@CR
9369       #1\Hy@ps@CR
9370     end%
9371   }%
9372 }%
9373 %
```

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.

```
9374 \g@addto@macro\Hy@FirstPageHook{%
9375   \headerps@out{%
9376     /betterpdfmark {%
9377       systemdict begin %
9378         dup /BP eq%
9379         {cleartomark gsave nulldevice []}%
9380         {dup /EP eq%
9381           {cleartomark cleartomark grestore}%
9382           {cleartomark}%
9383         }ifelse%
9384       }ifelse %
9385     end%
9386   }def\Hy@ps@CR
9387   __pdfmark__ not{/pdfmark /betterpdfmark load def}if%
9388 }% end of \headerps@out
9389 }% end of \AtBeginShipoutFirst
9390 %
9391 \input{pdfmark.def}%
9392 %
9393 \ifx\@pdfproducer\relax
```

```

9394 \def\@pdfproducer{Textures + Distiller}%
9395 \fi
9396 \providecommand*\@pdfborder{0 0 1}
9397 \providecommand*\@pdfborderstyle{}
9398 \providecommand*\@pdfview{XYZ}
9399 \providecommand*\@pdfviewparams{ H.V}
9400 %

```

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 .

```

9401 \headerps@out{%

```

Textures lives in normal points, I think. So conversion from one coordinate system to another involves doing nothing.

```

9402 /vsize {\Hy@pageheight} def%
9403 /DvipsToPDF {} def%
9404 /PDFToDvips {} def%
9405 /BPToDvips {} def%
9406 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
9407 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
9408 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
9409 /H.S {%
9410     currentpoint %
9411     HyperBorder add /pdf@lly exch def %
9412     dup DvipsToPDF 72 add /pdf@hoff exch def %
9413     HyperBorder sub /pdf@llx exch def%
9414 } def\Hy@ps@CR
9415 /H.L {%
9416     2 sub %
9417     PDFToDvips /HyperBase exch def %
9418     currentpoint %
9419     HyperBase sub /pdf@ury exch def%
9420     /pdf@urx exch def%
9421 } def\Hy@ps@CR
9422 /H.A {%
9423     H.L %
9424     currentpoint exch pop %
9425     vsize 72 sub exch DvipsToPDF %
9426     HyperBase sub % baseline skip
9427     sub /pdf@voff exch def%
9428 } def\Hy@ps@CR
9429 /H.R {%
9430     currentpoint %
9431     HyperBorder sub /pdf@ury exch def %
9432     HyperBorder add /pdf@urx exch def %
9433     currentpoint exch pop vsize 72 sub %
9434     exch DvipsToPDF sub /pdf@voff exch def%
9435 } def\Hy@ps@CR
9436 }

9437 \AfterBeginDocument{%
9438     \ifHy@colorlinks
9439         \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
9440     \fi
9441 }

```

Textures provides built-in support for HyperTeX specials so this part combines code from `hypertex.def` with what is established by loading `pdfmark.def`, or any other driver.

```

9442 \expandafter\let\expandafter\keepPDF@SetupDoc
9443   \csname PDF@SetupDoc\endcsname
9444 \def\PDF@SetupDoc{%
9445   \ifx\@baseurl\@empty
9446   \else
9447     \special{html:<base href="\@baseurl">}%
9448   \fi
9449   \keepPDF@SetupDoc
9450 }
9451 \def\hyper@anchor#1{%
9452   \Hy@SaveLastskip
9453   \begingroup
9454     \let\protect=\string
9455     \special{html:<a name=%
9456       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9457   \endgroup
9458   \Hy@activeanchortrue
9459   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9460   \special{html:</a>}%
9461   \Hy@activeanchorfalse
9462   \Hy@RestoreLastskip
9463 }
9464 \def\hyper@anchorstart#1{%
9465   \Hy@SaveLastskip
9466   \begingroup
9467     \hyper@chars
9468     \special{html:<a name=%
9469       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9470   \endgroup
9471   \Hy@activeanchortrue
9472 }
9473 \def\hyper@anchorend{%
9474   \special{html:</a>}%
9475   \Hy@activeanchorfalse
9476   \Hy@RestoreLastskip
9477 }
9478 \def\@urltype{url}
9479 \def\hyper@linkstart#1#2{%
9480   \expandafter\Hy@colorlink\csname @#1color\endcsname
9481   \def\Hy@tempa{#1}%
9482   \ifx\Hy@tempa\@urltype
9483     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9484   \else
9485     \begingroup
9486       \hyper@chars
9487       \special{html:<a href=%
9488         \hyper@quote\#HyperDestNameFilter{#2}\hyper@quote>}%
9489     \endgroup
9490   \fi
9491 }
9492 \def\hyper@linkend{%
9493   \special{html:</a>}%
9494   \Hy@endcolorlink
9495 }
9496 \def\hyper@linkfile#1#2#3{%

```

```

9497 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9498 }
9499 \def\hyper@linkurl#1#2{%
9500 \leavevmode
9501 \ifHy@raiselinks
9502 \setbox\@tempboxa=\color@hbox #1\color@endbox
9503 \@linkdim\dp\@tempboxa
9504 \lower\@linkdim\hbox{%
9505 \hyper@chars
9506 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9507 }%
9508 \Hy@colorlink\@urlcolor#1%
9509 \@linkdim\ht\@tempboxa
9510 \advance\@linkdim by -6.5\p@
9511 \raise\@linkdim\hbox{\special{html:</a>}}%
9512 \Hy@endcolorlink
9513 \else
9514 \begingroup
9515 \hyper@chars
9516 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
9517 \Hy@colorlink\@urlcolor#1%
9518 \special{html:</a>}}%
9519 \Hy@endcolorlink
9520 \endgroup
9521 \fi
9522 }

```

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

```

9523 \def\hyper@link#1#2#3{%
9524 \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}%
9525 }
9526 \def\hyper@image#1#2{%
9527 \begingroup
9528 \hyper@chars
9529 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
9530 \endgroup
9531 }
9532 </textures>

```

46.12 dvipsone

```

9533 % \subsection{dvipsone driver}
9534 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
9535 % |\special| commands.
9536 <*dvipsone>
9537 \providecommand*\XR@ext}{pdf}
9538 \def\Hy@raisedlink{}
9539 \providecommand*\@pdfborder{0 0 1}
9540 \providecommand*\@pdfborderstyle{}
9541 \def\literalps@out#1{\special{ps:#1}}%
9542 \def\headerps@out#1{\special{headertext=#1}}%
9543 \input{pdfmark.def}%
9544 \ifx\@pdfproducer\relax
9545 \def\@pdfproducer{dvipsone + Distiller}%
9546 \fi
9547 \def\PDF@FinishDoc{%
9548 \Hy@UseMaketitleInfos
9549 \special{PDF: Keywords \@pdfkeywords}%

```

```

9550 \special{PDF: Title \@pdftitle}%
9551 \special{PDF: Creator \@pdfcreator}%
9552 \ifx\@pdfcreationdate\@empty
9553 \else
9554 \special{PDF: CreationDate \@pdfcreationdate}%
9555 \fi
9556 \ifx\@pdfmoddate\@empty
9557 \else
9558 \special{PDF: ModDate \@pdfmoddate}%
9559 \fi
9560 \special{PDF: Author \@pdfauthor}%
9561 \ifx\@pdfproducer\relax
9562 \else
9563 \special{PDF: Producer \@pdfproducer}%
9564 \fi
9565 \special{PDF: Subject \@pdfsubject}%
9566 \Hy@DisableOption{pdfauthor}%
9567 \Hy@DisableOption{pdftitle}%
9568 \Hy@DisableOption{pdfsubject}%
9569 \Hy@DisableOption{pdfcreator}%
9570 \Hy@DisableOption{pdfcreationdate}%
9571 \Hy@DisableOption{pdfmoddate}%
9572 \Hy@DisableOption{pdfproducer}%
9573 \Hy@DisableOption{pdfkeywords}%
9574 }
9575 \def\PDF@SetupDoc{%
9576 \def\Hy@temp{%
9577 \ifx\@pdfstartpage\@empty
9578 \else
9579 \ifx\@pdfstartview\@empty
9580 \else
9581 \edef\Hy@temp{%
9582 ,Page=\@pdfstartpage
9583 ,View=\@pdfstartview
9584 }%
9585 \fi
9586 \fi
9587 \edef\Hy@temp{%
9588 \noexpand\pdfmark{%
9589 pdfmark=/DOCVIEW,%
9590 PageMode=/\@pdfpagemode
9591 \Hy@temp
9592 }%
9593 }%
9594 \Hy@temp
9595 \ifx\@pdfpagescrop\@empty
9596 \else
9597 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9598 \fi
9599 \edef\Hy@temp{%
9600 \ifHy@toolbar\else /HideToolbar true\fi
9601 \ifHy@menubar\else /HideMenubar true\fi
9602 \ifHy@windowui\else /HideWindowUI true\fi
9603 \ifHy@fitwindow /FitWindow true\fi
9604 \ifHy@centerwindow /CenterWindow true\fi
9605 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9606 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode

```

```

9607 \Hy@UseNameKey{Direction}\@pdfdirection
9608 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9609 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9610 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9611 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9612 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9613 \Hy@UseNameKey{Duplex}\@pdfduplex
9614 \ifx\@pdfpicktraybypdfsize\@empty
9615 \else
9616 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9617 \fi
9618 \ifx\@pdfprintpagerange\@empty
9619 \else
9620 /PrintPageRange[\@pdfprintpagerange]%
9621 \fi
9622 \ifx\@pdfnumcopies\@empty
9623 \else
9624 /NumCopies \@pdfnumcopies
9625 \fi
9626 }%
9627 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9628 \pdfmark{%
9629 pdfmark=/PUT,%
9630 Raw={%
9631 \string{Catalog\string}<<%
9632 \ifx\Hy@temp\@empty
9633 \else
9634 /ViewerPreferences<<\Hy@temp>>%
9635 \fi
9636 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9637 \ifx\@pdflang\@empty
9638 \else
9639 /Lang(\@pdflang)%
9640 \fi
9641 \ifx\@baseurl\@empty
9642 \else
9643 /URI<</Base(\Hy@pstringB)>>%
9644 \fi
9645 >>%
9646 }%
9647 }%
9648 }
9649 \providecommand*\@pdfview{XYZ}
9650 \providecommand*\@pdfviewparams{ %
9651 gsave revscl currentpoint grestore %
9652 72 add exch pop null exch null%
9653 }
9654 \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 .

```

9655 \g@addto@macro\Hy@FirstPageHook{%
9656 \headerps@out{%

```

dvipsone lives in scaled points; does this mean 65536 or 65781?


```

9657 /DvipsToPDF { 65781 div } def%
9658 /PDFToDvips { 65781 mul } def%
9659 /BPToDvips{65781 mul}def%
9660 /HyperBorder { 1 PDFToDvips } def%
9661 /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.

```

9662 /BorderArrayPatch{%
9663   [exch{%
9664     dup dup type/integertype eq exch type/realtype eq or%
9665     {BPToDvips}if%
9666   }forall]]%
9667 }def%
9668 /H.S {%
9669   currentpoint %
9670   HyperBorder add /pdf@lly exch def %
9671   dup DvipsToPDF 72 add /pdf@hoff exch def %
9672   HyperBorder sub /pdf@llx exch def%
9673 } def%
9674 /H.L {%
9675   2 sub %
9676   PDFToDvips /HyperBase exch def %
9677   currentpoint %
9678   HyperBase sub /pdf@ury exch def%
9679   /pdf@urx exch def%
9680 } def%
9681 /H.A {%
9682   H.L %
9683   currentpoint exch pop %
9684   HyperBase sub % baseline skip
9685   DvipsToPDF /pdf@voff exch def%
9686 } def%
9687 /H.R {%
9688   currentpoint %
9689   HyperBorder sub /pdf@ury exch def %
9690   HyperBorder add /pdf@urx exch def %
9691   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
9692 } def%
9693 }%
9694 }
9695 </dvipsone>

```

46.13 TeX4ht

```

9696 <*tex4ht>
9697 \providecommand*{\XR@ext}{html}
9698 \def\Hy@raisedlink{}
9699 \@ifpackageloaded{tex4ht}{%
9700   \typeout{hyperref tex4ht: tex4ht already loaded}%
9701 }{%
9702   \RequirePackage[hx4ht]{tex4ht}%
9703 }
9704 \hyperlinkfileprefix{}
9705 \def\PDF@FinishDoc{}
9706 \def\PDF@SetupDoc{%
9707   \ifx\@baseurl\@empty

```

```

9708 \else
9709 \special{t4ht=<base href="\@baseurl">}%
9710 \fi
9711 }
9712 \def\hyper@anchor#1{%
9713 \Hy@SaveLastskip
9714 \begingroup
9715 \let\protect=\string
9716 \special{t4ht=<a name=%
9717 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9718 \endgroup
9719 \Hy@activeanchortrue
9720 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9721 \special{t4ht=</a>}%
9722 \Hy@activeanchorfalse
9723 \Hy@RestoreLastskip
9724 }
9725 \def\hyper@anchorstart#1{%
9726 \Hy@SaveLastskip
9727 \begingroup
9728 \hyper@chars\special{t4ht=<a name=%
9729 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9730 \endgroup
9731 \Hy@activeanchortrue
9732 }
9733 \def\hyper@anchorend{%
9734 \special{t4ht=</a>}%
9735 \Hy@activeanchorfalse
9736 \Hy@RestoreLastskip
9737 }
9738 \def\@urltype{url}
9739 \def\hyper@linkstart#1#2{%
9740 \expandafter\Hy@colorlink\csname @#1color\endcsname
9741 \def\Hy@tempa{#1}%
9742 \ifx\Hy@tempa\@urltype
9743 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
9744 \else
9745 \begingroup
9746 \hyper@chars
9747 \special{t4ht=<a href=%
9748 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9749 \endgroup
9750 \fi
9751 }
9752 \def\hyper@linkend{%
9753 \special{t4ht=</a>}%
9754 \Hy@endcolorlink
9755 }
9756 \def\hyper@linkfile#1#2#3{%
9757 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
9758 }
9759 \def\hyper@linkurl#1#2{%
9760 \leavevmode
9761 \ifHy@raiselinks
9762 \setbox\@tempboxa=\color@hbox #1\color@endbox
9763 \@linkdim\dp\@tempboxa
9764 \lower\@linkdim\hbox{%

```

```

9765     \begingroup
9766     \hyper@chars\special{t4ht=<a href=\hyper@quote#2\hyper@quote>}}%
9767     \endgroup
9768 }%
9769 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9770 \@linkdim\ht\@tempboxa
9771 \advance\@linkdim by -6.5\p@
9772 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
9773 \else
9774 \begingroup
9775 \hyper@chars
9776 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}}%
9777 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9778 \special{t4ht=</a>}}%
9779 \endgroup
9780 \fi
9781 }

```

Poor implementation of \hyper@link without considering #1.

```

9782 \def\hyper@link#1#2#3{%
9783   \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}}%
9784 }
9785 \def\hyper@image#1#2{%
9786   \begingroup
9787   \hyper@chars
9788   \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}}%
9789   \endgroup
9790 }
9791 \let\autoref\ref
9792 \ifx \rEfLiNK \UnDef
9793   \def\rEfLiNK #1#2{#2}%
9794 \fi
9795 \def\backref#1{}
9796 </tex4ht>
9797 <*tex4htcfg>
9798 \IfFileExists{\jobname.cfg}{\endinput}{}
9799 \Preamble{html}
9800   \begin{document}%
9801 \EndPreamble
9802 \def\TeX{TeX}
9803 \def\OMEGA{\Omega}
9804 \def\LaTeX{LaTeX}
9805 \def\LaTeXe{\LaTeX2e}
9806 \def\eTeX{e-TeX}
9807 \def\MF{Metafont}
9808 \def\MP{MetaPost}
9809 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

9810 <*pdfmark>
9811 \long\def\@Form[#1]{%
9812 \g@addto@macro\Hy@FirstPageHook{%
9813   \headerps@out{%
9814     [%
9815     /_objdef{pdfDocEncoding}%

```

```

9816 /type/dict%
9817 /OBJ pdfmark%
9818 [%
9819 {pdfDocEncoding}%
9820 <<%
9821 /Type/Encoding%
9822 /Differences[%
9823 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
9824 /tilde %
9825 39/quotesingle %
9826 96/grave %
9827 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
9828 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
9829 /quotedblbase/quotedblleft/quotedblright/quoteleft%
9830 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
9831 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
9832 164/currency %
9833 166/brokenbar %
9834 168/dieresis/copyright/ordfeminine %
9835 172/logicalnot/.notdef/registered/macron/degree/plusminus%
9836 /twosuperior/threesuperior/acute/mu %
9837 183/periodcentered/cedilla/onesuperior/ordmasculine %
9838 188/onequarter/onehalf/threequarters %
9839 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
9840 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
9841 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
9842 /Ocircumflex/Otilde/Odieresis/multiply/Slash/Ugrave%
9843 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
9844 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
9845 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
9846 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
9847 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
9848 /ucircumflex/udieresis/yacute/thorn/ydieresis%
9849 ]%
9850 >>%
9851 /PUT pdfmark%
9852 [%
9853 /_objdef{ZaDb}%
9854 /type/dict%
9855 /OBJ pdfmark%
9856 [%
9857 {ZaDb}%
9858 <<%
9859 /Type/Font%
9860 /Subtype/Type1%
9861 /Name/ZaDb%
9862 /BaseFont/ZapfDingbats%
9863 >>%
9864 /PUT pdfmark%
9865 [%
9866 /_objdef{Helv}%
9867 /type/dict%
9868 /OBJ pdfmark%
9869 [%
9870 {Helv}%
9871 <<%
9872 /Type/Font%

```

```

9873     /Subtype/Type1%
9874     /Name/Helv%
9875     /BaseFont/Helvetica%
9876     /Encoding{pdfDocEncoding}%
9877   >>%
9878 /PUT pdfmark%
9879 [%
9880   /_objdef{aform}%
9881   /type/dict%
9882 /OBJ pdfmark%
9883 [%
9884   /_objdef{afields}%
9885   /type/array%
9886 /OBJ pdfmark%
9887 {%
9888   [%
9889     /BBox[0 0 100 100]%
9890     /_objdef{Check}%
9891   /BP pdfmark %
9892   1 0 0 setrgbcolor%
9893   /ZapfDingbats 80 selectfont %
9894   20 20 moveto%
9895   (4)show%
9896   [/EP pdfmark%
9897   [%
9898     /BBox[0 0 100 100]%
9899     /_objdef{Cross}%
9900   /BP pdfmark %
9901   1 0 0 setrgbcolor%
9902   /ZapfDingbats 80 selectfont %
9903   20 20 moveto%
9904   (8)show%
9905   [/EP pdfmark%
9906   [%
9907     /BBox[0 0 250 100]%
9908     /_objdef{Submit}%
9909   /BP pdfmark %
9910   0.6 setgray %
9911   0 0 250 100 rectfill %
9912   1 setgray %
9913   2 2 moveto %
9914   2 98 lineto %
9915   248 98 lineto %
9916   246 96 lineto %
9917   4 96 lineto %
9918   4 4 lineto %
9919   fill %
9920   0.34 setgray %
9921   248 98 moveto %
9922   248 2 lineto %
9923   2 2 lineto %
9924   4 4 lineto %
9925   246 4 lineto %
9926   246 96 lineto %
9927   fill%
9928   /Helvetica 76 selectfont %
9929   0 setgray %

```

```

9930 8 22.5 moveto%
9931 (Submit)show%
9932 [/EP pdfmark%
9933 [%
9934 /BBox[0 0 250 100]%
9935 /_objdef{SubmitP}%
9936 /BP pdfmark %
9937 0.6 setgray %
9938 0 0 250 100 rectfill %
9939 0.34 setgray %
9940 2 2 moveto %
9941 2 98 lineto %
9942 248 98 lineto %
9943 246 96 lineto %
9944 4 96 lineto %
9945 4 4 lineto %
9946 fill %
9947 1 setgray %
9948 248 98 moveto %
9949 248 2 lineto %
9950 2 2 lineto %
9951 4 4 lineto %
9952 246 4 lineto %
9953 246 96 lineto %
9954 fill%
9955 /Helvetica 76 selectfont %
9956 0 setgray %
9957 10 20.5 moveto%
9958 (Submit)show%
9959 [/EP pdfmark%
9960 } ?pdfmark%
9961 [%
9962 {aform}%
9963 <<%
9964 /Fields{afields}%
9965 /DR<<%
9966 /Font<<%
9967 /ZaDb{ZaDb}%
9968 /Helv{Helv}%
9969 >>%
9970 >>%
9971 /DA(/Helv 10 Tf 0 g)%
9972 /CO{corder}%
9973 \ifHy@pdfa
9974 \else
9975 /NeedAppearances true%
9976 \fi
9977 >>%
9978 /PUT pdfmark%
9979 [%
9980 {Catalog}%
9981 <<%
9982 /AcroForm{aform}%
9983 >>%
9984 /PUT pdfmark%
9985 [%
9986 /_objdef{corder}%

```

```

9987 /type/array%
9988 /OBJ pdfmark% dps
9989 }}%
9990 \setkeys{Form}{#1}%
9991 }
9992 \def\@endForm{}
9993 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9994 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
9995 }
9996 \def\@TextField[#1]#2{% parameters, label
9997 \def\Fld@name{#2}%
9998 \def\Fld@default{}%
9999 \let\Fld@value\@empty
10000 \def\Fld@width{\DefaultWidthofText}%
10001 \def\Fld@height{%
10002 \ifFld@multiline
10003 \DefaultHeightofTextMultiline
10004 \else
10005 \DefaultHeightofText
10006 \fi
10007 }%
10008 \begingroup
10009 \Field@toks={ }%
10010 \expandafter\HyField@SetKeys\expandafter{%
10011 \DefaultOptionsofText,#1%
10012 }%
10013 \HyField@FlagsText
10014 \ifFld@hidden\def\Fld@width{1sp}\fi
10015 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10016 \LayoutTextField{#2}{%
10017 \Hy@escapeform\PDFForm@Text
10018 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
10019 pdfmark=/ANN,Raw={\PDFForm@Text}%
10020 }%
10021 }%
10022 \endgroup
10023 }
10024 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10025 \def\Fld@name{#2}%
10026 \let\Fld@default\relax
10027 \let\Fld@value\relax
10028 \def\Fld@width{\DefaultWidthofChoiceMenu}%
10029 \def\Fld@height{\DefaultHeightofChoiceMenu}%
10030 \begingroup
10031 \Fld@menulength=0 %
10032 \@tempdima\z@
10033 \@for\@curropt:=#3\do{%
10034 \expandafter\Fld@checkequals\@curropt==\%
10035 \Hy@StepCount\Fld@menulength
10036 \settowidth{\@tempdimb}{\@currDisplay}%
10037 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10038 }%
10039 \advance\@tempdima by 15\p@
10040 \Field@toks={ }%
10041 \begingroup
10042 \HyField@SetKeys{#1}%
10043 \edef\x{\endgroup

```

```

10044 \noexpand\expandafter
10045 \noexpand\HyField@SetKeys
10046 \noexpand\expandafter{%
10047 \expandafter\noexpand\csname DefaultOptionsof%
10048 \ifFld@radio
10049 Radio%
10050 \else
10051 \ifFld@combo
10052 \ifFld@popdown
10053 PopdownBox%
10054 \else
10055 ComboBox%
10056 \fi
10057 \else
10058 ListBox%
10059 \fi
10060 \fi
10061 \endcsname
10062 }%
10063 }\x
10064 \HyField@SetKeys{#1}%
10065 \ifFld@hidden\def\Fld@width{1sp}\fi
10066 \ifx\Fld@value\relax
10067 \let\Fld@value\Fld@default
10068 \fi
10069 \LayoutChoiceField{#2}{%
10070 \ifFld@radio
10071 \HyField@FlagsRadioButton
10072 \@@Radio{#3}%
10073 \else
10074 \begingroup
10075 \HyField@FlagsChoice
10076 \ifdim\Fld@width<\@tempdima
10077 \ifdim\@tempdima<1cm\@tempdima1cm\fi
10078 \edef\Fld@width{\the\@tempdima}%
10079 \fi
10080 \ifFld@combo
10081 \else
10082 \@tempdima=\the\Fld@menulength\Fld@charsize
10083 \advance\@tempdima by \Fld@borderwidth bp %
10084 \advance\@tempdima by \Fld@borderwidth bp %
10085 \edef\Fld@height{\the\@tempdima}%
10086 \fi
10087 \@@ListBox{#3}%
10088 \endgroup
10089 \fi
10090 }%
10091 \endgroup
10092 }
10093 \def\@@Radio#1{%
10094 \Fld@listcount=0 %
10095 \@for\@curropt:=#1\do{%
10096 \expandafter\Fld@checkequals\@curropt==\\%
10097 \Hy@StepCount\Fld@listcount
10098 \@currDisplay\space
10099 \Hy@escapeform\PDFForm@Radio
10100 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%

```



```

10101         pdfmark=/ANN,%
10102         Raw={\PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>}%
10103     } % deliberate space between radio buttons
10104 }%
10105 }
10106 \newcount\Fld@listcount
10107 \def\@@ListBox#1{%
10108     \HyField@PDFChoices{#1}%
10109     \Hy@escapeform\PDFForm@List
10110     \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
10111         pdfmark=/ANN,Raw={\PDFForm@List}%
10112     }%
10113 }
10114 \def\@PushButton[#1]#2{% parameters, label
10115     \def\Fld@name{#2}%
10116     \begingroup
10117         \Field@toks={ }%
10118         \expandafter\HyField@SetKeys\expandafter{%
10119             \DefaultOptionsofPushButton,#1%
10120         }%
10121         \ifHy@pdfa
10122             \PackageError{hyperref}{%
10123                 PDF/A: Push button with JavaScript is prohibited%
10124             }\@ehc
10125             \LayoutPushButtonField{%
10126                 \leavevmode
10127                 \MakeButtonField{#2}%
10128             }%
10129         \else
10130             \HyField@FlagsPushButton
10131             \ifFld@hidden\def\Fld@width{1sp}\fi
10132             \LayoutPushButtonField{%
10133                 \leavevmode
10134                 \Hy@escapeform\PDFForm@Push
10135                 \pdfmark[\MakeButtonField{#2}]{%
10136                     pdfmark=/ANN,Raw={\PDFForm@Push}%
10137                 }%
10138             }%
10139         \fi
10140     \endgroup
10141 }
10142 \def\@Submit[#1]#2{%
10143     \Field@toks={ }%
10144     \def\Fld@width{\DefaultWidthofSubmit}%
10145     \def\Fld@height{\DefaultHeightofSubmit}%
10146     \begingroup
10147         \expandafter\HyField@SetKeys\expandafter{%
10148             \DefaultOptionsofSubmit,#1%
10149         }%
10150         \HyField@FlagsPushButton
10151         \HyField@FlagsSubmit
10152         \ifFld@hidden\def\Fld@width{1sp}\fi
10153         \Hy@escapeform\PDFForm@Submit
10154         \pdfmark[\MakeButtonField{#2}]{%
10155             pdfmark=/ANN,%
10156             Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
10157         }%

```

```

10158 \endgroup
10159 }
10160 \def\@Reset[#1]#2{%
10161   \Field@toks={ }%
10162   \def\Fld@width{\DefaultWidthofReset}%
10163   \def\Fld@height{\DefaultHeightofReset}%
10164   \begingroup
10165     \expandafter\HyField@SetKeys\expandafter{%
10166       \DefaultOptionsofReset,#1%
10167     }%
10168     \leavevmode
10169     \ifHy@pdfa
10170       \PackageError{hyperref}{%
10171         PDF/A: Reset action is prohibited%
10172       }\@ehc
10173       \MakeButtonField{#2}%
10174     \else
10175       \HyField@FlagsPushButton
10176       \ifFld@hidden\def\Fld@width{1sp}\fi
10177       \Hy@escapeform\PDFForm@Reset
10178       \pdfmark[\MakeButtonField{#2}]{%
10179         pdfmark=/ANN,Raw={\PDFForm@Reset}%
10180       }%
10181     \fi
10182   \endgroup
10183 }%
10184 \def\@CheckBox[#1]#2{% parameters, label
10185   \def\Fld@name{#2}%
10186   \def\Fld@default{0}%
10187   \begingroup
10188     \def\Fld@width{\DefaultWidthofCheckBox}%
10189     \def\Fld@height{\DefaultHeightofCheckBox}%
10190     \Field@toks={ }%
10191     \expandafter\HyField@SetKeys\expandafter{%
10192       \DefaultOptionsofCheckBox,#1%
10193     }%
10194     \HyField@FlagsCheckBox
10195     \ifFld@hidden\def\Fld@width{1sp}\fi
10196     \LayoutCheckField{#2}{%
10197       \Hy@escapeform\PDFForm@Check
10198       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
10199         pdfmark=/ANN,Raw={\PDFForm@Check}%
10200       }%
10201     }%
10202   \endgroup
10203 }
10204 \pdfmark>

```

47.2 HyperTeX

```

10205 <*hypertex>
10206 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
10207 \def\@endForm{}
10208 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10209   \typeout{Sorry, HyperTeX does not support FORM gauges}%
10210 }
10211 \def\@TextField[#1]#2{% parameters, label
10212   \typeout{Sorry, HyperTeX does not support FORM text fields}%

```

```

10213 }
10214 \def\@CheckBox[#1]#2{% parameters, label
10215 \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
10216 }
10217 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10218 \typeout{Sorry, HyperTeX does not support FORM choice menus}%
10219 }
10220 \def\@PushButton[#1]#2{% parameters, label
10221 \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
10222 }
10223 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10224 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10225 \end{hypertex}

```

47.3 TeX4ht

```

10226 \*tex4ht
10227 \def\@Form[#1]{%
10228 \setkeys{Form}{#1}%
10229 \HCode{<form action="\Form@action" method="\Form@method">}%
10230 }
10231 \def\@endForm{\HCode{</form>}}
10232 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10233 \typeout{Sorry, TeX4ht does not support gauges}%
10234 }
10235 \def\@TextField[#1]#2{% parameters, label
10236 \let\Hy@reserved@a\@empty
10237 \def\Fld@name{#2}%
10238 \def\Fld@default{}%
10239 \bgroup
10240 \Field@toks={ }%
10241 \setkeys{Field}{#1}%
10242 \HCode{<label for="\Fld@name">#2</label>}%
10243 \ifFld@password
10244 \@@PasswordField
10245 \else
10246 \@@TextField
10247 \fi
10248 \egroup
10249 }
10250 \def\@@PasswordField{%
10251 \HCode{%
10252 <input type="password" %
10253 id="\Fld@name" %
10254 name="\Fld@name" %
10255 \ifFld@hidden type="hidden" \fi
10256 value="\Fld@default" %
10257 \the\Fld@toks
10258 >%
10259 }%
10260 }
10261 \def\@@TextField{%
10262 \ifFld@multiline
10263 \HCode{<textarea %
10264 \ifFld@readonly readonly \fi
10265 id="\Fld@name" %
10266 name="\Fld@name" %
10267 \ifFld@hidden type="hidden" \fi

```

```

10268     \the\Field@toks>%
10269   }%
10270   \Fld@default
10271   \HCode{</textarea>}%
10272 \else
10273   \HCode{<input type="text" %
10274     \ifFld@readonly readonly \fi
10275     id="\Fld@name" %
10276     name="\Fld@name" %
10277     \ifFld@hidden type="hidden" \fi
10278     value="\Fld@default" %
10279     \the\Field@toks>%
10280   }%
10281 \fi
10282 }
10283 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10284   \def\Fld@name{#2}%
10285   \def\Fld@default{}%
10286   \let\Hy@reserved@a\relax
10287   \begingroup
10288     \expandafter\Fld@findlength#3\\%
10289     \Field@toks={ }%
10290     \setkeys{Field}{#1}%
10291     #2%
10292     \ifFld@radio
10293       \expandafter\@@Radio#3\\%
10294     \else
10295       \expandafter\@@Menu#3\\%
10296     \fi
10297   \endgroup
10298 }
10299 \def\Fld@findlength#1\\{%
10300   \Fld@menulength=0 %
10301   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
10302 }
10303 \def\@@Menu#1\\{%
10304   \HCode{<select size="\the\Fld@menulength" %
10305     name="\Fld@name" %
10306     \the\Field@toks>%
10307   }%
10308   \@for\@curropt:=#1\do{%
10309     \expandafter\Fld@checkequals\@curropt==\\%
10310     \HCode{<option %
10311       \ifx\@curropt\Fld@default selected \fi
10312       value="\@currValue">\@currDisplay</option>%
10313     }%
10314   }%
10315   \HCode{</select>}%
10316 }
10317 \def\@@Radio#1\\{%
10318   \@for\@curropt:=#1\do{%
10319     \expandafter\Fld@checkequals\@curropt==\\%
10320     \HCode{<input type="radio" %
10321       \ifx\@curropt\Fld@default checked \fi
10322       name="\Fld@name" %
10323       value="\@currValue" %
10324       \the\Field@toks>%

```

```

10325     }%
10326     \@currDisplay
10327 }%
10328 }
10329 \def\@PushButton[#1]#2{% parameters, label
10330 \def\Fld@name{#2}%
10331 \bgroup
10332   \Field@toks={ }%
10333   \setkeys{Field}{#1}%
10334   \HCode{<input type="button" %
10335     name="\Fld@name" %
10336     value="#2" %
10337     \the\Field@toks>%
10338   }%
10339   \HCode{</button>}%
10340 \egroup
10341 }
10342 \def\@Submit[#1]#2{%
10343   \HCode{<button type="submit">#2</button>}%
10344 }
10345 \def\@Reset[#1]#2{%
10346   \HCode{<button type="reset">#2</button>}%
10347 }
10348 \def\@CheckBox[#1]#2{% parameters, label
10349   \let\Hy@reserved@a\@empty
10350   \def\Fld@name{#2}%
10351   \def\Fld@default{0}%
10352   \bgroup
10353     \Field@toks={ }%
10354     \setkeys{Field}{#1}%
10355     \HCode{<input type="checkbox" %
10356       \ifFld@checked checked \fi
10357       \ifFld@disabled disabled \fi
10358       \ifFld@readonly readonly \fi
10359       name="\Fld@name" %
10360       \ifFld@hidden type="hidden" \fi
10361       value="\Fld@default" %
10362       \the\Field@toks>%
10363     #2%
10364   }%
10365 \egroup
10366 }
10367 </tex4ht>

```

47.4 pdfTeX

```

10368 <*pdfTeX>
10369 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10370   \typeout{Sorry, pdfTeX does not support FORM gauges}%
10371 }
10372 \def\MakeFieldObject#1#2{\sbox0{#1}%
10373   \immediate\pdfxform0 %
10374   \expandafter\edef\csname #2Object\endcsname{%
10375     \the\pdflastxform\space 0 R%
10376   }%
10377   \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
10378 }%
10379 \def\HyField@afields{}

```

```

10380 \begingroup\expandafter\expandafter\expandafter\endgroup
10381 \expandafter\ifx\csname pdfastlink\endcsname\relax
10382   \let\HyField@AddToFields\relax
10383   \PackageInfo{hyperref}{%
10384     You need pdfTeX 1.40.0 for setting the /Fields entry.\MessageBreak
10385     Adobe Reader/Acrobat accepts an empty /Field array,\MessageBreak
10386     but other PDF viewers might complain%
10387   }%
10388 \else
10389   \def\HyField@AddToFields{%
10390     \xdef\HyField@afields{%
10391       \ifx\HyField@afields\@empty
10392         \else
10393           \HyField@afields
10394           \space
10395         \fi
10396       \the\pdfastlink\space 0 R%
10397     }%
10398   }%
10399 \fi
10400 \def\@Form[#1]{%
10401   \ifundefined{textcolor}{\let\textcolor@gobble}{}}%
10402   \setkeys{Form}{#1}%
10403   \ifnum\pdfTeXversion>13 %
10404     \pdfrefobj\OBJ@pdfdocencoding
10405     \pdfrefobj\OBJ@ZaDb
10406     \pdfrefobj\OBJ@Helv
10407   \fi
10408   \AtEndDocument{%
10409     \immediate\pdfobj{%
10410       <<%
10411         /Fields[\HyField@afields]%
10412         /DR<<%
10413           /Font<<%
10414             /ZaDb \OBJ@ZaDb\space 0 R%
10415             /Helv \OBJ@Helv\space 0 R%
10416           >>%
10417         >>%
10418         /DA(/Helv 10 Tf 0 g)%
10419         \ifHy@pdfa
10420         \else
10421           /NeedAppearances true%
10422         \fi
10423       >>%
10424     }%
10425     \edef\OBJ@acroform{\the\pdfastobj}%
10426     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
10427   }%
10428   \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

10429   \begingroup
10430     \fontfamily{pzd}%
10431     \fontencoding{U}%
10432     \fontseries{m}%
10433     \fontshape{n}%
10434     \selectfont
10435     \char123 %

```

```

10436 \endgroup
10437 }{Ding}%
10438 \MakeFieldObject{%
10439 \fbox{\textcolor{yellow}{\textsf{Submit}}}}%
10440 }{Submit}%
10441 \MakeFieldObject{%
10442 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}}%
10443 }{SubmitP}%
10444 }
10445 \def\@endForm{}
10446 \def\@TextField[#1]#2{% parameters, label
10447 \def\Fld@name{#2}%
10448 \def\Fld@default{}%
10449 \let\Fld@value\@empty
10450 \def\Fld@width{\DefaultWidthofText}%
10451 \def\Fld@height{%
10452 \ifFld@multiline
10453 \DefaultHeightofTextMultiline
10454 \else
10455 \DefaultHeightofText
10456 \fi
10457 }%
10458 \begingroup
10459 \Field@toks={ }%
10460 \expandafter\HyField@SetKeys\expandafter{%
10461 \DefaultOptionsofText,#1%
10462 }%
10463 \PDFForm@Name
10464 \HyField@FlagsText
10465 \ifFld@hidden\def\Fld@width{1sp}\fi
10466 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10467 \LayoutTextField{#2}{%
10468 \Hy@escapeform\PDFForm@Text
10469 \pdfstartlink user {\PDFForm@Text}\relax
10470 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
10471 \HyField@AddToFields
10472 }%
10473 \endgroup
10474 }
10475 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10476 \def\Fld@name{#2}%
10477 \let\Fld@default\relax
10478 \let\Fld@value\relax
10479 \def\Fld@width{\DefaultWidthofChoiceMenu}%
10480 \def\Fld@height{\DefaultHeightofChoiceMenu}%
10481 \begingroup
10482 \Fld@menulength=0 %
10483 \@tempdima\z@
10484 \@for\@curropt:=#3\do{%
10485 \expandafter\Fld@checkequals\@curropt==\%
10486 \Hy@StepCount\Fld@menulength
10487 \settowidth{\@tempdimb}{\@currDisplay}%
10488 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10489 }%
10490 \advance\@tempdima by 15\p@
10491 \Field@toks={ }%
10492 \begingroup

```

```

10493     \HyField@SetKeys{#1}%
10494 \edef\x{\endgroup
10495     \noexpand\expandafter
10496     \noexpand\HyField@SetKeys
10497     \noexpand\expandafter{%
10498     \expandafter\noexpand\csname DefaultOptionsof%
10499     \ifFld@radio
10500     Radio%
10501     \else
10502     \ifFld@combo
10503     \ifFld@popdown
10504     PopdownBox%
10505     \else
10506     ComboBox%
10507     \fi
10508     \else
10509     ListBox%
10510     \fi
10511     \fi
10512     \endcsname
10513     }%
10514 } \x
10515 \HyField@SetKeys{#1}%
10516 \PDFForm@Name
10517 \ifFld@hidden\def\Fld@width{1sp}\fi
10518 \ifx\Fld@value\relax
10519     \let\Fld@value\Fld@default
10520 \fi
10521 \LayoutChoiceField{#2}{%
10522     \ifFld@radio
10523     \HyField@FlagsRadioButton
10524     \@@Radio{#3}%
10525     \else
10526     \begingroup
10527     \HyField@FlagsChoice
10528     \ifdim\Fld@width<\@tempdima
10529     \ifdim\@tempdima<1cm\@tempdima1cm\fi
10530     \edef\Fld@width{\the\@tempdima}%
10531     \fi
10532     \ifFld@combo
10533     \else
10534     \@tempdima=\the\Fld@menulength\Fld@charsize
10535     \advance\@tempdima by \Fld@borderwidth bp %
10536     \advance\@tempdima by \Fld@borderwidth bp %
10537     \edef\Fld@height{\the\@tempdima}%
10538     \fi
10539     \@@ListBox{#3}%
10540     \endgroup
10541     \fi
10542     }%
10543 \endgroup
10544 }
10545 \def\@@Radio#1{%
10546     \Fld@listcount=0 %
10547     \@for\@curropt:=#1\do{%
10548     \expandafter\Fld@checkequals\@curropt==\%
10549     \Hy@StepCount\Fld@listcount

```



```

10550 \currDisplay\space
10551 \leavevmode
10552 \Hy@escapeform\PDFForm@Radio
10553 \pdfstartlink user {%
10554 \PDFForm@Radio
10555 /AP<<%
10556 /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.

```

10557 \currValue\space \DingObject
10558 >>%
10559 >>%
10560 }%
10561 \relax
10562 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
10563 \ifnum\Fld@listcount=1 %
10564 \HyField@AddToFields
10565 \fi
10566 \space % deliberate space between radio buttons
10567 }%
10568 }
10569 \newcount\Fld@listcount
10570 \def\@@ListBox#1{%
10571 \HyField@PDFChoices{#1}%
10572 \leavevmode
10573 \Hy@escapeform\PDFForm@List
10574 \pdfstartlink user {\PDFForm@List}\relax
10575 \MakeChoiceField{\Fld@width}{\Fld@height}%
10576 \pdfendlink
10577 \HyField@AddToFields
10578 }
10579 \def\@PushButton[#1]#2{% parameters, label
10580 \def\Fld@name{#2}%
10581 \begingroup
10582 \Field@toks={ }%
10583 \expandafter\HyField@SetKeys\expandafter{%
10584 \DefaultOptionsofPushButton,#1%
10585 }%
10586 \PDFForm@Name
10587 \ifHy@pdfa
10588 \PackageError{hyperref}{%
10589 PDF/A: Push button with JavaScript is prohibited%
10590 }{\@ehc
10591 \LayoutPushButtonField{%
10592 \leavevmode
10593 \MakeButtonField{#2}%
10594 }%
10595 \else
10596 \HyField@FlagsPushButton
10597 \ifFld@hidden\def\Fld@width{1sp}\fi
10598 \LayoutPushButtonField{%
10599 \leavevmode
10600 \Hy@escapeform\PDFForm@Push
10601 \pdfstartlink user {\PDFForm@Push}\relax
10602 \MakeButtonField{#2}%
10603 \pdfendlink

```

```

10604         \HyField@AddToFields
10605     }%
10606     \fi
10607 \endgroup
10608 }
10609 \def\@Submit[#1]#2{%
10610     \Field@toks={ }%
10611     \def\Fld@width{\DefaultWidthofSubmit}%
10612     \def\Fld@height{\DefaultHeightofSubmit}%
10613     \begingroup
10614         \expandafter\HyField@SetKeys\expandafter{%
10615             \DefaultOptionsofSubmit,#1%
10616         }%
10617         \HyField@FlagsPushButton
10618         \HyField@FlagsSubmit
10619         \ifFld@hidden\def\Fld@width{1sp}\fi
10620         \leavevmode
10621         \Hy@escapeform\PDFForm@Submit
10622         \pdfstartlink user {%
10623             \PDFForm@Submit
10624             /AP<</N \SubmitObject/D \SubmitPObject>>%
10625         }%
10626         \relax
10627         \MakeButtonField{#2}%
10628         \pdfendlink
10629         \HyField@AddToFields
10630     \endgroup
10631 }
10632 \def\@Reset[#1]#2{%
10633     \Field@toks={ }%
10634     \def\Fld@width{\DefaultWidthofReset}%
10635     \def\Fld@height{\DefaultHeightofReset}%
10636     \begingroup
10637         \expandafter\HyField@SetKeys\expandafter{%
10638             \DefaultOptionsofReset,#1%
10639         }%
10640         \leavevmode
10641         \ifHy@pdfa
10642             \PackageError{hyperref}{%
10643                 PDF/A: Reset action is prohibited%
10644             }\@ehc
10645             \MakeButtonField{#2}%
10646         \else
10647             \HyField@FlagsPushButton
10648             \ifFld@hidden\def\Fld@width{1sp}\fi
10649             \Hy@escapeform\PDFForm@Reset
10650             \pdfstartlink user {\PDFForm@Reset}\relax
10651             \MakeButtonField{#2}%
10652             \pdfendlink
10653             \HyField@AddToFields
10654         \fi
10655     \endgroup
10656 }
10657 \def\@CheckBox[#1]#2{% parameters, label
10658     \def\Fld@name{#2}%
10659     \def\Fld@default{0}%
10660     \begingroup

```

```

10661 \def\Fld@width{\DefaultWidthofCheckBox}%
10662 \def\Fld@height{\DefaultHeightofCheckBox}%
10663 \Field@toks={ }%
10664 \expandafter\HyField@SetKeys\expandafter{%
10665 \DefaultOptionsofCheckBox,#1%
10666 }%
10667 \PDFForm@Name
10668 \HyField@FlagsCheckBox
10669 \ifFld@hidden\def\Fld@width{1sp}\fi
10670 \LayoutCheckField{#2}{%
10671 \Hy@escapeform\PDFForm@Check
10672 \pdfstartlink user {\PDFForm@Check}\relax
10673 \MakeCheckField{\Fld@width}{\Fld@height}%
10674 \pdfendlink
10675 \HyField@AddToFields
10676 }%
10677 \endgroup
10678 }
10679 \pdfobj {%
10680 <<%
10681 /Type/Encoding%
10682 /Differences[%
10683 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
10684 /ring/tilde %
10685 39/quotesingle %
10686 96/grave %
10687 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10688 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10689 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10690 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
10691 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10692 164/currency %
10693 166/brokenbar %
10694 168/dieresis/copyright/ordfeminine %
10695 172/logicalnot/.notdef/registered/macron/degree/plusminus%
10696 /twosuperior/threesuperior/acute/mu %
10697 183/periodcentered/cedilla/onesuperior/ordmasculine %
10698 188/onequarter/onehalf/threequarters %
10699 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10700 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10701 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10702 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
10703 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10704 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10705 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10706 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
10707 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
10708 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
10709 ]%
10710 >>%
10711 }
10712 \edef\OBJ@pdfdocencoding{\the\pdflastobj}
10713 \pdfobj{%
10714 <<%
10715 /Type/Font%
10716 /Subtype/Type1%
10717 /Name/ZaDb%

```

```

10718     /BaseFont/ZapfDingbats%
10719   >>%
10720 }
10721 \edef\OBJ@ZaDb{\the\pdflastobj}
10722 \pdfobj{%
10723   <<%
10724     /Type/Font%
10725     /Subtype/Type1%
10726     /Name/Helv%
10727     /BaseFont/Helvetica%
10728     /Encoding \OBJ@pdfdocencoding\space 0 R%
10729   >>%
10730 }
10731 \edef\OBJ@Helv{\the\pdflastobj}
10732 \pdfobj{</pdfobj>}

```

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.

```

10733 \def\*dvipdfm{

```

\@Gauge

```

10734 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10735   \typeout{Sorry, dvipdfm does not support FORM gauges}%
10736 }

```

\@Form

```

10737 \def\@Form[#1]{%
10738   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
10739   \setkeys{Form}{#1}%
10740   \@pdfm@mark{obj @afields []}%
10741   \@pdfm@mark{obj @corder []}%
10742   \@pdfm@mark{%
10743     obj @aform <<%
10744       /Fields @afields%
10745       /DR<<%
10746         /Font<<%
10747           /ZaDb @OBJ@ZaDb%
10748           /Helv @OBJ@Helv%
10749         >>%
10750       >>%
10751       /DA(/Helv 10 Tf 0 g)%
10752       /CO @corder%
10753       \ifHy@pdfa
10754       \else
10755         /NeedAppearances true%
10756       \fi
10757     >>%
10758   }%
10759   \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
10760 }

```

\@endForm

```

10761 \def\@endForm{

```

\dvipdfm@setdim \dvipdfm@setdim sets dimensions for ann using \pdfm@box.

```

10762 \def\dvipdfm@setdim{%
10763   height \the\ht\pdfm@box\space
10764   width \the\wd\pdfm@box\space
10765   depth \the\dp\pdfm@box\space
10766 }

\HyField@AnnotCount

10767 \newcount\HyField@AnnotCount
10768 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount

10769 \def\HyField@AdvanceAnnotCount{%
10770   \global\advance\HyField@AnnotCount\@ne
10771 }

\HyField@TheAnnotCount

10772 \def\HyField@TheAnnotCount{%
10773   \the\HyField@AnnotCount
10774 }

\@TextField

10775 \def\@TextField[#1]#2{% parameters, label
10776   \def\Fld@name{#2}%
10777   \def\Fld@default{}%
10778   \let\Fld@value\@empty
10779   \def\Fld@width{\DefaultWidthofText}%
10780   \def\Fld@height{%
10781     \ifFld@multiline
10782       \DefaultHeightofTextMultiline
10783     \else
10784       \DefaultHeightofText
10785     \fi
10786   }%
10787   \begingroup
10788     \Field@toks={ }%
10789     \expandafter\HyField@SetKeys\expandafter{%
10790       \DefaultOptionsofText,#1%
10791     }%
10792     \PDFForm@Name
10793     \HyField@FlagsText
10794     \ifFld@hidden\def\Fld@width{1sp}\fi
10795     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10796     \setbox\pdfm@box=\hbox{%
10797       \MakeTextField{\Fld@width}{\Fld@height}%
10798     }%
10799     \HyField@AdvanceAnnotCount
10800     \LayoutTextField{#2}{%
10801       \Hy@escapeform\PDFForm@Text
10802       \@pdfm@mark{%
10803         ann @text\HyField@TheAnnotCount\space
10804         \dvipdfm@setdim << \PDFForm@Text >>%
10805       }%
10806     }%
10807     \unhbox\pdfm@box
10808     \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
10809     % record in @afields array
10810   \endgroup

```

```

10811 }

\@ChoiceMenu
10812 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10813   \def\Fld@name{#2}%
10814   \let\Fld@default\relax
10815   \let\Fld@value\relax
10816   \def\Fld@width{\DefaultWidthofChoiceMenu}%
10817   \def\Fld@height{\DefaultHeightofChoiceMenu}%
10818   \begingroup
10819     \Fld@menulength=0 %
10820     \@tempdima\z@
10821     \for\@curropt:=#3\do{%
10822       \expandafter\Fld@checkequals\@curropt==\%
10823       \Hy@StepCount\Fld@menulength
10824       \settowidth{\@tempdimb}{\@currDisplay}%
10825       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10826     }%
10827     \advance\@tempdima by 15\p@
10828     \Field@toks={ }%
10829     \begingroup
10830       \HyField@SetKeys{#1}%
10831     \edef\x{\endgroup
10832       \noexpand\expandafter
10833       \noexpand\HyField@SetKeys
10834       \noexpand\expandafter{%
10835         \expandafter\noexpand\csname DefaultOptionsof%
10836           \ifFld@radio
10837             Radio%
10838           \else
10839             \ifFld@combo
10840               \ifFld@popdown
10841                 PopdownBox%
10842               \else
10843                 ComboBox%
10844               \fi
10845             \else
10846               ListBox%
10847             \fi
10848           \fi
10849         \endcsname
10850       }%
10851     }\x
10852     \HyField@SetKeys{#1}%
10853     \PDFForm@Name
10854     \ifFld@hidden\def\Fld@width{1sp}\fi
10855     \ifx\Fld@value\relax
10856       \let\Fld@value\Fld@default
10857     \fi
10858     \LayoutChoiceField{#2}{%
10859       \ifFld@radio
10860         \HyField@FlagsRadioButton
10861         \@@Radio{#3}%
10862       \else
10863         \begingroup
10864         \HyField@FlagsChoice
10865         \ifdim\Fld@width<\@tempdima

```

```

10866         \ifdim\@tempdima<1cm\@tempdima1cm\fi
10867         \edef\Fld@width{\the\@tempdima}%
10868     \fi
10869     \ifFld@combo
10870     \else
10871         \@tempdima=\the\Fld@menulength\Fld@charsize
10872         \advance\@tempdima by \Fld@borderwidth bp %
10873         \advance\@tempdima by \Fld@borderwidth bp %
10874         \edef\Fld@height{\the\@tempdima}%
10875     \fi
10876     \@@ListBox{#3}%
10877 \endgroup
10878 \fi
10879 }%
10880 \endgroup
10881 }

\@@Radio
10882 \def\@@Radio#1{%
10883     \Fld@listcount=0 %
10884     \setbox\pdfm@box=\hbox{\MakeRadioField{\Fld@width}{\Fld@height}}%
10885     \@for\@curropt:=#1\do{%
10886         \expandafter\Fld@checkequals\@curropt==\%
10887         \Hy@StepCount\Fld@listcount
10888         \@currDisplay\space
10889         \leavevmode
10890         \Hy@escapeform\PDFForm@Radio
10891         \ifnum\Fld@listcount=1 %
10892             \HyField@AdvanceAnnotCount
10893         \fi
10894         \@pdfm@mark{%
10895             ann \ifnum\Fld@listcount=1 @radio\HyField@TheAnnotCount\space\fi
10896             \dvi pdfm@setdim
10897             <<%
10898                 \PDFForm@Radio
10899                 /AP<</N<</\@currValue /null>>>>%
10900             >>%
10901         }%
10902         \unhcopy\pdfm@box\space% deliberate space between radio buttons
10903         \ifnum\Fld@listcount=1 %
10904             \@pdfm@mark{put @afields @radio\HyField@TheAnnotCount}%
10905         \fi
10906     }%
10907 }

\Fld@listcount
10908 \newcount\Fld@listcount

\@@ListBox
10909 \def\@@ListBox#1{%
10910     \HyField@PDFChoices{#1}%
10911     \setbox\pdfm@box=\hbox{\MakeChoiceField{\Fld@width}{\Fld@height}}%
10912     \leavevmode
10913     \Hy@escapeform\PDFForm@List
10914     \HyField@AdvanceAnnotCount
10915     \@pdfm@mark{%
10916         ann @list\HyField@TheAnnotCount\space

```

```

10917 \dvipdfm@setdim
10918 <<\PDFForm@List>>%
10919 }%
10920 \unhbox\pdfm@box
10921 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
10922 }

```

\@PushButton

```

10923 \def\@PushButton[#1]#2{% parameters, label
10924 \def\Fld@name{#2}%
10925 \begingroup
10926 \Field@toks={ }%
10927 \expandafter\HyField@SetKeys\expandafter{%
10928 \DefaultOptionsofPushButton,#1%
10929 }%
10930 \PDFForm@Name
10931 \ifHy@pdfa
10932 \PackageError{hyperref}{%
10933 PDF/A: Push button with JavaScript is prohibited%
10934 }{\@ehc
10935 \LayoutPushButtonField{%
10936 \leavevmode
10937 \MakeButtonField{#2}%
10938 }%
10939 \else
10940 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
10941 \HyField@FlagsPushButton
10942 \ifFld@hidden\def\Fld@width{1sp}\fi
10943 \HyField@AdvanceAnnotCount
10944 \LayoutPushButtonField{%
10945 \leavevmode
10946 \Hy@escapeform\PDFForm@Push
10947 \@pdfm@mark{%
10948 ann @push\HyField@TheAnnotCount\space
10949 \dvipdfm@setdim
10950 <<\PDFForm@Push>>%
10951 }%
10952 }%
10953 \unhbox\pdfm@box
10954 \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
10955 \fi
10956 \endgroup
10957 }

```

\@Submit

```

10958 \def\@Submit[#1]#2{%
10959 \Field@toks={ }%
10960 \def\Fld@width{\DefaultWidthofSubmit}%
10961 \def\Fld@height{\DefaultHeightofSubmit}%
10962 \begingroup
10963 \expandafter\HyField@SetKeys\expandafter{%
10964 \DefaultOptionsofSubmit,#1%
10965 }%
10966 \HyField@FlagsPushButton
10967 \HyField@FlagsSubmit
10968 \ifFld@hidden\def\Fld@width{1sp}\fi
10969 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%

```



```

10970 \leavevmode
10971 \Hy@escapeform\PDFForm@Submit
10972 \HyField@AdvanceAnnotCount
10973 \@pdfm@mark{%
10974     ann @submit\HyField@TheAnnotCount\space
10975     \dvi pdfm@setdim
10976     <<\PDFForm@Submit>>%
10977 }%
10978 \unhbox\pdfm@box%
10979 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
10980 \endgroup
10981 }

\@Reset
10982 \def\@Reset[#1]#2{%
10983     \Field@toks={ }%
10984     \def\Fld@width{\DefaultWidthofReset}%
10985     \def\Fld@height{\DefaultHeightofReset}%
10986     \begingroup
10987         \expandafter\HyField@SetKeys\expandafter{%
10988             \DefaultOptionsofReset,#1%
10989         }%
10990     \leavevmode
10991     \ifHy@pdfa
10992         \PackageError{hyperref}{%
10993             PDF/A: Reset action is prohibited%
10994         }\@ehc
10995         \MakeButtonField{#2}%
10996     \else
10997         \HyField@FlagsPushButton
10998         \ifFld@hidden\def\Fld@width{1sp}\fi
10999         \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11000         \Hy@escapeform\PDFForm@Reset
11001         \HyField@AdvanceAnnotCount
11002         \@pdfm@mark{%
11003             ann @reset\HyField@TheAnnotCount\space
11004             \dvi pdfm@setdim
11005             <<\PDFForm@Reset>>%
11006         }%
11007         \unhbox\pdfm@box
11008         \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
11009     \fi
11010 \endgroup
11011 }

\@CheckBox
11012 \def\@CheckBox[#1]#2{% parameters, label
11013     \def\Fld@name{#2}%
11014     \def\Fld@default{0}%
11015     \begingroup
11016         \def\Fld@width{\DefaultWidthofCheckBox}%
11017         \def\Fld@height{\DefaultHeightofCheckBox}%
11018         \Field@toks={ }%
11019         \expandafter\HyField@SetKeys\expandafter{%
11020             \DefaultOptionsofCheckBox,#1%
11021         }%
11022         \PDFForm@Name

```

```

11023 \HyField@FlagsCheckBox
11024 \ifFld@hidden\def\Fld@width{1sp}\fi
11025 \setbox\pdfm@box=\hbox{\MakeCheckField{\Fld@width}{\Fld@height}}%
11026 \HyField@AdvanceAnnotCount
11027 \LayoutCheckField{#2}{%
11028 \Hy@escapeform\PDFForm@Check
11029 \@pdfm@mark{%
11030 ann @check\HyField@TheAnnotCount\space
11031 \dvipdfm@setdim
11032 <<\PDFForm@Check>>%
11033 }%
11034 \unhbox\pdfm@box
11035 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
11036 }%
11037 \endgroup
11038 }

11039 \@pdfm@mark{obj @OBJpdfdocencoding%
11040 <<%
11041 /Type/Encoding%
11042 /Differences[%
11043 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
11044 39/quotesingle %
11045 96/grave %
11046 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11047 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11048 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
11049 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
11050 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11051 164/currency %
11052 166/brokenbar %
11053 168/dieresis/copyright/ordfeminine %
11054 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11055 /twosuperior/threesuperior/acute/mu %
11056 183/periodcentered/cedilla/onesuperior/ordmasculine %
11057 188/onequarter/onehalf/threequarters %
11058 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11059 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
11060 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
11061 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
11062 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
11063 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
11064 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
11065 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
11066 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
11067 /thorn/ydieresis%
11068 ]%
11069 >>%
11070 }
11071 \@pdfm@mark{obj @OBJZaDb%
11072 <<%
11073 /Type/Font%
11074 /Subtype/Type1%
11075 /Name/ZaDb%
11076 /BaseFont/ZapfDingbats%
11077 >>%
11078 }
11079 \@pdfm@mark{obj @OBJHelv%

```

```

11080 <<%
11081 /Type/Font%
11082 /Subtype/Type1%
11083 /Name/Helv%
11084 /BaseFont/Helvetica%
11085 /Encoding @OBJpdfdocencoding%
11086 >>%
11087 }
11088 </dvipdfm>

```

47.6 Common forms part

```

11089 <*pdfform>

```

\Hy@escapestring

```

11090 \begingroup\expandafter\expandafter\expandafter\endgroup
11091 \expandafter\ifx\csname pdfescapestring\endcsname\relax
11092 \let\Hy@escapestring\@firstofone
11093 \def\Hy@escapeform#1{%
11094   \ifHy@escapeform
11095     \def\Hy@escapestring##1{%
11096       \noexpand\Hy@escapestring{\noexpand##1}%
11097     }%
11098     \edef\Hy@temp{#1}%
11099     \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{}\@nil
11100     \def\Hy@escapestring##1{%
11101       \@ifundefined{Hy@esc@\string##1}{%
11102         ##1%
11103         \ThisShouldNotHappen
11104       }{%
11105         \csname Hy@esc@\string##1\endcsname
11106       }%
11107     }%
11108   \else
11109     \let\Hy@escapestring\@firstofone
11110   \fi
11111 }%
11112 \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
11113   \ifx\#3\%
11114   \else
11115     \expandafter\Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
11116     \Hy@ReturnAfterFi{%
11117       \Hy@@escapeform#3\@nil
11118     }%
11119   \fi
11120 }%
11121 \else
11122 \def\Hy@escapeform#1{%
11123   \ifHy@escapeform
11124     \let\Hy@escapestring\pdfescapestring
11125   \else
11126     \let\Hy@escapestring\@firstofone
11127   \fi
11128 }%
11129 \Hy@escapeform{}%
11130 \fi

```

\PDFForm@Name

```
11131 \def\PDFForm@Name{%
11132   \begingroup
11133   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
11134     \ifHy@unicode
11135       \Hy@unicodedefalse
11136     \fi
11137   \fi
11138   \pdfstringdef\Hy@gtemp\Fld@name
11139 \endgroup
11140 \let\Fld@name\Hy@gtemp
11141 }
```

\PDFForm@Check

```
11142 \def\PDFForm@Check{%
11143   /Subtype/Widget%
11144   \Fld@annotflags
11145   /T(\Fld@name)%
11146   /FT/Btn%
11147   \Fld@flags
11148   /Q \Fld@align
11149   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
11150   /MK<<%
11151     \ifnum\Fld@rotation=\z@
11152     \else
11153       /R \Fld@rotation
11154     \fi
11155     \ifx\Fld@bordercolor\relax
11156     \else
11157       /BC[\Fld@bordercolor]%
11158     \fi
11159     \ifx\Fld@bcolor\relax
11160     \else
11161       /BG[\Fld@bcolor]%
11162     \fi
11163     /CA(\Hy@escapestring{\Fld@cbsymbol})%
11164   >>%
11165   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11166     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11167   /H/P%
11168   \ifFld@checked /V/Yes\else /V/Off\fi
11169 }
```

\PDFForm@Push

```
11170 \ifHy@pdfa
11171 \else
11172   \def\PDFForm@Push{%
11173     /Subtype/Widget%
11174     \Fld@annotflags
11175     /T(\Fld@name)%
11176     /FT/Btn%
11177     \Fld@flags
11178     /H/P%
11179     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11180     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11181       \ifx\Fld@bordercolor\relax\else 1\fi
11182       \space
```

```

11183 \else
11184 /MK<<%
11185 \ifnum\Fld@rotation=\z@
11186 \else
11187 /R \Fld@rotation
11188 \fi
11189 \ifx\Fld@bordercolor\relax
11190 \else
11191 /BC[\Fld@bordercolor]%
11192 \fi
11193 >>%
11194 \fi
11195 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick})>>%
11196 }%
11197 \fi

```

\Fld@additionalactions

```

11198 \def\Fld@@additionalactions{%
K input (keystroke) format
11199 \ifx\Fld@keystroke@code\@empty
11200 \else
11201 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
11202 \fi
F display format
11203 \ifx\Fld@format@code\@empty
11204 \else
11205 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
11206 \fi
V validation
11207 \ifx\Fld@validate@code\@empty
11208 \else
11209 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
11210 \fi
C calculation
11211 \ifx\Fld@calculate@code\@empty
11212 \else
11213 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
11214 \fi
Fo receiving the input focus
11215 \ifx\Fld@onfocus@code\@empty
11216 \else
11217 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
11218 \fi
Bl loosing the input focus (blurred)
11219 \ifx\Fld@onblur@code\@empty
11220 \else
11221 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
11222 \fi
D pressing the mouse button (down)
11223 \ifx\Fld@onmousedown@code\@empty
11224 \else
11225 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
11226 \fi

```

U releasing the mouse button (up)

```
11227 \ifx\Fld@onmouseup@code\@empty
11228 \else
11229 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
11230 \fi
```

E cursor enters the annotation's active area.

```
11231 \ifx\Fld@onenter@code\@empty
11232 \else
11233 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
11234 \fi
```

X cursor exits the annotation's active area.

```
11235 \ifx\Fld@onexit@code\@empty
11236 \else
11237 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
11238 \fi
```

```
11239 }
```

```
11240 \def\Fld@additionalactions{%
11241 \if-\Fld@@additionalactions-%
11242 \else
11243 \ifHy@pdfa
11244 \else
11245 /AA<<\Fld@@additionalactions>>%
11246 \fi
11247 \fi
11248 }
```

\PDFForm@List

```
11249 \def\PDFForm@List{%
11250 /Subtype/Widget%
11251 \Fld@annotflags
11252 /T(\Fld@name)%
11253 /FT/Ch%
11254 \Fld@flags
11255 /Q \Fld@align
11256 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11257 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11258 \ifx\Fld@bordercolor\relax\else 1\fi
11259 \ifx\Fld@bcolor\relax \else 1\fi
11260 \space
11261 \else
11262 /MK<<%
11263 \ifnum\Fld@rotation=\z@
11264 \else
11265 /R \Fld@rotation
11266 \fi
11267 \ifx\Fld@bordercolor\relax
11268 \else
11269 /BC[\Fld@bordercolor]%
11270 \fi
11271 \ifx\Fld@bcolor\relax
11272 \else
11273 /BG[\Fld@bcolor]%
11274 \fi
11275 >>%
11276 \fi
11277 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
```

```

11278     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11279     \Fld@choices
11280     \Fld@additionalactions
11281 }

```

\PDFForm@Radio

```

11282 \def\PDFForm@Radio{%
11283   /Subtype/Widget%
11284   \Fld@annotflags
11285   /T(\Fld@name)%
11286   /FT/Btn%
11287   \Fld@flags
11288   /H/P%
11289   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11290   /MK<<%
11291     \ifnum\Fld@rotation=\z@
11292     \else
11293       /R \Fld@rotation
11294     \fi
11295     \ifx\Fld@bordercolor\relax
11296     \else
11297       /BC[\Fld@bordercolor]%
11298     \fi
11299     \ifx\Fld@bcolor\relax
11300     \else
11301       /BG[\Fld@bcolor]%
11302     \fi
11303     /CA(H)%
11304   >>%
11305   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11306     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11307   \ifx\@currValue\Fld@default
11308     /V/\Fld@default
11309   \else
11310     /V/Off%
11311   \fi
11312   \Fld@additionalactions
11313 }

```

\PDFForm@Text

```

11314 \def\PDFForm@Text{%
11315   /Subtype/Widget%
11316   \Fld@annotflags
11317   /T(\Fld@name)%
11318   /FT/Tx%
11319   \Fld@flags
11320   /Q \Fld@align
11321   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
11322   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11323     \ifx\Fld@bordercolor\relax\else 1\fi
11324     \ifx\Fld@bcolor\relax \else 1\fi
11325     \space
11326   \else
11327     /MK<<%
11328     \ifnum\Fld@rotation=\z@
11329     \else
11330       /R \Fld@rotation

```

```

11331     \fi
11332     \ifx\Fld@bordercolor\relax
11333     \else
11334         /BC[\Fld@bordercolor]%
11335     \fi
11336     \ifx\Fld@bcolor\relax
11337     \else
11338         /BG[\Fld@bcolor]%
11339     \fi
11340     >>%
11341     \fi
11342     /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11343         \ifx\Fld@color\empty\else\space\Fld@color\fi)%
11344     /DV(\Hy@escapestring{\Fld@default})%
11345     /V(\Hy@escapestring{\Fld@value})%
11346     \Fld@additionalactions
11347     \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
11348 }

```

\PDFForm@Submit

```

11349 \def\PDFForm@Submit{%
11350     /Subtype/Widget%
11351     \Fld@annotflags
11352     /T(\Fld@name)%
11353     /FT/Btn%
11354     \Fld@flags
11355     /H/P%
11356     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11357     \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11358         \ifx\Fld@bordercolor\relax\else 1\fi
11359         \space
11360     \else
11361         /MK<<%
11362         \ifnum\Fld@rotation=\z@
11363         \else
11364             /R \Fld@rotation
11365         \fi
11366         \ifx\Fld@bordercolor\relax
11367         \else
11368             /BC[\Fld@bordercolor]%
11369         \fi
11370         >>%
11371     \fi
11372     /A<<%
11373         /S/SubmitForm%
11374         /F<<%
11375             /FS/URL%
11376             /F(\Hy@escapestring{\Form@action})%
11377         >>%
11378         \Fld@submitflags
11379     >>%
11380 }

```

\PDFForm@Reset

```

11381 \ifHy@pdfa
11382 \else
11383     \def\PDFForm@Reset{%

```



```

11384 /Subtype/Widget%
11385 \Fld@annotflags
11386 /T(\Fld@name)%
11387 /FT/Btn%
11388 \Fld@flags
11389 /H/P%
11390 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
11391 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11392 \ifx\Fld@bordercolor\relax\else 1\fi
11393 \space
11394 \else
11395 /MK<<%
11396 \ifnum\Fld@rotation=\z@
11397 \else
11398 /R \Fld@rotation
11399 \fi
11400 \ifx\Fld@bordercolor\relax
11401 \else
11402 /BC[\Fld@bordercolor]%
11403 \fi
11404 % /CA (Clear)
11405 % /AC (Done)
11406 >>%
11407 \fi
11408 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11409 /A<</S/ResetForm>>%
11410 }%
11411 \fi

11412 </pdfform>
11413 <*package>

```

48 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in L^AT_EX 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`

```

11414 \def\phantomsection{%
11415 \Hy@GlobalStepCount\Hy@linkcounter
11416 \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11417 \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
11418 }
11419 </package>

```

48.1 Bookmarks

```
11420 <*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.

```

11421 \def\Hy@writebookmark#1#2#3#4#5{%
11422   % section number, text, label, level, file
11423   \ifx\WriteBookmarks\relax%
11424   \else
11425     \ifnum#4>\Hy@bookmarksdepth\relax
11426     \else
11427       \@writetorep{#1}{#2}{#3}{#4}{#5}%
11428     \fi
11429   \fi
11430 }
11431 \def\Hy@currentbookmarklevel{0}
11432 \def\Hy@numberline#1{#1 }
11433 \def\@@writetorep#1#2#3#4#5{%
11434   \begingroup
11435     \edef\Hy@tempa{#5}%
11436     \ifx\Hy@tempa\Hy@bookmarkstype
11437       \edef\Hy@level{#4}%
11438       \ifx\Hy@levelcheck Y%
11439         \@tempcnta\Hy@level\relax
11440         \advance\@tempcnta by -1 %
11441         \ifnum\Hy@currentbookmarklevel<\@tempcnta
11442           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
11443           \advance\@tempcnta by 1 %
11444           \Hy@Warning{%
11445             Difference (\the\@tempcnta) between bookmark levels is %
11446             greater \MessageBreak than one, level fixed%
11447           }%
11448           \@tempcnta\Hy@currentbookmarklevel
11449           \advance\@tempcnta by 1 %
11450           \edef\Hy@level{\the\@tempcnta}%
11451         \fi
11452       \else
11453         \global\let\Hy@levelcheck Y%
11454       \fi
11455       \global\let\Hy@currentbookmarklevel\Hy@level
11456       \@tempcnta\Hy@level\relax
11457       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
11458       \advance\@tempcnta by -1 %
11459       \edef\Hy@tempa{#3}%
11460       \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
11461       \ifx\Hy@tempa\Hy@tempb
11462         \Hy@Warning{%
11463           The anchor of a bookmark and its parent's must not%
11464           \MessageBreak be the same. Added a new anchor%
11465         }%
11466       \phantomsection
11467     \fi
11468     \ifHy@bookmarksnumbered
11469       \let\numberline\Hy@numberline
11470       \let\partnumberline\Hy@numberline
11471       \let\chapternumberline\Hy@numberline
11472     \else
11473       \let\numberline\@gobble
11474       \let\partnumberline\@gobble

```

```

11475      \let\chapternumberline@gobble
11476      \fi
11477      \pdfstringdef\Hy@tempa{#2}%
11478      \if@filesw
11479          \protected@write\@outlinefile{%
11480              \protect\BOOKMARK
11481                  [\Hy@level] [\@bookmarkopenstatus{\Hy@level}] {#3}%
11482                  {\Hy@tempa}{\Hy@tempb}%
11483          }%
11484      \fi
11485      \fi
11486      \endgroup
11487 }

```

In the call of `\BOOKMARK` the braces around #4 are omitted, because it is not likely, that the level number contains] .

```

11488 \newcommand{\currentpdfbookmark}{%
11489     \pdfbookmark[\Hy@currentbookmarklevel]%
11490 }
11491 \newcommand{\subpdfbookmark}{%
11492     \@tempcnta\Hy@currentbookmarklevel
11493     \Hy@StepCount\@tempcnta
11494     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
11495 }
11496 \newcommand{\belowpdfbookmark}[2]{%
11497     \@tempcnta\Hy@currentbookmarklevel
11498     \Hy@StepCount\@tempcnta
11499     \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
11500     \advance\@tempcnta by -1 %
11501     \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
11502 }

```

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.

```

11503 \renewcommand\pdfbookmark[3][0]{%
11504     \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
11505     \hyper@anchorstart{#3.#1}\hyper@anchorend
11506 }
11507 \def\BOOKMARK{\@ifnextchar[\@BOOKMARK]{\@@BOOKMARK[1][-]}}
11508 \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` macros.

The `VTEX` section was written originally by `VTEX`, but then amended by Denis Girou (`denis.girou@idris.fr`), then by by Taco Hoekwater (`taco.hoekwater@wkap.nl`). The problem is that `VTEX`, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```

11509 <*vtx>
11510 \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.

```

11511 \begingroup
11512     \catcode'\'=12 %
11513     \ifnum\Hy@VTeXversion<650 %
11514         \catcode\'\"=12 %

```

```

11515 \gdef\hv@pdf@char#1#2#3{%
11516   \char
11517   \ifcase'#1#2#3 %
11518     "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
11519     \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
11520     \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
11521     \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
11522     \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
11523     \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
11524     \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
11525     \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
11526     \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
11527     \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
11528     \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
11529     \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
11530     \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
11531     \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
11532     \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
11533     \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
11534     \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
11535     \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
11536     \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
11537     \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
11538     \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
11539     \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
11540     \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
11541     \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
11542     \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
11543     \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
11544     \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
11545     \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
11546     \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
11547     \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
11548     \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
11549     \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
11550   \fi
11551 }%
11552 \else
11553   \gdef\hv@pdf@char{\char'}%
11554 \fi
11555 \endgroup

```

\@@BOOKMARK

```

11556 \def\@@BOOKMARK[#1][#2]#3#4#5{%
11557   \expandafter\edef\csname @count@#3\endcsname{\the\@serial@counter}%
11558   \edef\@mycount{\the\@serial@counter}%
11559   \Hy@StepCount\@serial@counter
11560   \edef\@parcount{%
11561     \expandafter\ifx\csname @count@#5\endcsname\relax
11562     0%
11563     \else
11564       \csname @count@#5\endcsname
11565     \fi
11566   }%
11567   \immediate\special{%
11568     !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
11569     s=\ifx#2-c\else o\fi,t=#4%

```

```

11570 }%
11571 }%

```

\ReadBookmarks

```

11572 \def\ReadBookmarks{%
11573   \begingroup
11574   \def\O{\hv@pdf@char 0}%
11575   \def\1{\hv@pdf@char 1}%
11576   \def\2{\hv@pdf@char 2}%
11577   \def\3{\hv@pdf@char 3}%
11578   \def\({}%
11579   \def\)}%
11580   \def\do##1{%
11581     \ifnum\the\catcode'##1=\active
11582       \makeother##1%
11583     \fi
11584   }%
11585   \dospecials
11586   \InputIfFileExists{\jobname.out}{\}{}%
11587 \endgroup
11588 \ifx\WriteBookmarks\relax
11589 \else
11590   \if@filesw
11591     \newwrite\@outlinefile
11592     \immediate\openout\@outlinefile=\jobname.out\relax
11593     \ifHy@typexml
11594       \immediate\write\@outlinefile{<relaxxml>\relax}%
11595     \fi
11596   \fi
11597 \fi
11598 }

11599 </vtx>

11600 <*\vtx>
11601 \def\ReadBookmarks{%
11602   \begingroup
11603   \escapechar='\'%
11604   \let\escapechar\@gobble %
11605   \def\@@BOOKMARK[##1][##2]##3##4##5{\calc@bm@number{##5}}%
11606   \InputIfFileExists{\jobname.out}{\}{}%
11607   \ifx\WriteBookmarks\relax
11608     \global\let\WriteBookmarks\relax
11609   \fi
11610   \def\@@BOOKMARK[##1][##2]##3##4##5{%
11611     \def\Hy@temp{##4}%
11612 <*pdftex>
11613     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11614     \Hy@OutlineName{}\Hy@pstringName{%
11615       ##2\check@bm@number{##3}%
11616     }{%
11617       \expandafter\strip@prefix\meaning\Hy@temp
11618     }%
11619 </pdftex>
11620 <*pdfmark>
11621     \pdfmark{%
11622       pdfmark=/OUT,%
11623       Count={##2\check@bm@number{##3}},%

```

```

11624         Dest={##3},%
11625         Title=\expandafter\strip@prefix\meaning\Hy@temp
11626     }%
11627 </pdfmark>
11628 <*/dvipdfm>
11629     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
11630     \@pdfm@mark{%
11631         outline \ifHy@DvipdfmxOutlineOpen
11632             [%
11633             \ifnum##21>\z@
11634             \else
11635             -%
11636             \fi
11637             ] %
11638             \fi
11639             ##1<<%
11640             /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
11641             /A<<%
11642             /S/GoTo%
11643             /D(\Hy@pstringName)%
11644             >>%
11645             >>%
11646         }%
11647 </dvipdfm>
11648     }%
11649     {%
11650         \def\WriteBookmarks{0}%
11651         \InputIfFileExists{\jobname.out}{\relax}%
11652     }%
11653     {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}%
11654     \ifx\WriteBookmarks\relax
11655     \else
11656         \if@filesw
11657             \newwrite\@outlinefile
11658             \immediate\openout\@outlinefile=\jobname.out\relax
11659             \ifHy@typexml
11660                 \immediate\write\@outlinefile{<relaxxml>\relax}%
11661             \fi
11662         \fi
11663     \fi
11664     \endgroup
11665 }
11666 <*/pdftex>
11667 \def\Hy@OutlineName#1#2#3#4{%
11668     \pdfoutline goto name{#2}count#3{#4}%
11669 }
11670 </pdftex>
11671 \def\check@bm@number#1{%
11672     \expandafter\ifx\csname B_#1\endcsname\relax
11673         0%
11674     \else
11675         \csname B_#1\endcsname
11676     \fi
11677 }
11678 \def\calc@bm@number#1{%
11679     \@tempcnta=\check@bm@number{#1}\relax
11680     \advance\@tempcnta by 1 %

```

```

11681 \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
11682 }
11683 \</!vtex>

11684 \ifHy@implicit
11685 \else
11686 \expandafter\endinput
11687 \fi

11688 \</outlines>
11689 \<*outlines | hypertex>

11690 \let\H@old@ssect\@ssect
11691 \def\@ssect#1#2#3#4#5{%
11692 \H@old@ssect{#1}{#2}{#3}{#4}{#5}%
11693 \phantomsection
11694 }
11695 \let\H@old@schapter\@schapter
11696 \def\@schapter#1{%
11697 \H@old@schapter{#1}%
11698 \beginngroup
11699 \let\@mkboth\@gobbletwo
11700 \Hy@GlobalStepCount\Hy@linkcounter
11701 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11702 \Hy@raisedlink{%
11703 \hyper@anchorstart{\@currentHref}\hyper@anchorend
11704 }%
11705 \endgroup
11706 }

```

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:

```

11707 \@ifundefined{@chapter}{}{%
11708 \let\Hy@org@chapter\@chapter
11709 \def\@chapter{%
11710 \def\Hy@next{%
11711 \Hy@GlobalStepCount\Hy@linkcounter
11712 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11713 \Hy@raisedlink{%
11714 \hyper@anchorstart{\@currentHref}\hyper@anchorend
11715 }%
11716 }%
11717 \ifnum\c@secnumdepth>\m@ne
11718 \@ifundefined{if@mainmatter}%
11719 \iftrue{\csname if@mainmatter\endcsname}%
11720 \let\Hy@next\relax
11721 \fi
11722 \fi
11723 \Hy@next
11724 \Hy@org@chapter
11725 }%
11726 }

11727 \let\H@old@part\@part
11728 \beginngroup\expandafter\expandafter\expandafter\endgroup
11729 \expandafter\ifx\csname chapter\endcsname\relax
11730 \let\Hy@secnum@part\z@
11731 \else
11732 \let\Hy@secnum@part\m@ne

```

```

11733 \fi
11734 \def\@part{%
11735   \ifnum\Hy@secnum@part>\c@secnumdepth
11736     \phantomsection
11737   \fi
11738   \H@old@part
11739 }

11740 \let\H@old@spart\@spart
11741 \def\@spart#1{%
11742   \H@old@spart{#1}%
11743   \Hy@GlobalStepCount\Hy@linkcounter
11744   \xdef\@currentHref{part*.\the\Hy@linkcounter}%
11745   \Hy@raisedlink{%
11746     \hyper@anchorstart{\@currentHref}\hyper@anchorend
11747   }%
11748 }

11749 \let\H@old@sect\@sect
11750 \def\@sect#1#2#3#4#5#6[#7]#8{%
11751   \ifnum #2>\c@secnumdepth
11752     \Hy@GlobalStepCount\Hy@linkcounter
11753     \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11754   \fi
11755   \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[#7]{#8}%
11756   \ifnum #2>\c@secnumdepth
11757     \Hy@raisedlink{%
11758       \hyper@anchorstart{\@currentHref}\hyper@anchorend
11759     }%
11760   \fi
11761 }

11762 </outlines | hypertex>
11763 <*outlines>

11764 \expandafter\def\csname Parent-4\endcsname{}
11765 \expandafter\def\csname Parent-3\endcsname{}
11766 \expandafter\def\csname Parent-2\endcsname{}
11767 \expandafter\def\csname Parent-1\endcsname{}
11768 \expandafter\def\csname Parent0\endcsname{}
11769 \expandafter\def\csname Parent1\endcsname{}
11770 \expandafter\def\csname Parent2\endcsname{}
11771 \expandafter\def\csname Parent3\endcsname{}
11772 \expandafter\def\csname Parent4\endcsname{}

11773 </outlines>

```

49 Compatibility with koma-script classes

```
11774 <*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.

```

11775 \def\Hy@tempa{%
11776   \def\@addchap[##1]##2{%
11777     \typeout{##2}%
11778     \if@twoside
11779       \mkboth{##1}{}%
11780     \else

```



```

11781 \mkboth{}{##1}%
11782 \fi
11783 \addtocontents{lof}{\protect\addvspace{10\p@}}%
11784 \addtocontents{lot}{\protect\addvspace{10\p@}}%
11785 \Hy@GlobalStepCount\Hy@linkcounter
11786 \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
11787 \Hy@raisedlink{%
11788 \hyper@anchorstart{\@currentHref}\hyper@anchorend
11789 }%
11790 \if@twocolumn
11791 \topnewpage[\@makeschapterhead{##2}]%
11792 \else
11793 \@makeschapterhead{##2}%
11794 \@afterheading
11795 \fi
11796 \addcontentsline{toc}{chapter}{##1}%
11797 }%
11798 }
11799 \@ifclassloaded{scrbook}{%
11800 \@ifclasslater{scrbook}{2001/01/01}{%
11801 \let\Hy@tempa\@empty
11802 }{}%
11803 }{%
11804 \@ifclassloaded{scrreprt}{%
11805 \@ifclasslater{scrreprt}{2001/01/01}{%
11806 \let\Hy@tempa\@empty
11807 }{}%
11808 }{%
11809 \let\Hy@tempa\@empty
11810 }%
11811 }%
11812 \Hy@tempa
11813 </outlines | hypertext>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek oberdiek@ruf.uni-freiburg.de

50.1 PD1 encoding

```

11814 <*pdlenc>
11815 \DeclareFontEncoding{PD1}{}{}

Accents
11816 \DeclareTextAccent{'}{PD1}{\textasciigrave}
11817 \DeclareTextAccent{'\'}{PD1}{\textacute}
11818 \DeclareTextAccent{\`}{PD1}{\textasciicircum}
11819 \DeclareTextAccent{\~}{PD1}{\texttilde}
11820 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
11821 \DeclareTextAccent{\r}{PD1}{\textring}
11822 \DeclareTextAccent{\v}{PD1}{\textasciicaroon}
11823 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
11824 \DeclareTextAccent{\c}{PD1}{\textcedilla}
11825 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
11826 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
11827 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
11828 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}

```

```

11829 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
11830 \DeclareTextCompositeCommand{\^}{PD1}{\@empty}{\textasciicircum}
11831 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
11832 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
11833 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
11834 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
11835 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
11836 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
11837 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}
11838 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
11839 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
11840 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textasciigrave}
11841 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textacute}
11842 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
11843 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
11844 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
11845 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
11846 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
11847 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
11848 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
11849 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
11850 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
11851 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
11852 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
11853 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
11854 \DeclareTextCommand{\newtie}{PD1}[1]{\TextSymbolUnavailable{\newtie{#1}}#1}

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

11855 % U+0009 (CHARACTER TABULATION)
11856 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
11857 % U+000A (LINE FEED)
11858 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
11859 % U+000D (CARRIAGE RETURN)
11860 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

11861 % U+02D8 BREVE; breve
11862 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
11863 % U+02C7 CARON; caron
11864 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
11865 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
11866 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
11867 % U+02D9 DOT ABOVE; dotaccent
11868 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
11869 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
11870 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
11871 % U+02DB OGONEK; ogonek
11872 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
11873 % U+02DA RING ABOVE; ring
11874 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
11875 % U+02DC SMALL TILDE; ilde, *tilde
11876 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

11877 % U+0022 QUOTATION MARK; quotedbl

11878 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022

11879 % U+0023 NUMBER SIGN; numbersign

11880 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023

11881% U+0024 DOLLAR SIGN; dollar
 11882\DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
 11883% U+0025 PERCENT SIGN; percent
 11884\DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
 11885% U+0026 AMPERSAND; ampersand
 11886\DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
 \047: U+0027 APOSTROPHE; quotesingle

 11887% U+0028 LEFT PARENTHESIS; parenleft
 11888\DeclareTextCommand{\textparenleft}{PD1}{\string\{}% \050 U+0028
 11889% U+0029 RIGHT PARENTHESIS; parenright
 11890\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
 11891% U+002E FULL STOP; period
 11892\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
 11893% U+003C LESS-THAN SIGN; less
 11894\DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
 \075: U+003D EQUALS SIGN; equal
 11895% U+003E GREATER-THAN SIGN; greater
 11896\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
 11897% U+005C REVERSE SOLIDUS; backslash
 11898\DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 11899% U+005E CIRCUMFLEX ACCENT; asciicircum
 11900\DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 11901% U+005F LOW LINE; underscore
 11902\DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 11903\DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 11904% U+0060 GRAVE ACCENT; grave
 11905\DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
 \141: U+0061 LATIN SMALL LETTER A; a
 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 11906% U+0069 LATIN SMALL LETTER I; i
 11907\DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
 \152: U+006A LATIN SMALL LETTER J; j
 ...

\172: U+007A LATIN SMALL LETTER Z; z
 11908 % U+007B LEFT CURLY BRACKET; braceleft
 11909 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 11910 % U+007C VERTICAL LINE; *bar, verticalbar
 11911 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 11912 % U+007D RIGHT CURLY BRACKET; braceright
 11913 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
 11914 % U+007E TILDE; asciitilde
 11915 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
 Slot \177 (0x7F) is undefined in PDFDocEncoding.
 11916 % U+2022 BULLET; bullet
 11917 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
 11918 % U+2020 DAGGER; dagger
 11919 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
 11920 % U+2021 DOUBLE DAGGER; daggerdbl
 11921 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
 11922 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 11923 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
 11924 % U+2014 EM DASH; emdash
 11925 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
 11926 % U+2013 EN DASH; endash
 11927 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
 11928 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 11929 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
 11930 % U+2044 FRACTION SLASH; fraction
 11931 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
 11932 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 11933 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
 11934 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 11935 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
 11936 % U+2212 MINUS SIGN; minus
 11937 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
 11938 % U+2030 PER MILLE SIGN; perthousand
 11939 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
 11940 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 11941 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
 11942 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 11943 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
 11944 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 11945 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
 11946 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 11947 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
 11948 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 11949 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
 11950 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 11951 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
 11952 % U+2122 TRADE MARK SIGN; trademark
 11953 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
 11954 % U+FB01 LATIN SMALL LIGATURE FI; fi
 11955 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
 11956 % U+FB02 LATIN SMALL LIGATURE FL; fl
 11957 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
 11958 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 11959 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
 11960 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 11961 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
 11962 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron

11963 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
 11964 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 11965 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
 11966 \DeclareTextCommand{\IJ}{PD1}{\230}
 11967 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 11968 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 11969 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 11970 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 11971 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 11972 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 11973 % U+0153 LATIN SMALL LIGATURE OE; oe
 11974 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 11975 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 11976 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 11977 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 11978 \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.

11979 % U+20AC EURO SIGN; *Euro, euro
 11980 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 11981 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 11982 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 11983 % U+00A2 CENT SIGN; cent
 11984 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 11985 % U+00A3 POUND SIGN; sterling
 11986 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 11987 % U+00A4 CURRENCY SIGN; currency
 11988 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 11989 % U+00A5 YEN SIGN; yen
 11990 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 11991 % U+00A6 BROKEN BAR; brokenbar
 11992 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 11993 % U+00A7 SECTION SIGN; section
 11994 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 11995 % U+00A8 DIAERESIS; dieresis
 11996 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 11997 % U+00A9 COPYRIGHT SIGN; copyright
 11998 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 11999 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 12000 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 12001 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 12002 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 12003 % U+00AC NOT SIGN; logicalnot
 12004 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 12005 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

12006 % U+00AE REGISTERED SIGN; registered
 12007 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 12008 % U+00AF MACRON; *macron, overscore
 12009 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 12010 % U+00B0 DEGREE SIGN; degree
 12011 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 12012 % U+00B1 PLUS-MINUS SIGN; plusminus
 12013 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 12014 % U+00B2 SUPERScript TWO; twosuperior
 12015 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 12016 % U+00B3 SUPERScript THREE; threesuperior

12017 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
12018 % U+00B4 ACUTE ACCENT; acute
12019 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
12020 % U+00B5 MICRO SIGN; mu, mu1
12021 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
12022 % U+00B6 PILCROW SIGN; paragraph
12023 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
12024 % U+00B7 MIDDLE DOT; middot, *periodcentered
12025 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
12026 % U+00B8 CEDILLA; cedilla
12027 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
12028 % U+00B9 SUPERScript ONE; onesuperior
12029 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
12030 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
12031 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
12032 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
12033 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
12034 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
12035 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
12036 % U+00BD VULGAR FRACTION ONE HALF; onehalf
12037 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
12038 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
12039 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
12040 % U+00BF INVERTED QUESTION MARK; questiondown
12041 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
12042 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
12043 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
12044 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
12045 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
12046 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12047 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
12048 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
12049 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
12050 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
12051 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
12052 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12053 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
12054 % U+00C6 LATIN CAPITAL LETTER AE; AE
12055 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
12056 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12057 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
12058 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12059 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
12060 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12061 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
12062 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12063 \DeclareTextCompositeCommand{\^}{PD1}{E}{\312}% U+00CA
12064 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12065 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
12066 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12067 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
12068 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12069 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
12070 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12071 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
12072 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12073 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF

12074 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
 12075 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
 12076 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
 12077 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
 12078 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
 12079 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
 12080 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
 12081 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
 12082 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
 12083 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
 12084 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
 12085 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
 12086 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
 12087 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
 12088 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
 12089 % U+00D7 MULTIPLICATION SIGN; multiply
 12090 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
 12091 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
 12092 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
 12093 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
 12094 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
 12095 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
 12096 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
 12097 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
 12098 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
 12099 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
 12100 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
 12101 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
 12102 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
 12103 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
 12104 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
 12105 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
 12106 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
 12107 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
 12108 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
 12109 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
 12110 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
 12111 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
 12112 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
 12113 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
 12114 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
 12115 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
 12116 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
 12117 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
 12118 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
 12119 % U+00E6 LATIN SMALL LETTER AE; ae
 12120 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
 12121 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
 12122 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
 12123 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
 12124 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
 12125 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
 12126 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
 12127 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
 12128 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
 12129 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
 12130 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB

```

12131 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12132 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
12133 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
12134 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12135 \DeclareTextCompositeCommand{\`}{PD1}{i}{\355}% U+00ED
12136 \DeclareTextCompositeCommand{\`}{PD1}{i}{\355}% U+00ED
12137 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12138 \DeclareTextCompositeCommand{\`}{PD1}{i}{\356}% U+00EE
12139 \DeclareTextCompositeCommand{\`}{PD1}{i}{\356}% U+00EE
12140 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12141 \DeclareTextCompositeCommand{\`}{PD1}{i}{\357}% U+00EF
12142 \DeclareTextCompositeCommand{\`}{PD1}{i}{\357}% U+00EF
12143 % U+00F0 LATIN SMALL LETTER ETH; eth
12144 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
12145 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12146 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
12147 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12148 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
12149 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12150 \DeclareTextCompositeCommand{\`}{PD1}{o}{\363}% U+00F3
12151 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12152 \DeclareTextCompositeCommand{\`}{PD1}{o}{\364}% U+00F4
12153 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
12154 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
12155 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
12156 \DeclareTextCompositeCommand{\`}{PD1}{o}{\366}% U+00F6
12157 % U+00F7 DIVISION SIGN; divide
12158 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
12159 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
12160 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
12161 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
12162 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
12163 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
12164 \DeclareTextCompositeCommand{\`}{PD1}{u}{\372}% U+00FA
12165 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
12166 \DeclareTextCompositeCommand{\`}{PD1}{u}{\373}% U+00FB
12167 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
12168 \DeclareTextCompositeCommand{\`}{PD1}{u}{\374}% U+00FC
12169 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
12170 \DeclareTextCompositeCommand{\`}{PD1}{y}{\375}% U+00FD
12171 % U+00FE LATIN SMALL LETTER THORN; thorn
12172 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
12173 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
12174 \DeclareTextCompositeCommand{\`}{PD1}{y}{\377}% U+00FF
12175 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

```

Glyphs that consist of several characters.

```

12176 \DeclareTextCommand{\SS}{PD1}{SS}
12177 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

```

Aliases (german.sty)

```

12178 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
12179 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
12180 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
12181 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
12182 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
12183 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
12184 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
12185 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

```


Aliases (math names)

```
12186 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
12187 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
12188 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
12189 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
12190 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
12191 \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;

```
12192 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
12193 \DeclareTextCompositeCommand{\c}{PD1}{c}{c}% cacute
12194 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
12195 \DeclareTextCompositeCommand{\n}{PD1}{n}{n}% nacute
12196 \DeclareTextCompositeCommand{\s}{PD1}{s}{s}% sacute
12197 \DeclareTextCompositeCommand{\z}{PD1}{z}{z}% zacute
12198 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
12199 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
12200 \DeclareTextCompositeCommand{\c}{PD1}{C}{C}% Cacute
12201 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
12202 \DeclareTextCompositeCommand{\n}{PD1}{N}{N}% Nacute
12203 \DeclareTextCompositeCommand{\s}{PD1}{S}{S}% Sacute
12204 \DeclareTextCompositeCommand{\z}{PD1}{Z}{Z}% Zacute
12205 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
```

```
12206 </pdlenc>
```

50.2 PU encoding

```
12207 <*puenc>
12208 \DeclareFontEncoding{PU}{-}{-}
```

50.2.1 NFSS2 accents

```
12209 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
12210 \DeclareTextCommand{\`}{PU}[1]{#1\83\000}% U+0300
12211 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
12212 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
12213 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
12214 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
12215 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
12216 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
12217 % U+0304 COMBINING MACRON; macroncmb
12218 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
12219 % U+0306 COMBINING BREVE; brevecmb
12220 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
12221 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
12222 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
12223 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
12224 % U+0308 COMBINING DIAERESIS; dieresiscmb
12225 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
12226 % U+030A COMBINING RING ABOVE; ringcmb
12227 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
12228 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
12229 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
12230 % U+030C COMBINING CARON; caroncmb
12231 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
12232 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
12233 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
12234 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
```

```

12235 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
12236 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
12237 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
12238 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
12239 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
12240 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
12241 % U+0327 COMBINING CEDILLA; cedillacmb
12242 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
12243 % U+0328 COMBINING OGONEK; ogonekcmb
12244 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
12245 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
12246 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
12247 % U+20DD COMBINING ENCLOSING CIRCLE
12248 \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.

```

12249 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}
12250 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
12251 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciicircum}
12252 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
12253 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
12254 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
12255 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
12256 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
12257 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
12258 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
12259 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
12260 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
12261 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
12262 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
12263 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
12264 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
12265 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
12266 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
12267 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

12268 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}
12269 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
12270 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciicircum}
12271 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
12272 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
12273 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
12274 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
12275 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
12276 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
12277 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
12278 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
12279 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
12280 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
12281 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
12282 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
12283 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
12284 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
12285 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
12286 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

12287 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}

```

```

12288 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
12289 \DeclareTextCommand{\capitalgrave}{PU}[1]{\'{#1}}
12290 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
12291 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
12292 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
12293 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}
12294 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
12295 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
12296 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
12297 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
12298 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
12299 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
12300 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
12301 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

12302 % U+0009 (CHARACTER TABULATION)
12303 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
12304 % U+000A (LINE FEED)
12305 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
12306 % U+000D (CARRIAGE RETURN)
12307 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

12308 % U+0022 QUOTATION MARK; quotedbl
12309 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
12310 % U+0023 NUMBER SIGN; numbersign
12311 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
12312 % U+0024 DOLLAR SIGN; dollar
12313 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
12314 % U+0025 PERCENT SIGN; percent
12315 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
12316 % U+0026 AMPERSAND; ampersand
12317 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
12318 % U+0027 APOSTROPHE; quotesingle
12319 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
12320 % U+0028 LEFT PARENTHESIS; parenleft
12321 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
12322 % U+0029 RIGHT PARENTHESIS; parenright
12323 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
12324 % U+002A ASTERISK; asterisk
12325 \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

12326 % U+003C LESS-THAN SIGN; less
12327 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

```

\80\075: U+003D EQUALS SIGN; equal
 12328 % U+003E GREATER-THAN SIGN; greater
 12329 \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
 12330 % U+005C REVERSE SOLIDUS; backslash
 12331 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 12332 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12333 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 12334 % U+005F LOW LINE; underscore
 12335 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 12336 % U+0060 GRAVE ACCENT; grave
 12337 \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
 12338 % U+0069 LATIN SMALL LETTER I; i
 12339 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
 12340 \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
 12341 % U+007B LEFT CURLY BRACKET; braceleft
 12342 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 12343 % U+007C VERTICAL LINE; *bar, verticalbar
 12344 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 12345 % U+007D RIGHT CURLY BRACKET; braceright
 12346 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 12347 % U+007E TILDE; asciitilde
 12348 \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
 12349 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 12350 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 12351 % U+00A2 CENT SIGN; cent
 12352 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 12353 % U+00A3 POUND SIGN; sterling
 12354 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 12355 % U+00A4 CURRENCY SIGN; currency
 12356 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 12357 % U+00A5 YEN SIGN; yen
 12358 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 12359 % U+00A6 BROKEN BAR; brokenbar
 12360 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 12361 % U+00A7 SECTION SIGN; section
 12362 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 12363 % U+00A8 DIAERESIS; dieresis

12364 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
12365 % U+00A9 COPYRIGHT SIGN; copyright
12366 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
12367 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
12368 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
12369 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
12370 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
12371 % U+00AC NOT SIGN; logicalnot
12372 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
12373 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
12374 % U+00AE REGISTERED SIGN; registered
12375 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
12376 % U+00AF MACRON; *macron, overscore
12377 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
12378 % U+00B0 DEGREE SIGN; degree
12379 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
12380 % U+00B1 PLUS-MINUS SIGN; plusminus
12381 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
12382 % U+00B2 SUPERSCRIPT TWO; twosuperior
12383 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
12384 % U+00B3 SUPERSCRIPT THREE; threesuperior
12385 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
12386 % U+00B4 ACUTE ACCENT; acute
12387 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
12388 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
12389 % U+00B5 MICRO SIGN; mu, mu1
12390 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
12391 % U+00B6 PILCROW SIGN; paragraph
12392 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
12393 % U+00B7 MIDDLE DOT; middot, *periodcentered
12394 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
12395 % U+00B8 CEDILLA; cedilla
12396 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
12397 % U+00B9 SUPERSCRIPT ONE; onesuperior
12398 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
12399 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
12400 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
12401 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
12402 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
12403 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
12404 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
12405 % U+00BD VULGAR FRACTION ONE HALF; onehalf
12406 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
12407 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
12408 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
12409 % U+00BF INVERTED QUESTION MARK; questiondown
12410 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
12411 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
12412 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
12413 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
12414 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
12415 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12416 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
12417 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
12418 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
12419 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis

12420 \DeclareTextCompositeCommand{"}{PU}{A}{\80\304}% U+00C4
12421 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12422 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
12423 % U+00C6 LATIN CAPITAL LETTER AE; AE
12424 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
12425 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12426 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
12427 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12428 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
12429 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12430 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
12431 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12432 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
12433 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12434 \DeclareTextCompositeCommand{"}{PU}{E}{\80\313}% U+00CB
12435 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12436 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
12437 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12438 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
12439 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12440 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
12441 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12442 \DeclareTextCompositeCommand{"}{PU}{I}{\80\317}% U+00CF
12443 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12444 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
12445 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12446 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
12447 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12448 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
12449 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12450 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
12451 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12452 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
12453 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12454 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
12455 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12456 \DeclareTextCompositeCommand{"}{PU}{O}{\80\326}% U+00D6
12457 % U+00D7 MULTIPLICATION SIGN; multiply
12458 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
12459 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12460 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
12461 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12462 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
12463 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12464 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
12465 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12466 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
12467 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12468 \DeclareTextCompositeCommand{"}{PU}{U}{\80\334}% U+00DC
12469 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12470 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
12471 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12472 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
12473 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12474 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
12475 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12476 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0

12477 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12478 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
12479 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12480 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\342}% U+00E2
12481 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12482 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
12483 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12484 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
12485 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12486 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
12487 % U+00E6 LATIN SMALL LETTER AE; ae
12488 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
12489 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12490 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
12491 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12492 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
12493 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12494 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
12495 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12496 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
12497 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12498 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
12499 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12500 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
12501 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
12502 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12503 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\355}% U+00ED
12504 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
12505 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12506 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12507 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12508 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12509 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
12510 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
12511 % U+00F0 LATIN SMALL LETTER ETH; eth
12512 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
12513 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12514 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
12515 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12516 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
12517 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12518 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
12519 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12520 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
12521 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
12522 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
12523 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
12524 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
12525 % U+00F7 DIVISION SIGN; divide
12526 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
12527 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
12528 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
12529 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
12530 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
12531 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
12532 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
12533 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex

12534 \DeclareTextCompositeCommand{\~}{PU}{u}{\80\373}% U+00FB
 12535 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 12536 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 12537 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 12538 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 12539 % U+00FE LATIN SMALL LETTER THORN; thorn
 12540 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 12541 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 12542 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

12543 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 12544 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 12545 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 12546 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 12547 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 12548 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 12549 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 12550 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 12551 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 12552 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 12553 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 12554 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 12555 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 12556 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 12557 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 12558 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 12559 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 12560 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 12561 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 12562 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 12563 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
 12564 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 12565 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 12566 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 12567 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 12568 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 12569 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 12570 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 12571 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 12572 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 12573 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 12574 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
 12575 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
 12576 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
 12577 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
 12578 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
 12579 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
 12580 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
 12581 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
 12582 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
 12583 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
 12584 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
 12585 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
 12586 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
 12587 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent

12588 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
12589 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
12590 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
12591 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
12592 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
12593 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
12594 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
12595 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
12596 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
12597 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
12598 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
12599 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
12600 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
12601 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
12602 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
12603 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
12604 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
12605 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
12606 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
12607 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
12608 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
12609 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
12610 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
12611 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
12612 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
12613 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
12614 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
12615 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
12616 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
12617 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
12618 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
12619 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
12620 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
12621 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
12622 \DeclareTextCommand{\textHslash}{PU}{\81\047}% U+0127
12623 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
12624 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
12625 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
12626 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
12627 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
12628 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
12629 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
12630 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
12631 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
12632 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
12633 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
12634 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
12635 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
12636 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
12637 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
12638 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
12639 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
12640 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
12641 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
12642 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
12643 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
12644 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130

```

12645 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
12646 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
12647 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
12648 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
12649 % U+0133 LATIN SMALL LIGATURE IJ; ij
12650 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
12651 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
12652 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
12653 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
12654 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
12655 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
12656 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
12657 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
12658 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
12659 \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`.

```

12660 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
12661 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
12662 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
12663 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
12664 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
12665 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
12666 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
12667 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
12668 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
12669 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
12670 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
12671 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
12672 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
12673 \DeclareTextCompositeCommand{\v}{PU}{l}{\81\076}% U+013E

```

There seems to be no variants of letters ‘L’ and ‘l’ with a dot above (reasonable). Therefore the `\.` accent is reused instead of making a separate accent macro `\textmiddledot`.

```

12674 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
12675 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
12676 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
12677 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
12678 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
12679 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
12680 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
12681 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
12682 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
12683 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
12684 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
12685 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
12686 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
12687 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
12688 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
12689 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
12690 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
12691 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
12692 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
12693 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
12694 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
12695 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149

```

12696 % U+014A LATIN CAPITAL LETTER ENG; Eng
 12697 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 12698 % U+014B LATIN SMALL LETTER ENG; eng
 12699 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 12700 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 12701 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 12702 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 12703 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 12704 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 12705 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 12706 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 12707 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 12708 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
 12709 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 12710 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
 12711 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 12712 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 12713 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 12714 % U+0153 LATIN SMALL LIGATURE OE; oe
 12715 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 12716 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 12717 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 12718 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 12719 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 12720 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
 12721 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 12722 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 12723 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 12724 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 12725 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 12726 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 12727 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 12728 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 12729 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 12730 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 12731 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 12732 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 12733 \DeclareTextCompositeCommand{\`}{PU}{S}{\81\134}% U+015C
 12734 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 12735 \DeclareTextCompositeCommand{\`}{PU}{s}{\81\135}% U+015D
 12736 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 12737 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 12738 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 12739 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 12740 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 12741 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 12742 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 12743 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
 12744 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
 12745 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
 12746 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
 12747 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
 12748 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
 12749 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
 12750 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
 12751 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
 12752 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar

12753 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
 12754 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
 12755 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
 12756 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
 12757 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
 12758 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
 12759 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
 12760 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
 12761 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
 12762 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
 12763 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
 12764 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
 12765 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
 12766 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
 12767 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
 12768 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
 12769 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
 12770 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
 12771 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
 12772 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
 12773 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
 12774 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
 12775 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
 12776 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
 12777 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
 12778 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
 12779 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
 12780 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
 12781 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
 12782 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
 12783 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
 12784 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
 12785 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
 12786 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
 12787 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
 12788 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
 12789 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
 12790 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
 12791 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
 12792 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
 12793 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
 12794 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
 12795 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
 12796 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
 12797 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 12798 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 12799 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 12800 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 12801 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 12802 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 12803 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

12804 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 12805 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 12806 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 12807 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD

12808 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
12809 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
12810 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
12811 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
12812 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
12813 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
12814 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
12815 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
12816 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
12817 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
12818 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
12819 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
12820 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
12821 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
12822 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
12823 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
12824 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
12825 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
12826 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
12827 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
12828 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
12829 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
12830 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
12831 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
12832 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
12833 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
12834 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
12835 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
12836 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
12837 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
12838 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
12839 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
12840 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
12841 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
12842 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
12843 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
12844 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
12845 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
12846 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
12847 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
12848 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
12849 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
12850 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
12851 \DeclareTextCompositeCommand{\'}{PU}{AE}{\81\374}% U+01FC
12852 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
12853 \DeclareTextCompositeCommand{\'}{PU}{ae}{\81\375}% U+01FD
12854 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacut
12855 \DeclareTextCompositeCommand{\'}{PU}{O}{\81\376}% U+01FE
12856 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacut
12857 \DeclareTextCompositeCommand{\'}{PU}{o}{\81\377}% U+01FF
12858 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
12859 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
12860 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
12861 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
12862 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
12863 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
12864 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave

12865 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 12866 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
 12867 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 12868 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
 12869 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 12870 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 12871 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
 12872 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 12873 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
 12874 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 12875 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 12876 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 12877 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 12878 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 12879 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 12880 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 12881 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 12882 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 12883 % U+021E LATIN CAPITAL LETTER H WITH CARON
 12884 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 12885 % U+021F LATIN SMALL LETTER H WITH CARON
 12886 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 12887 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 12888 \DeclareTextCompositeCommand{.}{PU}{A}{\82\046}% U+0226
 12889 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 12890 \DeclareTextCompositeCommand{.}{PU}{a}{\82\047}% U+0227
 12891 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 12892 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 12893 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 12894 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 12895 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 12896 \DeclareTextCompositeCommand{.}{PU}{O}{\82\056}% U+022E
 12897 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 12898 \DeclareTextCompositeCommand{.}{PU}{o}{\82\057}% U+022F
 12899 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 12900 \DeclareTextCompositeCommand{=}{PU}{Y}{\82\062}% U+0232
 12901 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 12902 \DeclareTextCompositeCommand{=}{PU}{y}{\82\063}% U+0233
 12903 % U+0237 LATIN SMALL LETTER DOTLESS J
 12904 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

12905 % U+02C7 CARON; caron
 12906 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 12907 % U+02D8 BREVE; breve
 12908 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 12909 % U+02D9 DOT ABOVE; dotaccent
 12910 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 12911 % U+02DA RING ABOVE; ring
 12912 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 12913 % U+02DB OGONEK; ogonek
 12914 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 12915 % U+02DC SMALL TILDE; ilde, *tilde
 12916 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 12917 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 12918 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 12919 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD

12920 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 12921 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 12922 % U+02F7 MODIFIER LETTER LOW TILDE
 12923 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

12924 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 12925 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 12926 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 12927 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 12928 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 12929 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 12930 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 12931 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 12932 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 12933 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

12934 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 12935 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 12936 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 12937 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 12938 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 12939 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 12940 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 12941 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 12942 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 12943 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 12944 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 12945 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 12946 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 12947 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 12948 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
 12949 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 12950 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 12951 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 12952 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; iotadiesisistonos
 12953 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
 12954 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 12955 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 12956 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 12957 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 12958 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 12959 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 12960 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
 12961 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
 12962 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
 12963 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
 12964 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
 12965 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
 12966 % U+0397 GREEK CAPITAL LETTER ETA; Eta
 12967 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
 12968 % U+0398 GREEK CAPITAL LETTER THETA; Theta
 12969 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
 12970 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
 12971 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
 12972 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa

12973 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
12974 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
12975 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
12976 % U+039C GREEK CAPITAL LETTER MU; Mu
12977 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
12978 % U+039D GREEK CAPITAL LETTER NU; Nu
12979 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
12980 % U+039E GREEK CAPITAL LETTER XI; Xi
12981 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
12982 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
12983 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
12984 % U+03A0 GREEK CAPITAL LETTER PI; Pi
12985 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
12986 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
12987 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
12988 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
12989 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
12990 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
12991 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
12992 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
12993 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
12994 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
12995 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
12996 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
12997 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
12998 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
12999 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
13000 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
13001 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
13002 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
13003 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
13004 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
13005 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilondieresis
13006 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
13007 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
13008 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
13009 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilon
13010 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
13011 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos
13012 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
13013 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotanos
13014 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
13015 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilondieresis
13016 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
13017 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
13018 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
13019 % U+03B2 GREEK SMALL LETTER BETA; beta
13020 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
13021 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
13022 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
13023 % U+03B4 GREEK SMALL LETTER DELTA; delta
13024 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
13025 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
13026 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
13027 % U+03B6 GREEK SMALL LETTER ZETA; zeta
13028 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
13029 % U+03B7 GREEK SMALL LETTER ETA; eta

13030 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
13031 % U+03B8 GREEK SMALL LETTER THETA; theta
13032 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
13033 % U+03B9 GREEK SMALL LETTER IOTA; iota
13034 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
13035 % U+03BA GREEK SMALL LETTER KAPPA; kappa
13036 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
13037 % U+03BB GREEK SMALL LETTER LAMDA; lambda
13038 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
13039 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
13040 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
13041 % U+03BD GREEK SMALL LETTER NU; nu
13042 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
13043 % U+03BE GREEK SMALL LETTER XI; xi
13044 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
13045 % U+03BF GREEK SMALL LETTER OMICRON; omicron
13046 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
13047 % U+03C0 GREEK SMALL LETTER PI; pi
13048 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
13049 % U+03C1 GREEK SMALL LETTER RHO; rho
13050 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
13051 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
13052 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
13053 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
13054 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
13055 % U+03C4 GREEK SMALL LETTER TAU; tau
13056 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
13057 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
13058 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
13059 % U+03C6 GREEK SMALL LETTER PHI; phi
13060 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
13061 % U+03C7 GREEK SMALL LETTER CHI; chi
13062 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
13063 % U+03C8 GREEK SMALL LETTER PSI; psi
13064 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
13065 % U+03C9 GREEK SMALL LETTER OMEGA; omega
13066 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
13067 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
13068 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
13069 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; upsilondieresis
13070 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
13071 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; microntonos
13072 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
13073 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
13074 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
13075 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
13076 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
13077 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
13078 % U+03DA GREEK LETTER STIGMA; Stigmagreek
13079 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
13080 % U+03DB GREEK SMALL LETTER STIGMA
13081 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
13082 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
13083 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
13084 % U+03DD GREEK SMALL LETTER DIGAMMA
13085 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
13086 % U+03DE GREEK LETTER KOPPA; Koppagreek

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13087 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
13088 % U+03DF GREEK SMALL LETTER KOPPA
13089 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
13090 % U+03E0 GREEK LETTER SAMPI; Sampigreek
13091 \DeclareTextCommand{\textsampigreek}{PU}{\83\340}% U+03E0
13092 % U+03E1 GREEK SMALL LETTER SAMPI
13093 \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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13094 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
13095 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
13096 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
13097 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
13098 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
13099 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
13100 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
13101 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
13102 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
13103 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
13104 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
13105 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
13106 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
13107 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrillic, *afii10055
13108 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
13109 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrillic, *afii10056
13110 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
13111 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
13112 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
13113 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
13114 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
13115 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
13116 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
13117 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
13118 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
13119 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
13120 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
13121 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
13122 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
13123 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
13124 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrillic, *afii10062
13125 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
13126 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
13127 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
13128 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
13129 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
13130 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
13131 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
13132 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
13133 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
13134 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
13135 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
13136 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
13137 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
13138 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
13139 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022

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13140 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
13141 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
13142 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
13143 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
13144 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
13145 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
13146 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
13147 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
13148 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
13149 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
13150 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
13151 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
13152 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
13153 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
13154 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
13155 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
13156 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
13157 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
13158 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
13159 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
13160 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
13161 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
13162 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
13163 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
13164 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
13165 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
13166 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
13167 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
13168 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
13169 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
13170 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
13171 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
13172 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
13173 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
13174 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
13175 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
13176 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
13177 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
13178 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
13179 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
13180 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
13181 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
13182 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
13183 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
13184 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
13185 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
13186 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
13187 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
13188 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
13189 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
13190 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
13191 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
13192 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
13193 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
13194 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
13195 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
13196 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic

13197 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
13198 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
13199 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
13200 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
13201 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
13202 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
13203 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
13204 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
13205 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
13206 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
13207 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
13208 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
13209 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
13210 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
13211 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
13212 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
13213 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
13214 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
13215 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
13216 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
13217 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
13218 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
13219 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
13220 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
13221 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
13222 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
13223 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
13224 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
13225 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
13226 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
13227 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
13228 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
13229 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
13230 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
13231 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
13232 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
13233 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
13234 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
13235 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
13236 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
13237 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
13238 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
13239 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
13240 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
13241 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
13242 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
13243 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
13244 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
13245 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
13246 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
13247 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
13248 \DeclareTextCommand{\cyhrdsn}{PU}{\84\112}% U+044A
13249 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
13250 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
13251 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
13252 \DeclareTextCommand{\cyrsftsn}{PU}{\84\114}% U+044C
13253 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic

13254 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
13255 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
13256 \DeclareTextCommand{\cyrju}{PU}{\84\116}% U+044E
13257 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
13258 \DeclareTextCommand{\cyrja}{PU}{\84\117}% U+044F
13259 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
13260 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
13261 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
13262 \DeclareTextCommand{\cyrjo}{PU}{\84\121}% U+0451
13263 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
13264 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
13265 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
13266 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
13267 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
13268 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
13269 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
13270 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
13271 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
13272 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
13273 \DeclareTextCommand{\cyrri}{PU}{\84\126}% U+0456
13274 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
13275 \DeclareTextCommand{\cyrji}{PU}{\84\127}% U+0457
13276 \DeclareTextCompositeCommand{\"}{PU}{\cyrri}{\84\127}% U+0457
13277 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
13278 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
13279 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
13280 \DeclareTextCommand{\cyrlje}{PU}{\84\131}% U+0459
13281 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
13282 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
13283 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
13284 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
13285 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
13286 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
13287 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
13288 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
13289 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
13290 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
13291 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
13292 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
13293 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
13294 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
13295 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
13296 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
13297 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
13298 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
13299 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
13300 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
13301 \DeclareTextCommand{\cyrjat}{PU}{\84\143}% U+0463
13302 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
13303 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
13304 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
13305 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
13306 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
13307 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
13308 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
13309 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
13310 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleiotifiedcyrillic

13311 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
13312 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleiotifiedcyrillic
13313 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
13314 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
13315 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
13316 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
13317 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
13318 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotifiedcyrillic
13319 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
13320 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
13321 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
13322 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
13323 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
13324 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
13325 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
13326 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
13327 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
13328 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
13329 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
13330 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
13331 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
13332 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
13333 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
13334 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
13335 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
13336 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
13337 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
13338 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
13339 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
13340 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
13341 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
13342 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
13343 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
13344 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
13345 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
13346 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
13347 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
13348 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
13349 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
13350 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
13351 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
13352 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
13353 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
13354 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
13355 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
13356 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
13357 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
13358 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
13359 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
13360 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
13361 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
13362 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
13363 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482

\84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
\84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
\84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumata-

cyrillicmb

\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

13364 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL

13365 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A

13366 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL

13367 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B

13368 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN

13369 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C

13370 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN

13371 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D

13372 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK

13373 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E

13374 % U+048F CYRILLIC SMALL LETTER ER WITH TICK

13375 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F

13376 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050

13377 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490

13378 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic

13379 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491

13380 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic

13381 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492

13382 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic

13383 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493

13384 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic

13385 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494

13386 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic

13387 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495

13388 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic

13389 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496

13390 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic

13391 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497

13392 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic

13393 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498

13394 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498

13395 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic

13396 \DeclareTextCommand{\cyrzds}{PU}{\84\231}% U+0499

13397 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499

13398 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic

13399 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A

13400 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic

13401 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B

13402 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kavertikalstrokecyrillic

13403 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C

13404 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kavertikalstrokecyrillic

13405 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D

13406 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic

13407 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E

13408 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic

13409 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F

13410 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic

13411 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0

13412 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic

13413 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1

13414 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic

13415 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
13416 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endscendercyrillic
13417 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
13418 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
13419 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
13420 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
13421 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
13422 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
13423 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
13424 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
13425 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
13426 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
13427 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
13428 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
13429 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
13430 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
13431 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
13432 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
13433 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
13434 \DeclareTextCommand{\cyrstdsc}{PU}{\84\253}% U+04AB
13435 \DeclareTextCompositeCommand{\k}{PU}{\cyrst}{\84\253}% U+04AB
13436 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
13437 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
13438 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
13439 \DeclareTextCommand{\cyrtstdsc}{PU}{\84\255}% U+04AD
13440 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
13441 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
13442 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
13443 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
13444 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
13445 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
13446 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
13447 \DeclareTextCommand{\cyrhcrs}{PU}{\84\261}% U+04B1
13448 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesendercyrillic
13449 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
13450 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
13451 \DeclareTextCommand{\cyrhdsc}{PU}{\84\263}% U+04B3
13452 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
13453 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
13454 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
13455 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
13456 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
13457 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
13458 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
13459 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
13460 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Cheverticalstrokecyrillic
13461 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
13462 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; cheverticalstrokecyrillic
13463 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
13464 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
13465 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
13466 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
13467 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
13468 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
13469 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
13470 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
13471 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD

13472 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
13473 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
13474 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
13475 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
13476 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
13477 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
13478 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
13479 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
13480 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
13481 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
13482 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
13483 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
13484 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
13485 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
13486 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
13487 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
13488 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
13489 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
13490 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
13491 \DeclareTextCommand{\cyrlldsc}{PU}{\84\306}% U+04C6
13492 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
13493 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
13494 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
13495 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
13496 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
13497 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
13498 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
13499 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
13500 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
13501 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
13502 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
13503 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
\84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
13504 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
13505 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
13506 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
13507 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
13508 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
13509 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
13510 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
13511 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
13512 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
13513 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
13514 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic
13515 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
13516 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevecyrillic
13517 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
13518 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevecyrillic
13519 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
13520 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
13521 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
13522 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
13523 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
13524 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiescyrillic
13525 \DeclareTextCompositeCommand{\U}{PU}{\CYRSCHWA}{\84\332}% U+04DA
13526 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiescyrillic
13527 \DeclareTextCompositeCommand{\U}{PU}{\cyrschwa}{\84\333}% U+04DB

13528 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
13529 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
13530 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
13531 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\335}% U+04DD
13532 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
13533 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
13534 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
13535 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
13536 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
13537 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
13538 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
13539 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
13540 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
13541 \DeclareTextCompositeCommand{=}{PU}{\CYRI}{\84\342}% U+04E2
13542 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
13543 \DeclareTextCompositeCommand{=}{PU}{\cyri}{\84\343}% U+04E3
13544 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
13545 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
13546 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
13547 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
13548 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
13549 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
13550 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
13551 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
13552 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
13553 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
13554 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
13555 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
13556 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
13557 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
13558 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
13559 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
13560 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
13561 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
13562 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
13563 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
13564 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
13565 \DeclareTextCompositeCommand{=}{PU}{\CYRU}{\84\356}% U+04EE
13566 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
13567 \DeclareTextCompositeCommand{=}{PU}{\cyru}{\84\357}% U+04EF
13568 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
13569 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
13570 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
13571 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
13572 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
13573 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
13574 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
13575 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
13576 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
13577 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
13578 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
13579 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
13580 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
13581 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
13582 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
13583 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
13584 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic

13585 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 13586 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
 13587 \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
 13588 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 13589 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 13590 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 13591 \DeclareTextCommand{\cyrhk}{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

13592 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 13593 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

13594 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 13595 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 13596 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 13597 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 13598 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 13599 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 13600 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 13601 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 13602 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 13603 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A
 13604 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 13605 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
 13606 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 13607 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 13608 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 13609 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 13610 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 13611 \DeclareTextCompositeCommand{c}{PU}{D}{\9036\020}% U+1E10
 13612 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 13613 \DeclareTextCompositeCommand{c}{PU}{d}{\9036\021}% U+1E11
 13614 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 13615 \DeclareTextCompositeCommand{.}{PU}{F}{\9036\036}% U+1E1E
 13616 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 13617 \DeclareTextCompositeCommand{.}{PU}{f}{\9036\037}% U+1E1F
 13618 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
 13619 \DeclareTextCompositeCommand{=}{PU}{G}{\9036\040}% U+1E20
 13620 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
 13621 \DeclareTextCompositeCommand{=}{PU}{g}{\9036\041}% U+1E21
 13622 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
 13623 \DeclareTextCompositeCommand{.}{PU}{H}{\9036\042}% U+1E22
 13624 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
 13625 \DeclareTextCompositeCommand{.}{PU}{h}{\9036\043}% U+1E23
 13626 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
 13627 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
 13628 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
 13629 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
 13630 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
 13631 \DeclareTextCompositeCommand{c}{PU}{H}{\9036\050}% U+1E28

13632 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
13633 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
13634 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
13635 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
13636 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
13637 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
13638 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
13639 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
13640 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
13641 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
13642 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
13643 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
13644 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
13645 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
13646 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
13647 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
13648 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
13649 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
13650 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
13651 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
13652 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
13653 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
13654 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
13655 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
13656 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
13657 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
13658 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
13659 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
13660 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
13661 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
13662 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
13663 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
13664 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
13665 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
13666 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
13667 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
13668 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
13669 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
13670 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
13671 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
13672 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
13673 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
13674 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
13675 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
13676 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
13677 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
13678 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
13679 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
13680 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
13681 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
13682 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
13683 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
13684 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
13685 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
13686 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
13687 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
13688 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde

13689 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
13690 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
13691 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\200}% U+1E80
13692 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
13693 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\201}% U+1E81
13694 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
13695 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\202}% U+1E82
13696 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
13697 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
13698 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
13699 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\204}% U+1E84
13700 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
13701 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
13702 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
13703 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\206}% U+1E86
13704 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
13705 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
13706 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
13707 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
13708 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
13709 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
13710 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
13711 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
13712 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
13713 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
13714 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
13715 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
13716 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
13717 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
13718 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
13719 \DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
13720 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
13721 \DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
13722 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
13723 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
13724 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
13725 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
13726 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
13727 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
13728 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
13729 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
13730 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
13731 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
13732 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
13733 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
13734 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotaccent
13735 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
13736 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
13737 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
13738 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
13739 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
13740 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
13741 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
13742 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
13743 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
13744 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
13745 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8

13746 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 13747 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

13748 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 13749 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 13750 % U+2013 EN DASH; endash
 13751 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 13752 % U+2014 EM DASH; emdash
 13753 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 13754 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 13755 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 13756 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 13757 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 13758 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 13759 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 13760 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 13761 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 13762 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 13763 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 13764 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 13765 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 13766 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 13767 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 13768 % U+2020 DAGGER; dagger
 13769 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 13770 % U+2021 DOUBLE DAGGER; daggerdbl
 13771 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 13772 % U+2022 BULLET; bullet
 13773 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 13774 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 13775 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 13776 % U+2030 PER MILLE SIGN; perthousand
 13777 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 13778 % U+2031 PER TEN THOUSAND SIGN
 13779 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 13780 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 13781 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 13782 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 13783 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 13784 % U+203B REFERENCE MARK; referencemark
 13785 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 13786 % U+203D INTERROBANG
 13787 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 13788 % U+2044 FRACTION SLASH; fraction
 13789 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 13790 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 13791 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 13792 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 13793 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 13794 % U+2052 COMMERCIAL MINUS SIGN
 13795 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

13796 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 13797 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 13798 % U+2074 SUPERSCRIPT FOUR; foursuperior

13799 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 13800 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 13801 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
 13802 % U+2076 SUPERSCRIPT SIX; sixsuperior
 13803 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 13804 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 13805 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 13806 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 13807 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 13808 % U+2079 SUPERSCRIPT NINE; ninesuperior
 13809 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 13810 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 13811 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 13812 % U+207B SUPERSCRIPT MINUS
 13813 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 13814 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 13815 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
 13816 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 13817 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 13818 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 13819 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 13820 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 13821 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 13822 % U+2080 SUBSCRIPT ZERO; zeroinferior
 13823 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 13824 % U+2081 SUBSCRIPT ONE; oneinferior
 13825 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 13826 % U+2082 SUBSCRIPT TWO; twoinferior
 13827 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 13828 % U+2083 SUBSCRIPT THREE; threeinferior
 13829 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 13830 % U+2084 SUBSCRIPT FOUR; fourinferior
 13831 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 13832 % U+2085 SUBSCRIPT FIVE; fiveinferior
 13833 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 13834 % U+2086 SUBSCRIPT SIX; sixinferior
 13835 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 13836 % U+2087 SUBSCRIPT SEVEN; seveninferior
 13837 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 13838 % U+2088 SUBSCRIPT EIGHT; eightinferior
 13839 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 13840 % U+2089 SUBSCRIPT NINE; nineinferior
 13841 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 13842 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 13843 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 13844 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 13845 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

13846 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 13847 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 13848 % U+20A4 LIRA SIGN; afii08941, *lira
 13849 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 13850 % U+20A6 NAIRA SIGN
 13851 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 13852 % U+20A7 PESETA SIGN; peseta
 13853 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7

13854 % U+20A9 WON SIGN; won
 13855 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 13856 % U+20AB DONG SIGN; dong
 13857 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 13858 % U+20AC EURO SIGN; *Euro, euro
 13859 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 13860 % U+20B1 PESO SIGN
 13861 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 13862 % U+20B2 GUARANI SIGN
 13863 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

13864 % U+2103 DEGREE CELSIUS; centigrade
 13865 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 13866 % U+2116 NUMERO SIGN; *afii61352, numero
 13867 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 13868 % U+2117 SOUND RECORDING COPYRIGHT
 13869 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 13870 % U+211E PRESCRIPTION TAKE; prescription
 13871 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 13872 % U+2120 SERVICE MARK
 13873 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 13874 % U+2122 TRADE MARK SIGN; trademark
 13875 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 13876 % U+2126 OHM SIGN; Ohm, Omega
 13877 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 13878 % U+2127 INVERTED OHM SIGN
 13879 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 13880 % U+212B ANGSTROM SIGN; angstrom
 13881 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 13882 % U+212E ESTIMATED SYMBOL; estimated
 13883 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 13884 % U+2135 ALEF SYMBOL; aleph
 13885 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

13886 % U+2190 LEFTWARDS ARROW; arrowleft
 13887 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 13888 % U+2191 UPWARDS ARROW; arrowup
 13889 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 13890 % U+2192 RIGHTWARDS ARROW; arrowright
 13891 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 13892 % U+2193 DOWNWARDS ARROW; arrowdown
 13893 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

13894 % U+2212 MINUS SIGN; minus
 13895 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 13896 % U+221A SQUARE ROOT; radical
 13897 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

13898 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 13899 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 13900 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 13901 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

13902 % U+2422 BLANK SYMBOL
13903 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
13904 % U+2423 OPEN BOX; blank
13905 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

13906 % U+2460 CIRCLED DIGIT ONE; onecircle
13907 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
13908 % U+2461 CIRCLED DIGIT TWO; twocircle
13909 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
13910 % U+2462 CIRCLED DIGIT THREE; threecircle
13911 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
13912 % U+2463 CIRCLED DIGIT FOUR; fourcircle
13913 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
13914 % U+2464 CIRCLED DIGIT FIVE; fivecircle
13915 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
13916 % U+2465 CIRCLED DIGIT SIX; sixcircle
13917 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
13918 % U+2466 CIRCLED DIGIT SEVEN; sevendigit
13919 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
13920 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
13921 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
13922 % U+2468 CIRCLED DIGIT NINE; ninecircle
13923 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
13924 % U+2469 CIRCLED NUMBER TEN; tencircle
13925 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
13926 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
13927 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
13928 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
13929 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
13930 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
13931 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
13932 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
13933 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
13934 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
13935 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
13936 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
13937 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
13938 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
13939 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
13940 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
13941 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
13942 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
13943 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
13944 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
13945 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
13946 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
13947 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
13948 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
13949 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
13950 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
13951 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
13952 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
13953 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
13954 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
13955 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA

13956 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 13957 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 13958 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 13959 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 13960 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 13961 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 13962 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 13963 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 13964 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 13965 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 13966 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 13967 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 13968 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 13969 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 13970 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 13971 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 13972 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 13973 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 13974 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 13975 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 13976 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 13977 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 13978 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 13979 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 13980 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 13981 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 13982 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 13983 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 13984 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 13985 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 13986 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 13987 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 13988 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 13989 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 13990 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 13991 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 13992 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 13993 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 13994 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 13995 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 13996 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 13997 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 13998 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 13999 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 14000 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 14001 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 14002 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 14003 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 14004 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 14005 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 14006 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 14007 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 14008 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 14009 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 14010 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 14011 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 14012 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle

14013 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 14014 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 14015 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 14016 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 14017 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 14018 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 14019 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 14020 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 14021 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 14022 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 14023 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 14024 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 14025 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 14026 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 14027 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 14028 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 14029 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 14030 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 14031 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 14032 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 14033 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 14034 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 14035 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 14036 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 14037 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 14038 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 14039 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 14040 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 14041 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 14042 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 14043 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 14044 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 14045 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 14046 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 14047 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 14048 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 14049 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 14050 % U+24EA CIRCLED DIGIT ZERO
 14051 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

14052 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 14053 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 14054 % U+25EF LARGE CIRCLE; largecircle
 14055 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

14056 % U+266A EIGHTH NOTE; musicalnote
 14057 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 14058 % U+26AD MARRIAGE SYMBOL
 14059 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 14060 % U+26AE DIVORCE SYMBOL
 14061 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

14062 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 14063 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6

```

14064 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
14065 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

```

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

```

14066 % U+FB01 LATIN SMALL LIGATURE FI; fi
14067 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
14068 % U+FB02 LATIN SMALL LIGATURE FL; fl
14069 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

```

50.2.25 Miscellaneous

```

14070 \DeclareTextCommand{\SS}{PU}{SS}

```

50.2.26 Aliases

Aliases (german.sty)

```

14071 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
14072 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
14073 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
14074 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
14075 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
14076 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
14077 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
14078 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

```

Aliases (math names)

```

14079 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
14080 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
14081 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
14082 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
14083 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
14084 </puenc>

```

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```

14085 <*puvnenc>

14086 \DeclareTextCommand{\abreve}{PU}{\81\003}
14087 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
14088 \DeclareTextCommand{\dj}{PU}{\81\021}
14089 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
14090 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
14091 \DeclareTextCommand{\ohorn}{PU}{\81\241}
14092 \DeclareTextCommand{\uhorn}{PU}{\81\260}
14093 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
14094 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
14095 \DeclareTextCommand{\DJ}{PU}{\81\020}
14096 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
14097 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
14098 \DeclareTextCommand{\OHORN}{PU}{\81\240}
14099 \DeclareTextCommand{\UHORN}{PU}{\81\257}

14100 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
14101 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
14102 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
14103 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
14104 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
14105 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}

```

14106 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
14107 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
14108 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
14109 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
14110 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
14111 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
14112 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
14113 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
14114 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
14115 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
14116 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
14117 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
14118 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
14119 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
14120 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
14121 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
14122 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
14123 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
14124 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
14125 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
14126 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
14127 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
14128 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
14129 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
14130 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
14131 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
14132 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}
14133 \DeclareTextCompositeCommand{\h}{PU}{o}{\9036\317}
14134 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}
14135 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\321}
14136 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
14137 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
14138 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
14139 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
14140 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
14141 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
14142 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\335}
14143 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
14144 \DeclareTextCompositeCommand{\~}{PU}{\ohorn}{\9036\341}
14145 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}
14146 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
14147 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
14148 \DeclareTextCompositeCommand{\h}{PU}{u}{\9036\347}
14149 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}
14150 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\351}
14151 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}
14152 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
14153 \DeclareTextCompositeCommand{\h}{PU}{\uhorn}{\9036\355}
14154 \DeclareTextCompositeCommand{\~}{PU}{\uhorn}{\9036\357}
14155 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}
14156 \DeclareTextCompositeCommand{\d}{PU}{y}{\9036\365}
14157 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}
14158 \DeclareTextCompositeCommand{\h}{PU}{y}{\9036\367}
14159 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}
14160 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}
14161 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
14162 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}

14163 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
14164 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
14165 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\256}
14166 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
14167 \DeclareTextCompositeCommand{\'}{PU}{\ABREVE}{\9036\260}
14168 \DeclareTextCompositeCommand{\h}{PU}{\ABREVE}{\9036\262}
14169 \DeclareTextCompositeCommand{\~}{PU}{\ABREVE}{\9036\264}
14170 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\244}
14171 \DeclareTextCompositeCommand{\d}{PU}{\ACIRCUMFLEX}{\9036\254}
14172 \DeclareTextCompositeCommand{\'}{PU}{\ACIRCUMFLEX}{\9036\246}
14173 \DeclareTextCompositeCommand{\h}{PU}{\ACIRCUMFLEX}{\9036\250}
14174 \DeclareTextCompositeCommand{\~}{PU}{\ACIRCUMFLEX}{\9036\252}
14175 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}
14176 \DeclareTextCompositeCommand{\d}{PU}{E}{\9036\270}
14177 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\310}
14178 \DeclareTextCompositeCommand{\h}{PU}{E}{\9036\272}
14179 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}
14180 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\276}
14181 \DeclareTextCompositeCommand{\d}{PU}{\ECIRCUMFLEX}{\9036\306}
14182 \DeclareTextCompositeCommand{\'}{PU}{\ECIRCUMFLEX}{\9036\300}
14183 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
14184 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
14185 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}
14186 \DeclareTextCompositeCommand{\d}{PU}{I}{\9036\312}
14187 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
14188 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
14189 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}
14190 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}
14191 \DeclareTextCompositeCommand{\d}{PU}{O}{\9036\314}
14192 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
14193 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
14194 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
14195 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}
14196 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
14197 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
14198 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
14199 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
14200 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\332}
14201 \DeclareTextCompositeCommand{\d}{PU}{\OHORN}{\9036\342}
14202 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
14203 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
14204 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
14205 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
14206 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
14207 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
14208 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}
14209 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
14210 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
14211 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
14212 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\352}
14213 \DeclareTextCompositeCommand{\h}{PU}{\UHORN}{\9036\354}
14214 \DeclareTextCompositeCommand{\~}{PU}{\UHORN}{\9036\356}
14215 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}
14216 \DeclareTextCompositeCommand{\d}{PU}{Y}{\9036\364}
14217 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
14218 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
14219 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}

14220 </puvnenc>

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

14221 <*puarenc>

```
14222 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LETTER HAMZA
14223 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LETTER ALEF WITH MADDA A
14224 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LETTER ALEF WITH HAMZA A
14225 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LETTER WAW WITH HAMZA AE
14226 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LETTER ALEF WITH HA
14227 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
14228 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
14229 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
14230 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
14231 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
14232 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LETTER THEH
14233 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LETTER JEEM
14234 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
14235 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
14236 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
14237 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
14238 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
14239 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
14240 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
14241 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LETTER SHEEN
14242 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
14243 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
14244 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
14245 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
14246 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
14247 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LETTER GHAIN
14248 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
14249 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
14250 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
14251 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
14252 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
14253 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LETTER MEEM
14254 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
14255 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
14256 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afii57448;ARABIC LETTER WAW
14257 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afii57449;ARABIC LETTER ALEF MAKSURA
14258 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afii57450;ARABIC LETTER YEH

14259 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
14260 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN
14261 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
14262 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
14263 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afii57455;ARABIC DAMMA
14264 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afii57456;ARABIC KASRA
14265 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afii57457;ARABIC SHADDA
14266 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afii57458;ARABIC SUKUN

Farsi

14267 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afii57506;ARABIC LETTER PEH
14268 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afii57507;ARABIC LETTER TCHEH
14269 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afii57508;ARABIC LETTER JEH
```

```

14270 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afii????;FARSI LETTER KAF
14271 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afii57509;ARABIC LETTER GAF
14272 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afii????;FARSI LETTER YEH

14273 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
14274 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

14275 \puarenc

```

51 End of file hyccheck.tex

```

14276 \*check
14277 \typeout{}
14278 \begin{document}
14279 \end{document}
14280 \check

```


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