

Hypertext marks in L^AT_EX

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1 Documentation overview for hyperref

The documentation for package `hyperref` consists of several files:

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

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

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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

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3 File hycheck.tex

Many commands of \LaTeX or other packages cannot be overloaded, but have to be redefined by hyperref directly. If these commands change in newer versions, these changes are not noticed by hyperref. With this test file this situation can be checked. It defines the command `\checkcommand` that is more powerful than \LaTeX 's `\CheckCommand`, because it takes `\DeclareRobustCommand` and optional parameters better into account.

```
1 \langle *check\rangle
2 \documentclass{article}
3 \makeatletter
```

`\checklatex` Optional argument: release date of \LaTeX .

```
4 \newcommand*{\checklatex}[1] [] {%
5   \typeout{}%
6   \typeout{* Format: 'LaTeX2e' #1}%
7   \typeout{\space\space Loaded: '\fmtname' \fmtversion}%
8 }%
```

`\checkpackage` The argument of `\checkpackage` is the package name without extension optionally followed by a release date.

```
9 \newcommand*{\checkpackage}[1] {%
10   \def\HyC@package{#1}%
11   \let\HyC@date\@empty
12   \@ifnextchar[\HyC@getDate\HyC@checkPackage
13 }
```

`\HyC@getDate` The release date is scanned.

```
14 \def\HyC@getDate[#1] {%
15   \def\HyC@date{#1}%
16   \HyC@checkPackage
17 }
```

`\HyC@checkPackage`

```
18 \def\HyC@checkPackage{%
19   \typeout{}%
20   \begingroup
21     \edef\x{\endgroup
22       \noexpand\RequirePackage{\HyC@package}%
23       \ifx\HyC@date\@empty\relax\else[\HyC@date]\fi%
24     }%
25   \x
26   \typeout{}%
27   \typeout{%
28     * Package '\HyC@package'%
29     \ifx\HyC@date\@empty
30       \else
31         \space\HyC@date
32       \fi
33   }%
34   \@ifundefined{ver@\HyC@package.sty}{%
35     }{%
36     \typeout{%
37       \space\space Loaded: '\HyC@package' %
38       \csname ver@\HyC@package.sty\endcsname
39     }%
40   }%
41 }
```

`\checkcommand` The macro `\checkcommand` parses the next tokens as a \LaTeX definition and compares this definition with the current meaning of that command.

```

42 \newcommand*{\checkcommand}[1]{%
43   \begingroup
44   \ifx\long#1\relax
45     \expandafter\HyC@checklong
46   \else
47     \def\HyC@defcmd{#1}%
48     \expandafter\let\expandafter\HyC@next
49       \csname HyC@\expandafter\@gobble\string#1\endcsname
50     \expandafter\HyC@checkcommand
51   \fi
52 }
```

`\HyC@checklong` The definition command `\def` or `\edef` is read.

```

53 \def\HyC@checklong#1{%
54   \def\HyC@defcmd{\long#1}%
55   \expandafter\let\expandafter\HyC@next
56     \csname HyC@\expandafter\@gobble\string#1\endcsname
57   \HyC@checkcommand
58 }
```

`\HyC@checkcommand` The optional star of \LaTeX 's definitions is parsed.

```

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

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

```

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

`\HyC@noValue`

```

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

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


```

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

```

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

```

90 \newtoks\HyC@Toks

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

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

```

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

`\HyC@meaning`

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

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

```

```

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

```

```
231 \Hy@SetCatcodes
```

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

```

232 \RequirePackage{keyval}[1997/11/10]
233 \RequirePackage{ifpdf}[2006/02/20]
234 \RequirePackage{ifvtex}
235 \RequirePackage{ifxetex}[2006/08/21]
236 \RequirePackage{hycolor}
237 \def\Hy@Warning#1{\PackageWarning{hyperref}{#1}}
238 \def\Hy@WarningNoLine#1{\PackageWarningNoLine{hyperref}{#1}}
239 \def\Hy@Info#1{\PackageInfo{hyperref}{#1}}

```

4.2 Compatibility with format dumps

`\AfterBeginDocument` For use with pre-compiled formats, created using the `ldump` package, there needs to be 2 hooks for adding material delayed until `\begin{document}`. These are called `\AfterBeginDocument` and `\AtBeginDocument`. If `ldump` is not loaded, then a single hook suffices for normal L^AT_EX processing.

The default definition of `\AfterBeginDocument` cannot be done by `\let` because of problems with `xypic`.

```

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

```

4.3 Switches

```

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

```

```

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

```

Defaults for the switches are now set.

```

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

```

```

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

```

5 Common help macros

\Hy@StepCount

```

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

```

\Hy@GlobalStepCount

```

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

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

```

5.1 Macros for recursions

\Hy@ReturnAfterElseFi The commands \Hy@ReturnAfterElseFi and \Hy@ReturnAfterFi avoid a too deep \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 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).

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

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

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

Example (T_EX):

```

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

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

```

```

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

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

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

6.2 Definition of `\pdfstringdef`

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

Important: In $\text{T}_{\text{E}}\text{X}$'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 $\text{T}_{\text{E}}\text{X}$ 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 $\text{T}_{\text{E}}\text{X}$ 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 $\text{T}_{\text{E}}\text{X}$, 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
457 \let\phantom\@gobble
458 \let\vphantom\@gobble
459 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

461 \def\MakeUppercase{\MakeUppercaseIsNotSupportedInPdfStrings}%
462 \def\MakeLowercase{\MakeLowercaseIsNotSupportedInPdfStrings}%

```

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

```

463 \let\textlatin\@firstofone
464 \@ifundefined{language@group}{\}%
465 \csname HyPsd@babel@language@group\endcsname
466 }%
467 \HyPsd@GreekPatch

```

```

468 \let\@safe@activetrue\relax
469 \let\@safe@activesfalse\relax
    Disable \cyr, used in russianb.ldf.
470 \let\cyr\relax
    Redefine \es@roman, used in spanish.ldf.
471 \let\es@roman\@Roman

```

Package german.

```

472 \let\glqq\textglqq
473 \let\grqq\textgrqq
474 \let\glq\textglq
475 \let\grq\textgrq
476 \let\flqq\textflqq
477 \let\frqq\textfrqq
478 \let\flq\textflq
479 \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}
480 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

481 \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.

```

482 \let\hspace\HyPsd@hspace

```

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

```

483 \let\label\@gobble
484 \let\index\@gobble
485 \let\glossary\@gobble
486 \let\href\@secondoftwo
487 \let\@mkboth\@gobbletwo

```

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

```

488 \let\ref\HyPsd@ref
489 \let\pageref\HyPsd@pageref
490 \let\nameref\HyPsd@nameref
491 \let\autoref\HyPsd@autoref

```

Miscellaneous commands.

```

492 \let\leavevmode\@empty
493 \let\mbox\@empty

```

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

```

494 \def\halign{\pdfstringdefWarn\halign\@gobble}%
495 \let\ignorespaces\HyPsd@ignorespaces

```

Patch for cjk bookmarks.

```
496 \ifHy@CJKbookmarks
497 \HyPsd@CJKhook
498 \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`).

```
499 \Hy@pdfstringtrue
500 \pdfstringdefPreHook
```

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

```
501 \HyPsd@LetUnexpandableSpace\space
502 \HyPsd@LetUnexpandableSpace\ %
503 \HyPsd@LetUnexpandableSpace~%
504 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
505 \@ifundefined{@xspace}{%
506 \let\xspace\HyPsd@ITALCORR
507 }{%
508 \let\xspace\HyPsd@XSPACE
509 }%
510 \let\/\HyPsd@ITALCORR
511 \let\bgroup\/%
512 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
513 \let\discretionary\@gobbletwo
\@ifstar is defined in  $\text{\LaTeX}$  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 expandable 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:

```
514 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
515 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
516 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
517 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
518 \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 be 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 PDF1 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).

```
519 \begingroup
520 \let\GenericError\@gobblefour
521 \let\GenericWarning\@gobbletwo
522 \let\GenericInfo\@gobbletwo
```

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

```
523 \ifx\nofrenchguillemets\@undefined
524 \else
525 \nofrenchguillemets
526 \fi
```

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

```
527 \let\Hy@temp\xdef
528 \let\def\HyPsd@DefCommand
529 \let\gdef\HyPsd@DefCommand
```

```

530      \let\edef\HyPsd@DefCommand
531      \let\xdef\HyPsd@DefCommand
532      \let\futurelet\HyPsd@LetCommand
533      \let\let\HyPsd@LetCommand
534      \Hy@temp#1{#2}%
535      \endgroup

```

6.2.3 Postprocessing

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

```

536      \ifx#1\@empty
537      \else

```

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

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

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

```

538      \HyPsd@ProtectSpaces#1%
539      \let\HyPsd@String\@empty
540      \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
541      \global\let#1\HyPsd@String

```

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

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

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

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

```

542 \let\HyPsd@SPACEOPTI\relax
543 {%
544 \let\HyPsd@String\@empty
545 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@End
546 \global\let#1\HyPsd@String
547 }%
548 \expandafter\HyPsd@RemoveMask\expandafter
549 |\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.

```

550 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
551 \let\HyPsd@String\@empty
552 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
553 \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.

```
554 \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.1df can produce an additional space before \guillemotright, because \lastskip and \unskip do not work. Therefore it is removed here.

```

555 \ifHy@unicode
556 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
557 \HyPsd@SPACEOPTI#1%
558 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
559 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
560 {\HyPsd@SPACEOPTI\80\273}#1%
561 \else
562 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
563 \expandafter\HyPsd@Subst\expandafter{%
564 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
565 \string\273}{\HyPsd@SPACEOPTI\273}#1%
566 \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.


```

567 \ifHy@unicode
568 \HyPsd@StringSubst{\}){\80\051}#1%
569 \HyPsd@Subst){\80\051}#1%
570 \let\HyPsd@empty\relax
571 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
572 {\HyPsd@empty\80\051}#1%
573 \else
574 \HyPsd@StringSubst{\}){\051}#1%
575 \HyPsd@Subst){\051}#1%
576 \let\HyPsd@empty\relax
577 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\})#1%
578 \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`.

```

579 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
580 \@ifundefined{@xspace}{%
581 }{%
582 \let\HyPsd@xspace\relax
583 \expandafter\HyPsd@Subst\expandafter
584 {\HyPsd@XSPACE}\HyPsd@xspace#1%
585 \let\HyPsd@xspace\HyPsd@doxspace
586 }%
587 \xdef#1{#1\HyPsd@empty}%

```

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

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

```

588 \HyPsd@Subst{---}\textemdash#1%
589 \HyPsd@Subst{--}\textendash#1%
590 % \HyPsd@Subst{fi}\textfi#1%
591 % \HyPsd@Subst{fl}\textfl#1%
592 \HyPsd@Subst{!'}\texttexclamdown#1%
593 \HyPsd@Subst{?'}\textquestiondown#1%

```

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

```

594 \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.

```

595     \ifHy@unicode
596         \HyPsd@StringSubst\(\textparenleft#1%
597         \HyPsd@Subst(\textparenleft#1%
598     \else
599         \HyPsd@StringSubst\({\050}#1%
600         \HyPsd@Subst({\050}#1%
601         \HyPsd@StringSubst{\050}{\string\()}#1%
602     \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.

```

603     \ifHy@unicode
604         \edef\HyPsd@SPACEOPTI{\80\040}%
605     \else
606         \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
607     \fi
608     \xdef#1{#1\@empty}%
609 \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.

```

610 \endgroup
611 \begingroup
612     \ifHy@unicode
613         \HyPsd@ConvertToUnicode#1%

```

Try conversion back to PDFDocEncoding.

```

614     \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
615         \ifundefined{StringEncodingConvertTest}{%
616             {%
617                 \EdefUnescapeString\HyPsd@temp#1%
618                 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
619                     {utf16be}{pdfdoc}{%
620                     \EdefEscapeString\HyPsd@temp\HyPsd@temp
621                     \global\let#1\HyPsd@temp
622                     \Hy@unicodedefalse
623                 }{}%
624             }%
625         \fi
626     \fi

```

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

```

627     \pdfstringdefPostHook#1%
628 \endgroup
629 }

```

`\Hy@pdfstringdef`

```
630 \def\Hy@pdfstringdef#1#2{%
631   \pdfstringdef\Hy@gtemp{#2}%
632   \let#1\Hy@gtemp
633 }
```

6.3 Encodings

6.3.1 Workaround for package linguex

```
634 \@ifpackageloaded{linguex}{%
635   \let\HyLinguex@OrgB\b
636   \let\HyLinguex@OrgC\c
637   \let\HyLinguex@OrgD\d
638   \def\HyLinguex@Restore{%
639     \let\b\HyLinguex@OrgB
640     \let\c\HyLinguex@OrgC
641     \let\d\HyLinguex@OrgD
642   }%
643   \AtEndOfPackage{%
644     \pdfstringdefDisableCommands{%
645       \@ifundefined{oldb}{\let\b\oldb}%
646       \@ifundefined{oldc}{\let\c\oldc}%
647       \@ifundefined{oldd}{\let\d\oldd}%
648     }%
649   }%
650 }{%
651   \let\HyLinguex@Restore\relax
652 }%
```

6.3.2 PD1 encoding

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

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

```
653 \@ifundefined{T@PD1}{%
654   \input{pd1enc.def}%
655   \HyLinguex@Restore
656 }{}
657 \DeclareFontFamily{PD1}{pdf}{}
658 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
659 \DeclareFontSubstitution{PD1}{pdf}{m}{n}
```

6.3.3 PU encoding

The PU encoding implements the Unicode encoding for use with L^AT_EX's NFSS. Because of large memory requirements the encoding file for Unicode support is only loaded, if option unicode is specified as package option.

`\HyPsd@InitUnicode` Because the file puenc.def takes a lot of memory, the loading is defined in the macro `\HyPsd@InitUnicode` called by the package option unicode.

```
660 \def\HyPsd@InitUnicode{%
661   \@ifundefined{T@PU}{%
```

```

662 \input{puenc.def}%
663 \HyLinguex@Restore
664 }{}%
665 \DeclareFontFamily{PU}{pdf}{}%
666 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
667 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
668 \let\HyPsd@InitUnicode\relax
669 }

```

6.4 Additional user commands

6.4.1 `\texorpdfstring`

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

```

670 \def\texorpdfstring{%
671   \ifHy@pdfstring
672     \expandafter\@secondoftwo
673   \else
674     \expandafter\@firstoftwo
675   \fi
676 }

```

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`.

```

677 \@ifundefined{pdfstringdefPreHook}{%
678   \let\pdfstringdefPreHook\@empty
679 }{}
680 \@ifundefined{pdfstringdefPostHook}{%
681   \let\pdfstringdefPostHook\@gobble
682 }{}

```

`\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`.

```

683 \def\pdfstringdefDisableCommands{%
684   \begingroup
685     \makeatletter
686     \HyPsd@DisableCommands
687 }

```

`\HyPsd@DisableCommands`

```
688 \long\def\HyPsd@DisableCommands#1{%
689   \toks0=\expandafter{\pdfstringdefPreHook}%
690   \toks1={#1}%
691   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
692 \endgroup
693 }
```

`\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`.

```
694 \def\pdfstringdefWarn#1{%
695   \expandafter\noexpand\csname\<>-string#1\endcsname
696 }
```

6.5 Help macros for expansion

6.5.1 `\ignorespaces`

`\HyPsd@ignorespaces` With the help of a trick using `\romannumeral` the effect of `\ignorespaces` can be simulated a little, In a special case using an alphabetic constant `\romannumeral` eats an optional space. If the constant is zero, then the `\romannumeral` expression vanishes. The following macro uses this trick twice, thus `\HyPsd@ignorespaces` eats up to two following spaces.

```
697 \begingroup
698   \catcode0=12 %
699   \def\x{\endgroup
700     \def\HyPsd@ignorespaces{%
701       \romannumeral\expandafter'\expandafter^^@%
702       \romannumeral'^^@%
703     }%
704   }%
705 \x
```

6.5.2 Babel languages

```
706 \newif\ifHy@next

Nothing to do for english.
707 \@ifundefined{danish@sh@"@sel}{-}{%
708   \def\HyPsd@babel@danish{%
709     \declare@shorthand{danish}{-}{-}%
710     \declare@shorthand{danish}{-}{-}%
711   }%
712 }
713 \@ifundefined{dutch@sh@"@sel}{-}{%
714   \def\HyPsd@babel@dutch{%
715     \declare@shorthand{dutch}{-}{-}%
716     \declare@shorthand{dutch}{-}{-}%
717   }%
718 }
```

```

719 \@ifundefined{finnish@sh@"@sel}{-}{%
720   \def\HyPsd@babel@finnish{%
721     \declare@shorthand{finnish}{-}{-}%
722   }%
723 }
724 \@ifundefined{french@sh@"@sel}{-}{%
725   \def\HyPsd@babel@frenchb{%
726     \def\guill@spacing{ }%
727   }%
728 }
729 \@ifundefined{german@sh@"@sel}{-}{%
730   \def\HyPsd@babel@german{%
731     \declare@shorthand{german}{f}{f}%
732     \declare@shorthand{german}{-}{-}%
733     \declare@shorthand{german}{~}{-}%
734   }%
735 }
736 \@ifundefined{macedonian@sh@"@sel}{-}{%
737   \def\HyPsd@babel@macedonian{%
738     \declare@shorthand{macedonian}{-}{-}%
739     \declare@shorthand{macedonian}{~}{-}%
740   }%
741 }{-}
742 \@ifundefined{ngerman@sh@"@sel}{-}{%
743   \def\HyPsd@babel@ngerman{%
744     \declare@shorthand{ngerman}{-}{-}%
745     \declare@shorthand{ngerman}{~}{-}%
746   }%
747 }
748 \@ifundefined{portuges@sh@"@sel}{-}{%
749   \def\HyPsd@babel@portuges{%
750     \declare@shorthand{portuges}{-}{-}%
751   }%
752 }
753 \@ifundefined{russian@sh@"@sel}{-}{%
754   \def\HyPsd@babel@russian{%
755     \declare@shorthand{russian}{-}{-}%
756     \declare@shorthand{russian}{~}{-}%
757   }%
758 }
759 \@ifundefined{slovene@sh@"@sel}{-}{%
760   \def\HyPsd@babel@slovene{%
761     \declare@shorthand{slovene}{-}{-}%
762   }%
763 }

```

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

```

764 \@ifundefined{spanish@sh@>@sel}{-}{%
765   \def\HyPsd@babel@spanish{%
766     \declare@shorthand{spanish}{<<}{\guillemotleft}%
767     \declare@shorthand{spanish}{>>}{\guillemotright}%
768     \declare@shorthand{spanish}{=}{-}%
769     \declare@shorthand{spanish}{~}{-}%
770     \declare@shorthand{spanish}{!}{\textexclamdown}%
771     \declare@shorthand{spanish}{?}{\textquestiondown}%
772   }%
773 }
774 \@ifundefined{swedish@sh@"@sel}{-}{%

```

```

775 \def\HyPsd@babel@swedish{%
776   \declare@shorthand{swedish}{"}{|}%
777   \declare@shorthand{swedish}{"}{|}%
778 }%
779 }
780 \@ifundefined{ukrainian@sh@"@sel}{|}%
781 \def\HyPsd@babel@ukrainian{%
782   \declare@shorthand{ukrainian}{"}{|}%
783   \declare@shorthand{ukrainian}{"}{|}%
784 }%
785 }
786 \@ifundefined{usorbian@sh@"@sel}{|}%
787 \def\HyPsd@babel@usorbian{%
788   \declare@shorthand{usorbian}{"}{|}%
789   \declare@shorthand{usorbian}{"}{|}%
790 }%
791 }
792 \@ifundefined{greek@sh@\string~@sel}{|}%
793 \let\HyPsd@GreekPatch\empty
794 }{|}%
795 \def\HyPsd@GreekPatch{%
796   \let\greeknumeral\HyPsd@greeknumeral
797   \let\Greeknumeral\HyPsd@Greeknumeral
798 }%
799 }
800 \def\HyPsd@greeknumeral#1{%
801   \HyPsd@GreekNum\@firstoftwo{#1}%
802 }
803 \def\HyPsd@Greeknumeral#1{%
804   \HyPsd@GreekNum\@secondoftwo{#1}%
805 }
806 \def\HyPsd@GreekNum#1#2{%
807   \ifHy@unicode
808     \ifnum#2<\@one
809       \@arabic{#2}%
810     \else
811       \ifnum#2<1000000 %
812         \HyPsd@@GreekNum#1{#2}%
813       \else
814         \@arabic{#2}%
815       \fi
816     \fi
817   \else
818     \@arabic{#2}%
819   \fi
820 }
821 \def\HyPsd@@GreekNum#1#2{%
822   \ifnum#2<\@m
823     \ifnum#2<10 %
824       \expandafter\HyPsd@GreekNumI
825       \expandafter\@gobble\expandafter#1\number#2%
826     \else
827       \ifnum#2<100 %
828         \expandafter\HyPsd@GreekNumII
829         \expandafter\@gobble\expandafter#1\number#2%
830       \else
831         \expandafter\HyPsd@GreekNumIII

```

```

832         \expandafter\@gobble\expandafter#1\number#2%
833     \fi
834 \fi
835 \ifnum#2>\z@
836     \textnumeralsigngreek
837 \fi
838 \else
839     \ifnum#2<\@M
840         \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
841     \else
842         \ifnum#2<100000 %
843             \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
844         \else
845             \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
846         \fi
847     \fi
848 \fi
849 }
850 \def\HyPsd@GreekNumI#1#2#3{%
851     #1{%
852         \ifnum#3>\z@
853             \textnumeralsignlowergreek
854         \fi
855     }%
856     \expandafter#2%
857     \ifcase#3 %
858         {}{}%
859     \or\textalpha\textAlpha
860     \or\textbeta\textBeta
861     \or\textgamma\textGamma
862     \or\textdelta\textDelta
863     \or\textepsilon\textEpsilon
864     \or\textstigmagreek\textStigmagreek
865     \or\textzeta\textZeta
866     \or\texteta\textEta
867     \or\texttheta\textTheta
868     \else
869         {}{}%
870     \fi
871 }
872 \def\HyPsd@GreekNumII#1#2#3#4{%
873     #1{%
874         \ifnum#3>\z@
875             \textnumeralsignlowergreek
876         \fi
877     }%
878     \expandafter#2%
879     \ifcase#3 %
880         {}{}%
881     \or\textiota\textIota
882     \or\textkappa\textKappa
883     \or\textlambda\textLambda
884     \or\textmu\textMu
885     \or\textnu\textNu
886     \or\textxi\textXi
887     \or\textomicron\textOmicron
888     \or\textpi\textPi

```



```

889 \or\textkoppagreek\textKoppagreek
890 \else
891   {}{}%
892 \fi
893 \HyPsd@GreekNumI#1#2#4%
894 }
895 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
896   #1{%
897     \ifnum#3>\z@
898       \textnumeralsignlowergreek
899     \fi
900   }%
901   \expandafter#2%
902   \ifcase#3 %
903     {}{}%
904   \or\textrho\textRho
905   \or\textsigma\textSigma
906   \or\texttau\textTau
907   \or\textupsilon\textUpsilon
908   \or\textphi\textPhi
909   \or\textchi\textChi
910   \or\textpsi\textPsi
911   \or\textomega\textOmega
912   \or\textsampigreek\textSampigreek
913   \else
914     {}{}%
915   \fi
916   \HyPsd@GreekNumII#1#2#4#5%
917 }
918 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
919   \HyPsd@GreekNumI\@firstofone#1#2%
920   \HyPsd@@GreekNum#1{#3#4#5}%
921 }
922 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
923   \HyPsd@GreekNumII\@firstofone#1#2#3%
924   \HyPsd@@GreekNum#1{#4#5#6}%
925 }
926 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
927   \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
928   \HyPsd@@GreekNum#1{#5#6#7}%
929 }

```

6.5.3 CJK bookmarks

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

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

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

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

```

930 \begingroup
931   \catcode"7F=\active
932   \toks@{%
933     \let\CJK@ignorespaces\empty

```

```

934 \def\CJK@char#1{\@gobbletwo}%
935 \let\CJK@charx\@gobblefour
936 \let\CJK@punctchar\@gobblefour
937 \def\CJK@punctcharx#1{\@gobblefour}%
938 \catcode"7F=\active
939 \def^^7f#1^^7f#2^^7f{%
940   \string #1\HyPsd@DecimalToOctal{#2}%
941 }%
942 % ... ?
943 \ifHy@unicode
944   \def\Hy@cjkpu{\80}%
945   \else
946     \let\Hy@cjkpu\@empty
947   \fi
948   \HyPsd@CJKActiveChars
949 }%
950 \count@=127 %
951 \@whilenum\count@<255 \do{%
952   \advance\count@ by 1 %
953   \lccode'\~=\count@
954   \lowercase{%
955     \toks@\expandafter{\the\toks@ ~}%
956   }%
957 }%
958 \toks@\expandafter{\the\toks@ !}%
959 \xdef\HyPsd@CJKhook{\the\toks@}%
960 \endgroup

```

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

```

961 \def\HyPsd@CJKActiveChars#1{%
962   \ifx#1!%
963     \let\HyPsd@CJKActiveChars\relax
964   \else
965     \edef#1{\noexpand\Hy@cjkpu\string#1}%
966   \fi
967   \HyPsd@CJKActiveChars
968 }

```

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

```

969 \def\HyPsd@DecimalToOctal#1{%
970   \ifcase #1 %
971     \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
972     \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
973     \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
974     \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
975     \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
976     \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
977     \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
978     \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
979     \or @\or A\or B\or C\or D\or E\or F\or G%
980     \or H\or I\or J\or K\or L\or M\or N\or O%
981     \or P\or Q\or R\or S\or T\or U\or V\or W%
982     \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
983     \or \140\or a\or b\or c\or d\or e\or f\or g%
984     \or h\or i\or j\or k\or l\or m\or n\or o%
985     \or p\or q\or r\or s\or t\or u\or v\or w%

```

```

986 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
987 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
988 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
989 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
990 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
991 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
992 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
993 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
994 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
995 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
996 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
997 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
998 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
999 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1000 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1001 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1002 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1003 \fi
1004 }

```

6.5.4 \@inmathwarn-Patch

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

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

```

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

```

```

    }\@eha}
\def\@inmathwarn#1{%
  \ifmmode
    \@latex@warning{Command \protect#1 invalid in math mode}%
  \fi}

1005 \def\HyPsd@inmathwarn#1#2{%
1006   \ifx#2\expandafter
1007     \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1008       \HyPsd@GLYPHERR
1009       \expandafter\@gobble\string#1%
1010       >%
1011       \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1012     \else
1013       \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1014     \fi
1015   \else
1016     \expandafter#2%
1017   \fi
1018 }
1019 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1020 \def\HyPsd@EndWithElse#1\else\else{}

```

\HyPsd@add@accent

```

1021 \def\HyPsd@add@accent#1#2{%
1022   \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1023   #2%
1024 }%

```

6.5.5 Unexpandable spaces

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

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

These properties are used in \HyPsd@CheckCatcodes.

```

1025 \def\HyPsd@LetUnexpandableSpace#1{%
1026   \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1027 }

```

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

```

1028 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.6 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.

\HyPsd@ITALCORR
\HyPsd@GLYPHERR

```

1029 \edef\HyPsd@XSPACE{\string#\string X}
1030 \edef\HyPsd@ITALCORR{\string#\string I}
1031 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.7 \hspace fix

\HyPsd@hspace

```
1032 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*\END}
```

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

```
1033 \def\HyPsd@@hspace#1*#2\END{%
1034   \ifx\#2\%
1035     \HyPsd@hspacetest{#1}%
1036   \else
1037     \expandafter\HyPsd@hspacetest
1038   \fi
1039 }
```

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

```
1040 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.8 Fix for AMS classes

```
1041 \@ifundefined{tocsection}{%
1042   \let\HyPsd@AMSclassfix\relax
1043 }{%
1044   \def\HyPsd@AMSclassfix{%
1045     \let\tocpart\HyPsd@tocsection
1046     \let\tocchapter\HyPsd@tocsection
1047     \let\tocappendix\HyPsd@tocsection
1048     \let\tocsection\HyPsd@tocsection
1049     \let\tocsubsection\HyPsd@tocsection
1050     \let\tocsubsubsection\HyPsd@tocsection
1051     \let\tocparagraph\HyPsd@tocsection
1052   }%
1053   \def\HyPsd@tocsection#1#2#3{%
1054     \if @#2@\else\if @#1@\else#1 \fi#2. \fi
1055     #3%
1056   }%
1057 }
```

6.5.9 Reference commands

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

```
1058 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

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

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

```
1066 \def\HyPsd@@@ref#1{%
1067   \expandafter\ifx\csname r@#1\endcsname\relax
1068     ??%
```

```

1069 \else
1070   \expandafter\expandafter\expandafter
1071   \@car\csname r@#1\endcsname\@nil
1072 \fi
1073 }

\HyPsd@pageref Macro \HyPsd@pageref calls the macro \HyPsd@@pageref for star checking. The same
methods like in \HyPsd@hspace is used.
1074 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

\HyPsd@@pageref Macro \HyPsd@@pageref checks if a star is present.
1075 \def\HyPsd@@pageref#1*#2\END{%
1076   \ifx\#2\%
1077     \HyPsd@@@pageref{#1}%
1078   \else
1079     \expandafter\HyPsd@@@pageref
1080   \fi
1081 }

\HyPsd@@@pageref \HyPsd@@@pageref does the work and extracts the second argument.
1082 \def\HyPsd@@@pageref#1{%
1083   \expandafter\ifx\csname r@#1\endcsname\relax
1084     ??%
1085   \else
1086     \expandafter\expandafter\expandafter\expandafter
1087     \expandafter\expandafter\expandafter\@car
1088     \expandafter\expandafter\expandafter\@gobble
1089     \csname r@#1\endcsname{}\@nil
1090   \fi
1091 }

\HyPsd@nameref Macro \HyPsd@nameref calls the macro \HyPsd@@nameref for star checking. The same
methods like in \HyPsd@hspace is used.
1092 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

\HyPsd@@nameref Macro \HyPsd@@nameref checks if a star is present.
1093 \def\HyPsd@@nameref#1*#2\END{%
1094   \ifx\#2\%
1095     \HyPsd@@@nameref{#1}%
1096   \else
1097     \expandafter\HyPsd@@@nameref
1098   \fi
1099 }

\HyPsd@@@nameref \HyPsd@@@nameref does the work and extracts the third argument.
1100 \def\HyPsd@@@nameref#1{%
1101   \expandafter\ifx\csname r@#1\endcsname\relax
1102     ??%
1103   \else
1104     \expandafter\expandafter\expandafter\expandafter
1105     \expandafter\expandafter\expandafter\@car
1106     \expandafter\expandafter\expandafter\@gobbletwo
1107     \csname r@#1\endcsname{}\@nil
1108   \fi
1109 }

```

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

```
1110 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1111 \def\HyPsd@@autoref#1*#2\END{%
1112   \ifx\#2\%
1113     \HyPsd@@@autoref{#1}%
1114   \else
1115     \expandafter\HyPsd@@@autoref
1116   \fi
1117 }
```

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

```
1118 \def\HyPsd@@@autoref#1{%
1119   \expandafter\ifx\csname r@#1\endcsname\relax
1120     ??%
1121   \else
1122     \expandafter\expandafter\expandafter\HyPsd@autorefname
1123       \csname r@#1\endcsname{}{}{}{}\@nil
1124     \expandafter\expandafter\expandafter
1125       \@car\csname r@#1\endcsname\@nil
1126   \fi
1127 }
```

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

```
1128 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1129   \ifx\#4\%
1130   \else
1131     \HyPsd@@autorefname#4.\@nil
1132   \fi
1133 }
```

`\HyPsd@@autorefname`

```
1134 \def\HyPsd@@autorefname#1.#2\@nil{%
1135   \@ifundefined{#1autorefname}{%
1136     \@ifundefined{#1name}{%
1137       }{%
1138         \csname#1name\endcsname\space
1139       }%
1140     }{%
1141       \csname#1autorefname\endcsname\space
1142     }%
1143 }
```

6.5.10 Redefining the defining commands

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

Active characters cannot be defined with this trick. It is possible to define all undefined active characters (perhaps that they have the meaning of `\relax`). To avoid side

effects this should be done in `\pdfstringdef` shortly before the `\xdef` job. But checking and defining all possible active characters of the full range (0 until 255) would take a while. `\pdfstringdef` is slow enough, so this isn't done.

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

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

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

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

```
\HyPsd@DefCommand
\HyPsd@LetCommand 1144 \begingroup
1145   \def\x#1#2{%
1146     \endgroup
1147     \let#1\def
1148     \def\HyPsd@DefCommand##1##2##{%
1149       #1%
1150       \expandafter\noexpand
1151       \csname\expandafter@gobble\string##1\@empty\endcsname
1152       \@gobble
1153     }%
1154     \let#2\let
1155     \def\HyPsd@@LetCommand##1{%
1156       \expandafter\ifx\csname##1\expandafter\endcsname
1157         \csname iftrue\endcsname
1158         \pdfstringdefWarn\let
1159         \expandafter@gobble
1160       \else
1161         \expandafter\ifx\csname##1\expandafter\endcsname
1162           \csname iffalse\endcsname
1163           \pdfstringdefWarn\let
1164           \expandafter\expandafter\expandafter@gobble
1165         \else
1166           #2%
1167           \expandafter\noexpand
1168           \csname##1\expandafter\expandafter\expandafter\endcsname
1169         \fi
1170       \fi
1171     }%
1172   }%
1173   \expandafter\x\csname <def>-command\expandafter\endcsname
1174     \csname <let>-command\endcsname
1175   \def\HyPsd@LetCommand#1{%
1176     \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1177     \expandafter\expandafter\expandafter{%
1178     \expandafter@gobble\string#1\@empty
```



```

1179 }%
1180 }

```

6.5.11 \ifnextchar

`\HyPsd@ifnextchar` In `\pdfstringdef \@ifnextchar` is disabled via a `\let` command to save time. First a warning message is given, then the three arguments are canceled. `\@ifnextchar` cannot work in a correct manner, because it uses `\futurelet`, but this is a stomach feature, that doesn't work in an expanding context. There are several variants of `\@ifnextchar`:

- `\@ifnextchar`
- `\kernel@ifnextchar`
- `\new@ifnextchar` from package `amsgen.sty` (bug report latex/3662).

```

1181 \def\HyPsd@ifnextchar#1{%
1182   \pdfstringdefWarn#1%
1183   \expandafter\@gobbletwo\@gobble
1184 }

```

6.5.12 \@protected@testoptifnextchar

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

```

1185 \def\HyPsd@protected@testopt#1{%
1186   \pdfstringdefWarn#1%
1187   \@gobbletwo
1188 }

```

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:

```

1189 \def\HyPsd@Warning#1{%
1190   \begingroup
1191     \def\space{ }%
1192     \Hy@Warning{#1}%
1193   \endgroup
1194 }

```

6.6.2 Protecting spaces

```

1195 \RequirePackage{etexcmds}[2007/09/09]
1196 \ifetex@unexpanded
1197   \expandafter\@secondoftwo
1198 \else
1199   \expandafter\@firstoftwo
1200 \fi
1201 {%

```

`\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`.

```

1202 \def\HyPsd@ProtectSpaces#1{%
1203   \iftrue
1204     \expandafter\HyPsd@@ProtectSpacesFi
1205     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1206   \fi
1207 }%

```

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

```

1208 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1209   \fi
1210   \ifx\scrollmode#2\scrollmode
1211     \HyPsd@RemoveMask#1\HyPsd@End#3%
1212   \else
1213     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1214     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1215   \fi
1216 }%

```

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.

```

1217 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1218   \toks@{\expandafter{#1}}%
1219   \xdef#2{\the\toks@}%
1220 }%

1221 }{%
1222 \let\HyPsd@fi\fi
1223 \def\HyPsd@ProtectSpaces#1{%
1224   \xdef#1{%
1225     \iftrue
1226       \expandafter\HyPsd@@ProtectSpacesFi
1227       \expandafter|\expandafter\@empty#1| %
1228     \HyPsd@fi
1229   }%
1230   \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1231 }%
1232 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1233   \fi
1234   \etex@unexpanded{#1}%
1235   \ifx\scrollmode#2\scrollmode
1236   \else
1237     \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1238   \HyPsd@fi
1239 }%
1240 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1241   \xdef#2{\etex@unexpanded\expandafter{#1}}%
1242 }%
1243 }

```

6.6.3 Remove grouping braces

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

```

1244 \def\HyPsd@RemoveBraces#1{%
1245   \ifx\scrollmode#1\scrollmode
1246   \else
1247     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1248   \fi
1249 }

```

`\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`.

```

1250 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1251   \fi
1252   \def\Hy@temp@A{#1#2}%
1253   \def\Hy@temp@B{#3}%
1254   \ifx\Hy@temp@A\Hy@temp@B
1255     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1256       \HyPsd@String#1%
1257     }%
1258     \ifx\scrollmode#2\scrollmode
1259     \else
1260       \Hy@ReturnAfterFiFiEnd{%
1261         \HyPsd@RemoveBraces{#2}%
1262       }%
1263     \fi
1264   \else
1265     \def\Hy@temp@A{#1}%
1266     \HyPsd@AppendItalcorr\HyPsd@String
1267     \ifx\Hy@temp@A\@empty
1268       \Hy@ReturnAfterElseFiFiEnd{%
1269         \HyPsd@RemoveBraces{#2}%
1270       }%
1271     \else
1272       \HyPsd@ProtectSpaces\Hy@temp@A
1273       \HyPsd@AppendItalcorr\Hy@temp@A
1274       \Hy@ReturnAfterFiFiEnd{%
1275         \expandafter\HyPsd@RemoveBraces\expandafter
1276           {\Hy@temp@A#2}%
1277       }%
1278     \fi
1279   \fi
1280   \Hy@ReturnEnd
1281 }

```

`\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`.

```

1282 \def\HyPsd@AppendItalcorr#1{%
1283   \expandafter\HyPsd@@AppendItalcorr\expandafter{/}#1%
1284 }
1285 \def\HyPsd@@AppendItalcorr#1#2{%
1286   \expandafter\def\expandafter#2\expandafter{#2#1}%
1287 }

```

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`).

```
1288 \def\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1289   \global\let\HyPsd@Rest\relax
1290   \ifcat\relax\noexpand#1\relax
1291     \ifx#1\protect
1292     \else
1293       \ifx#1\penalty
1294         \setbox\z@=\hbox{%
1295           \afterassignment\HyPsd@AfterCountRemove
1296           \count@=#2\HyPsd@end
1297         }%
1298       \else
1299         \ifx#1\kern
1300         \setbox\z@=\hbox{%
1301           \afterassignment\HyPsd@AfterDimenRemove
1302           \dimen@=#2\HyPsd@end
1303         }%
1304       \else
1305         \ifx#1\hskip
1306         \setbox\z@=\hbox{%
1307           \afterassignment\HyPsd@AfterSkipRemove
1308           \skip@=#2\HyPsd@end
1309         }%
1310       \else
1311         \HyPsd@CatcodeWarning{#1}%
1312       \fi
1313     \fi
1314   \fi
1315 \fi
1316 \else
1317   \ifcat#1A% letter
1318   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1319     \HyPsd@String#1%
1320   }%
1321 \else
1322   \ifcat#1 % SPACE
1323   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1324     \HyPsd@String\HyPsd@SPACEOPTI
1325   }%
1326 \else
1327   \ifcat$#1%
1328   \HyPsd@CatcodeWarning{math shift}%
1329 \else
1330   \ifcat&#1%
1331   \HyPsd@CatcodeWarning{alignment tab}%
```

```

1332         \else
1333             \ifcat~#1%
1334                 \HyPsd@CatcodeWarning{superscript}%
1335             \else
1336                 \ifcat_#1%
1337                     \HyPsd@CatcodeWarning{subscript}%
1338                 \else
1339                     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1340                         \HyPsd@String#1%
1341                     }%
1342                 \fi
1343             \fi
1344         \fi
1345     \fi
1346 \fi
1347 \fi
1348 \fi
1349 \ifx\HyPsd@Rest\relax
1350     \ifx\scrollmode#2\scrollmode
1351     \else
1352         \Hy@ReturnAfterFiFiEnd{%
1353             \HyPsd@CheckCatcodes#2\HyPsd@End
1354         }%
1355     \fi
1356 \else
1357     \ifx\HyPsd@Rest\@empty
1358     \else
1359         \Hy@ReturnAfterFiFiEnd{%
1360             \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1361         }%
1362     \fi
1363 \fi
1364 \Hy@ReturnEnd
1365 }

```

Remove counts, dimens, skips.

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

```

1366 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1367     \gdef\HyPsd@Rest{#1}%
1368 }

```

\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.

```

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

```

1380 }

`\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).

```
1381 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1382   \ifdim\ifx\HyPsd@String\@empty\z@else\skip@fi>1ex %
1383     \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1384     \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1385   \else
1386     \ifdim\skip@=\z@
1387     \else
1388       \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1389     \fi
1390     \gdef\HyPsd@Rest{#1}%
1391   \fi
1392 }
```

Catcode warnings.

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

```
1393 \def\HyPsd@CatcodeWarning#1{%
1394   \HyPsd@Warning{%
1395     Token not allowed in a PDF string (%
1396     \ifHy@unicode
1397       Unicode%
1398     \else
1399       PDFDocEncoding%
1400     \fi
1401     ):%
1402     \MessageBreak removing ‘\HyPsd@RemoveCmdPrefix#1’%
1403   }%
1404 }
1405 \begingroup
1406   \catcode'\|=0 %
1407   \catcode'\|=12 %
1408   \gdef\HyPsd@RemoveCmdPrefix#1{%
1409     \expandafter\HyPsd@@RemoveCmdPrefix
1410     \string#1\@empty\<>-|\@empty|\@empty
1411   }%
1412   \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2|\@empty#3|\@empty{#1#2}%
1413 \endgroup
```

`\HyPsd@RemoveSpaceWarning`

```
1414 \def\HyPsd@RemoveSpaceWarning#1{%
1415   \HyPsd@Warning{%
1416     Token not allowed in a PDF string (%
1417     \ifHy@unicode
1418       Unicode%
1419     \else
1420       PDFDocEncoding%
1421     \fi
1422     ):%
1423     \MessageBreak #1\MessageBreak
1424     removed%
1425   }%
1426 }
```

\HyPsd@ReplaceSpaceWarning

```
1427 \def\HyPsd@ReplaceSpaceWarning#1{%
1428   \HyPsd@Warning{%
1429     Token not allowed in a PDF string (%)
1430     \ifHy@unicode
1431       Unicode%
1432     \else
1433       PDFDocEncoding%
1434     \fi
1435   }:%
1436   \MessageBreak #1\MessageBreak
1437   replaced by space%
1438 }%
1439 }
```

6.6.5 Check for wrong glyphs

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

```
1440 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1441   \expandafter\def\expandafter\HyPsd@String\expandafter{%
1442     \HyPsd@String#1%
1443   }%
1444   \ifx\#2\%
1445   \else
1446     \Hy@ReturnAfterFi{%
1447       \HyPsd@GlyphProcessWarning#2\@empty
1448     }%
1449   \fi
1450 }
1451 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
1452   \HyPsd@@GlyphProcessWarning#1++>%
1453   \HyPsd@GlyphProcess#2\@empty
1454 }
1455 \def\HyPsd@@GlyphProcessWarning#1+#2+#3>{%
1456   \ifx\#2\%
1457     \HyPsd@Warning{%
1458       Glyph not defined in %
1459       P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
1460       removing ‘\@backslashchar#1’%
1461     }%
1462   \else
1463     \HyPsd@Warning{%
1464       Composite letter ‘\@backslashchar#1+#2’\MessageBreak
1465       not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
1466       \MessageBreak
1467       removing ‘\@backslashchar#1’%
1468     }%
1469   \fi
1470 }
```

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.

```

1471 \def\HyPsd@spaceopti#1{ % first space
1472   \ifx\HyPsd@spaceopti#1%
1473     \040%
1474   \else
1475     #1%
1476   \fi
1477 }%

```

6.6.6 Replacing tokens

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

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

```

1478 \def\HyPsd@Subst#1#2#3{%
1479   \def\HyPsd@@ReplaceFi##1#1##2\END\fi{%
1480     \fi
1481     ##1%
1482     \ifx\scrollmode##2\scrollmode
1483     \else
1484       #2%
1485       \HyPsd@@ReplaceFi##2\END
1486     \fi
1487   }%
1488   \xdef#3{%
1489     \iftrue
1490       \expandafter\HyPsd@@ReplaceFi#3#1\END
1491     \fi
1492   }%
1493 }

```

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

```

1494 \def\HyPsd@StringSubst#1{%
1495   \expandafter\HyPsd@Subst\expandafter{\string#1}%
1496 }

```

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.

```

1497 \def\HyPsd@doxspace#1{%
1498   \ifx#1\relax\else
1499   \ifx#1.\else
1500   \ifx#1:\else
1501   \ifx#1,\else
1502   \ifx#1;\else
1503   \ifx#1!\else
1504   \ifx#1?\else
1505   \ifx#1/\else
1506   \ifx#1-\else
1507   \ifx#1'\else
1508     \HyPsd@SPACEOPTI
1509   \fi

```



```

1510         \fi
1511         \fi
1512         \fi
1513         \fi
1514         \fi
1515         \fi
1516         \fi
1517         \fi
1518         \fi
1519         #1%
1520 }%

```

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.

```

1521 \begingroup
1522   \catcode'\|=0 %
1523   \catcode'\|=12 %

```

\HyPsd@ConvertToUnicode

```

1524 |gdef|HyPsd@ConvertToUnicode#1{%
1525   |xdef#1{%
1526     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
1527   }%
1528   |ifx#1|@empty
1529   |else
1530     |xdef#1{%
1531       \376\377%
1532       #1%
1533     }%
1534   |fi
1535 }%

```

\HyPsd@DoConvert

```

1536 |gdef|HyPsd@DoConvert#1{%
1537   |ifx#1|@empty
1538   |else
1539     |Hy@ReturnAfterFi{%
1540       |ifx#1\%%
1541       \%%
1542       |expandafter|HyPsd@DoEscape
1543     |else
1544       |HyPsd@Char{#1}%
1545       |expandafter|HyPsd@DoConvert
1546     |fi
1547   }%
1548   |fi
1549 }%

```

\HyPsd@DoEscape

```

1550 |gdef|HyPsd@DoEscape#1{%
1551   |ifx#19%
1552   |expandafter|HyPsd@GetTwoBytes
1553   |else

```

```

1554 |Hy@ReturnAfterFi{%
1555 |ifx#18%
1556 00%
1557 |expandafter|HyPsd@GetTwoBytes
1558 |else
1559 #1%
1560 |expandafter|HyPsd@GetOneByte
1561 |fi
1562 }%
1563 |fi
1564 }%

```

\HyPsd@GetTwoBytes

```

1565 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
1566 #1\#2#3#4%
1567 |HyPsd@DoConvert
1568 }%

```

\HyPsd@GetOneByte

```

1569 |gdef|HyPsd@GetOneByte#1#2{%
1570 #1#2%
1571 |HyPsd@DoConvert
1572 }%
1573 |endgroup

```

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

```

1574 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
1575 \xdef#4{#4#1#2}%
1576 \HyPsd@@ConvertToUnicode#3\END#4%
1577 }

```

\HyPsd@Char

```

1578 \begingroup
1579 \catcode0=9 %
1580 \catcode'\^=7 %
1581 \catcode'\^^=12 %
1582 \def\x{^^^0000}%
1583 \expandafter\endgroup
1584 \ifx\x\@empty
1585 \def\HyPsd@Char#1{%
1586 \ifnum'#1<128 %
1587 \@backslashchar 000#1%
1588 \else
1589 \ifnum'#1<65536 %
1590 \expandafter\HyPsd@CharTwoByte\number'#1!%
1591 \else
1592 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
1593 \intcalcSub{ '#1}{65536}!%
1594 \fi
1595 \fi
1596 }%
1597 \def\HyPsd@CharTwoByte#1!{%
1598 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1599 \IntCalcDiv#1!256!!%
1600 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1601 \IntCalcMod#1!256!!%
1602 }%

```

```

1603 \def\HyPsd@CharOctByte#1!{%
1604   \@backslashchar
1605   \IntCalcDiv#1!64!%
1606   \intcalcDiv{\IntCalcMod#1!64!}{8}%
1607   \IntCalcMod#1!8!%
1608 }%
1609 \def\HyPsd@CharSurrogate#1!{%
1610   \@backslashchar 33%
1611   \IntCalcDiv#1!262144!%
1612   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1613   \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
1614   \@backslashchar 33%
1615   \expandafter\expandafter\expandafter\IntCalcAdd
1616   \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
1617   \expandafter\expandafter\expandafter\HyPsd@CharOctByte
1618   \IntCalcMod#1!256!%
1619 }%
1620 \else
1621 \def\HyPsd@Char#1{%
1622   \@backslashchar 000#1%
1623 }%
1624 \fi

```

6.6.9 Support for UTF-8 input encoding

After `\usepackage[utf8]{inputenc}` there are macros that expect the UTF-8 octets as arguments. Therefore we can calculate the PDF octal sequences directly. Because the PDF format is limited to UCS-2, conversion macros are needed for UTF-8 sequences with two and three octets only.

This calculation must be done in an expandable context, so we use `eTeX` here for performance reasons. Unhappily the results of divisions are rounded. Thus a circumvention via `\dimexpr` is used, e.g.:

```

\numexpr 123/4\relax is replaced by
\number\dimexpr.25\dimexpr 123sp\relax\relax

1625 \begingroup\expandafter\expandafter\expandafter\endgroup
1626 \expandafter\ifx\csname numexpr\endcsname\relax
1627   \let\HyPsd@UTFviii\relax
1628 \else
1629   \begingroup
1630     \lccode'\~='^^f4\relax
1631   \lowercase{\endgroup
1632     \def\HyPsd@UTFviii{%
1633       \let\UTFviii@two@octets\HyPsd@UTFviii@two
1634       \let\UTFviii@three@octets\HyPsd@UTFviii@three
1635       \let\UTFviii@four@octets\HyPsd@UTFviii@four
1636       \ifx~\HyPsd@UTFviii@ccxliv@undef
1637         \let~\HyPsd@UTFviii@ccxliv@def
1638       \fi
1639       \let\unichar\HyPsd@unichar
1640     }%
1641   }%
1642   \def\HyPsd@UTFviii@ccxliv@undef{\@inpencl@undefined@{utf8}}%
1643   \edef\HyPsd@UTFviii@ccxliv@def{%
1644     \noexpand\UTFviii@four@octets\string ^^f4%
1645   }%

```

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.

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

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

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

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

$$(5)$$

```

1646 \def\HyPsd@UTFviii@two#1#2{%
1647   \expandafter\HyPsd@UTFviii@two
1648   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1649   \number'#1\expandafter|
1650   \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter|
1651   \number'#2 \@nil
1652 }%
1653 \def\HyPsd@UTFviii@two#1|#2|#3|#4\@nil{%
1654   \expandafter\8%
1655   \number\numexpr #1-48\expandafter\relax
1656   \csname\number\numexpr #2-4*#1\relax\expandafter\endcsname
1657   \number\numexpr #3-8*%
1658   \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
1659   \number\numexpr #4-8*#3\relax
1660 }%
```

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

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

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

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

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

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

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

$$(12)$$

```

1661 \def\HyPsd@UTFviii@three#1#2#3{%
1662   \expandafter\HyPsd@UTFviii@three
1663   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter|
1664   \number'#1\expandafter|
1665   \number\ifnum\numexpr'#2-128\relax <32 0\else 1\fi\expandafter|
1666   \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter|
1667   \number'#2\expandafter|
1668   \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter|
1669   \number'#3 \@nil
1670 }%
1671 \def\HyPsd@UTFviii@three#1|#2|#3|#4|#5|#6|#7\@nil{%
1672   \expandafter\9%
1673   \number\numexpr #1-56\expandafter\relax
1674   \number\numexpr 2*(#2-4*#1)+#3\expandafter\relax
1675   \number\numexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
1676   \csname\number\numexpr #5-4*#4\relax\expandafter\endcsname
1677   \number\numexpr #6-16\expandafter\relax
1678   \number\numexpr #7-8*#6\relax
1679 }%
```

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
```

```
1680 \def\HyPsd@UTFviii@four#1#2{%
1681   \expandafter\HyPsd@UTFviii@four\number
1682   \numexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
1683   \expandafter|\number
1684   \numexpr'#2-16*\dimexpr.0625\dimexpr'#2sp|%
1685 }%
1686 \def\HyPsd@@UTFviii@four#1|#2|#3{%
1687   \933\number\dimexpr.25\dimexpr#1sp\relax\relax
1688   \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1689   \ifodd#2 %
1690     \number\dimexpr(#2-1)/2\relax
1691   \else
1692     \number\dimexpr#2/2\relax
1693   \fi
1694   \number\dimexpr\ifodd#2 4+\fi
1695   \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
1696   \933%
1697   \expandafter\HyPsd@@@UTFviii@four\number
1698   \numexpr'#3-16*\dimexpr.0625\dimexpr'#3sp|%
1699 }%
1700 \def\HyPsd@@@UTFviii@four#1|#2{%
1701   \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
1702   \csname\number\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
1703   \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
1704   \number\dimexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
1705 }%
```

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

```
1706 \def\HyPsd@unichar#1{%
1707   \ifHy@unicode
1708     \ifnum#1>"10FFFF %
1709       \HyPsd@UnicodeReplacementCharacter % illegal
1710     \else
1711       \ifnum#1>"FFFF %
```

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

```
1712   \expandafter\HyPsd@unichar\expandafter{%
1713     \number\dimexpr 55296+%
1714     \dimexpr.0009765625\dimexpr\number#1sp-\p@
1715     \relax\relax\relax
1716   }%
```

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

```
1717   \expandafter\HyPsd@unichar\expandafter{%
1718     \number\dimexpr#1-9216%
1719     -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
1720     \relax\relax\relax
1721   }%
1722   \else
1723     \ifnum#1>"7FF %
```

```

1724         \9%
1725         \expandafter\HyPsd@unichar@first@byte\expandafter{%
1726         \number
1727         \dimexpr.00390625\dimexpr\number#1sp\relax\relax
1728     }%
1729     \else
1730         \8%
1731         \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
1732     \fi
1733     \expandafter\HyPsd@unichar@second@byte\expandafter{%
1734     \number
1735     \numexpr#1-256*\number
1736     \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
1737 }%
1738 \fi
1739 \fi
1740 \else
1741     .% unsupported (Unicode -> PDF Doc Encoding)
1742 \fi
1743 }%
1744 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
1745 \def\HyPsd@unichar@first@byte#1{%
1746     \number\dimexpr.015625\dimexpr#1sp\relax\relax
1747     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1748     \number
1749     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1750     \relax\relax\relax
1751 }%
1752 }%
1753 \def\HyPsd@unichar@second@byte#1{%
1754     \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
1755     \expandafter\HyPsd@unichar@octtwo\expandafter{%
1756     \number
1757     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
1758     \relax\relax\relax
1759 }%
1760 }%
1761 \def\HyPsd@unichar@octtwo#1{%
1762     \number\dimexpr.125\dimexpr#1sp\relax\relax
1763     \number\numexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
1764     \relax\relax\relax
1765 }%
1766 \fi

```

7 Support of other packages

7.1 Class memoir

```

1767 \@ifclassloaded{memoir}{%
1768     \AtEndOfPackage{\RequirePackage{memhfixc}}}%
1769 }{}

```

7.2 Package subfigure

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

```

1770 \@ifpackageloaded{subfigure}{%
1771     \@ifundefined{sub@label}{%

```

```

1772 \Hy@hypertextnamesfalse
1773 }{%
1774 \renewcommand*{\sub@label}[1]{%
1775 \@bsphack
1776 \subfig@oldlabel{#1}%
1777 \if@filesw
1778 \begingroup
1779 \edef\@currentlabstr{%
1780 \expandafter\strip@prefix\meaning\@currentlabelname
1781 }%
1782 \protected@write\@auxout{}{%
1783 \string\newlabel{sub@#1}{%
1784 {\@nameuse{@@thesub\@capter}}%
1785 {\thepage}%
1786 }%
1787 \expandafter\strip@period\@currentlabstr
1788 \relax.\relax\@@%
1789 }%
1790 {\@currentHref}%
1791 {}%
1792 }%
1793 }%
1794 \endgroup
1795 \fi
1796 \@esphack
1797 }%
1798 \@ifpackagelater{subfigure}{2002/03/26}{-}{%
1799 \providecommand*{\toclevel@subfigure}{1}%
1800 \providecommand*{\toclevel@subtable}{1}%
1801 }%
1802 }%
1803 }{}

```

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:

```
1804 \@ifundefined{XR@addURL}{%
1805 }{%
```

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.

```

1806 \def\XR@addURL#1{\XR@dURL#1{-}{-}{-}\}%
1807 \def\XR@dURL#1#2#3#4#5\{\%
1808   {#1}{#2}%
1809   \if!#4!%
1810   \else
1811     {#3}{#4}{\XR@URL}%
1812   \fi
1813 }%
1814 }

```

```
1815 \def\Hy@true{true}
1816 \def\Hy@false{false}
```

Providing dummy definitions.

```
1817 \let\literalps@out\@gobble
1818 \newcommand\pdfbookmark[3][]{}
```

```

1819 \def\Acrobatmenu#1#2{\leavevmode#2}
1820 \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

```

1821 \let\HyperRaiseLinkHook\@empty
1822 \def\HyperRaiseLinkDefault{\baselineskip}

```

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

```

1823 \def\Hy@raisedlink#1{%
1824   \ifvmode
1825     #1%
1826   \else
1827     \penalty\@M
1828     \smash{%
1829       \begingroup
1830         \let\HyperRaiseLinkLength\@tempdima
1831         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
1832         \HyperRaiseLinkHook
1833       \expandafter\endgroup
1834       \expandafter\raise\the\HyperRaiseLinkLength\hbox{#1}%
1835     }%
1836   \fi
1837 }

```

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

```

1838 \def\Hy@SaveLastskip{%
1839   \let\Hy@RestoreLastskip\relax
1840   \ifvmode
1841     \ifdim\lastskip=\z@
1842       \let\Hy@RestoreLastskip\nobreak
1843     \else
1844       \begingroup
1845         \skip@=-\lastskip
1846         \edef\x{%
1847           \endgroup
1848           \def\noexpand\Hy@RestoreLastskip{%
1849             \noexpand\ifvmode
1850               \noexpand\nobreak
1851               \vskip\the\skip@
1852               \vskip\the\lastskip\relax
1853             \noexpand\fi
1854           }%
1855         }%

```



```

1856     \x
1857     \fi
1858   \else
1859     \ifhmode
1860       \ifdim\lastskip=\z@
1861         \let\Hy@RestoreLastskip\nobreak
1862       \else
1863         \begingroup
1864           \skip@=-\lastskip
1865           \edef\x{%
1866             \endgroup
1867             \def\noexpand\Hy@RestoreLastskip{%
1868               \noexpand\ifhmode
1869                 \noexpand\nobreak
1870                 \hskip\the\skip@
1871                 \hskip\the\lastskip\relax
1872             \noexpand\fi
1873           }%
1874         }%
1875       \x
1876     \fi
1877   \fi
1878 \fi
1879 }%

```

9 Options

9.1 Help macros

\Hy@boolkey

```

1880 \def\Hy@boolkey{\@dblarg\Hy@boolkey}
1881 \def\Hy@boolkey[#1]#2#3{%
1882   \edef\Hy@tempa{#3}%
1883   \lowercase\expandafter{%
1884     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
1885   }%
1886   \ifx\Hy@tempa\@empty
1887     \let\Hy@tempa\Hy@true
1888   \fi
1889   \ifx\Hy@tempa\Hy@true
1890   \else
1891     \ifx\Hy@tempa\Hy@false
1892     \else
1893       \let\Hy@tempa\relax
1894     \fi
1895   \fi
1896   \ifx\Hy@tempa\relax
1897     \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
1898   \else
1899     \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
1900     \csname Hy@#2\Hy@tempa\endcsname
1901   \fi
1902 }

```

\Hy@WarnOptionValue

```

1903 \def\Hy@WarnOptionValue#1#2#3{%

```

```

1904 \Hy@Warning{%
1905   Unexpected value ‘#1’\MessageBreak
1906   of option ‘#2’ instead of\MessageBreak
1907   #3%
1908 }%
1909 }

```

\Hy@DisableOption

```

1910 \def\Hy@DisableOption#1{%
1911   \@ifundefined{KV@Hyp@#1@default}{%
1912     \define@key{Hyp}{#1}%
1913   }{%
1914     \define@key{Hyp}{#1}[]%
1915   }%
1916   {\Hy@WarnOptionDisabled{#1}}%
1917 }

```

\Hy@WarnOptionDisabled

```

1918 \def\Hy@WarnOptionDisabled#1{%
1919   \Hy@Warning{%
1920     Option ‘#1’ has already been used,\MessageBreak
1921     setting the option has no effect%
1922   }%
1923 }

```

\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.

```

1924 \def\Hy@CheckOptionValue#1#2#3{%
1925   \begingroup
1926     \edef\x{#1}%
1927     \@onelevel@sanitize\x
1928     \let\y=y%
1929     \def\do##1##2{%
1930       \def\z{##1}%
1931       \@onelevel@sanitize\z
1932       \ifx\x\z
1933         \let\y=n%
1934         \let\do\@gobbletwo
1935       \fi
1936     }%
1937     #3%
1938     \ifx\y y%
1939       \def\do##1##2{%
1940         * ‘##1’%
1941         \ifx\\##2\\\else\space(##2)\fi
1942         \MessageBreak
1943       }%
1944       \Hy@Warning{%
1945         Values of option ‘#2’:\MessageBreak
1946         #3%
1947         * An empty value disables the option.\MessageBreak
1948         Unknown value ‘\x’%
1949       }%
1950     \fi
1951   \endgroup
1952 }

```

```

\Hy@DefNameKey #1: option name
#2: \do list with known values, first argument of \do is value, second argument is a
comment.
1953 \def\Hy@DefNameKey#1{%
1954   \expandafter\Hy@@DefNameKey\csname @#1\endcsname{#1}%
1955 }

\Hy@@DefNameKey #1: macro for value storage
#2: option name
#3: \do list with known values.
1956 \def\Hy@@DefNameKey#1#2#3{%
1957   \define@key{Hyp}{#2}{%
1958     \edef#1{##1}%
1959     \ifx#1\@empty
1960     \else
1961       \Hy@CheckOptionValue{##1}{#2}{#3}%
1962     \fi
1963   }%
1964   \let#1\@empty
1965 }

\Hy@UseNameKey
1966 \def\Hy@UseNameKey#1#2{%
1967   \ifx#2\@empty
1968   \else
1969     /#1/#2%
1970   \fi
1971 }

```

9.2 Defining the options

```

1972 \define@key{Hyp}{implicit}[true]{%
1973   \Hy@boolkey{implicit}{#1}%
1974 }
1975 \define@key{Hyp}{draft}[true]{%
1976   \Hy@boolkey{draft}{#1}%
1977 }
1978 \define@key{Hyp}{final}[true]{%
1979   \Hy@boolkey{final}{#1}%
1980 }
1981 \let\KV@Hyp@nolinks\KV@Hyp@draft
1982 \define@key{Hyp}{a4paper}[true]{%
1983   \def\special@paper{210mm,297mm}%
1984   \def\Hy@pageheight{842}%
1985 }
1986 \define@key{Hyp}{a5paper}[true]{%
1987   \def\special@paper{148mm,210mm}%
1988   \def\Hy@pageheight{595}%
1989 }
1990 \define@key{Hyp}{b5paper}[true]{%
1991   \def\special@paper{176mm,250mm}%
1992   \def\Hy@pageheight{709}%
1993 }
1994 \define@key{Hyp}{letterpaper}[true]{%
1995   \def\special@paper{8.5in,11in}%
1996   \def\Hy@pageheight{792}%

```

```

1997 }
1998 \define@key{Hyp}{legalpaper}[true]{%
1999   \def\special@paper{8.5in,14in}%
2000   \def\Hy@pageheight{1008}%
2001 }
2002 \define@key{Hyp}{executivepaper}[true]{%
2003   \def\special@paper{7.25in,10.5in}%
2004   \def\Hy@pageheight{720}%
2005 }
2006 \define@key{Hyp}{setpagesize}[true]{%
2007   \Hy@boolkey{setpagesize}{#1}%
2008 }
2009 \define@key{Hyp}{debug}[true]{%
2010   \Hy@boolkey[debug]{verbose}{#1}%
2011 }
2012 \define@key{Hyp}{linktocpage}[true]{%
2013   \Hy@boolkey{linktocpage}{#1}%
2014   \ifHy@linktocpage
2015     \let\Hy@linktoc\Hy@linktoc@page
2016   \else
2017     \let\Hy@linktoc\Hy@linktoc@section
2018   \fi
2019 }
2020 \chardef\Hy@linktoc@none=0 %
2021 \chardef\Hy@linktoc@section=1 %
2022 \chardef\Hy@linktoc@page=2 %
2023 \chardef\Hy@linktoc@all=3 %
2024 \ifHy@linktocpage
2025   \let\Hy@linktoc\Hy@linktoc@page
2026 \else
2027   \let\Hy@linktoc\Hy@linktoc@section
2028 \fi
2029 \define@key{Hyp}{linktoc}{%
2030   \@ifundefined{Hy@linktoc@#1}{%
2031     \Hy@Warning{%
2032       Unexpected value ‘#1’ of\MessageBreak
2033       option ‘linktoc’ instead of ‘none’,\MessageBreak
2034       ‘section’, ‘page’ or ‘all’%
2035     }%
2036   }{%
2037     \expandafter\let\expandafter\Hy@linktoc
2038     \csname Hy@linktoc@#1\endcsname
2039   }%
2040 }
2041 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2042 \let\XR@ext\relax
2043 \define@key{Hyp}{verbose}[true]{%
2044   \Hy@boolkey{verbose}{#1}%
2045 }
2046 \define@key{Hyp}{typexml}[true]{%
2047   \Hy@boolkey{typexml}{#1}%
2048 }

```

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.

```

2049 \define@key{Hyp}{raiselinks}[true]{%

```

```

2050 \Hy@boolkey{raiselinks}{#1}%
2051 }

```

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

```

2052 \def\Hy@setbreaklinks#1{%
2053   \csname breaklinks#1\endcsname
2054 }

2055 \def\Hy@breaklinks@unsupported{%
2056   \ifx\Hy@setbreaklinks@gobble
2057     \ifHy@breaklinks
2058       \Hy@WarningNoLine{%
2059         You have enabled option 'breaklinks'.\MessageBreak
2060         But driver '\Hy@driver.def' does not support this.\MessageBreak
2061         Expect trouble with the link areas of broken links%
2062       }%
2063     \fi
2064   \fi
2065 }

2066 \define@key{Hyp}{breaklinks}[true]{%
2067   \Hy@boolkey{breaklinks}{#1}%
2068   \let\Hy@setbreaklinks@gobble
2069 }

```

Determines whether an automatic anchor is put on each page

```

2070 \define@key{Hyp}{pageanchor}[true]{%
2071   \Hy@boolkey{pageanchor}{#1}%
2072 }

```

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.

```

2073 \define@key{Hyp}{plainpages}[true]{%
2074   \Hy@boolkey{plainpages}{#1}%
2075 }

```

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

```

2076 \define@key{Hyp}{naturalnames}[true]{%
2077   \Hy@boolkey{naturalnames}{#1}%
2078 }

```

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

```

2079 \define@key{Hyp}{hypertexnames}[true]{%
2080   \Hy@boolkey{hypertexnames}{#1}%
2081 }

```

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

```

2082 \define@key{Hyp}{nesting}[true]{%
2083   \Hy@boolkey{nesting}{#1}%
2084 }

2085 \define@key{Hyp}{unicode}[true]{%
2086   \Hy@boolkey{unicode}{#1}%
2087   \ifHy@unicode
2088     \def\HyPsd@pdfencoding{unicode}%
2089   \else
2090     \def\HyPsd@pdfencoding{pdfdoc}%
2091   \fi
2092   \HyPsd@LoadUnicode
2093 }

2094 \def\HyPsd@LoadUnicode{%

```

```

2095 \@ifundefined{T@PU}{%
2096   \input{puenc.def}%
2097   \HyLingux@Restore
2098 }{}%
2099 \DeclareFontFamily{PU}{pdf}{}%
2100 \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
2101 \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2102 \global\let\HyPsd@LoadUnicode\relax
2103 }
2104 \AtBeginDocument{%
2105   \ifx\HyPsd@LoadUnicode\relax
2106   \else
2107     \def\HyPsd@LoadUnicode{%
2108       \PackageError{hyperref}{%
2109         Unicode support for bookmarks is not available.\MessageBreak
2110         Activate unicode support by using one of the options\MessageBreak
2111         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2112         in the preamble%
2113       }@ehc
2114       \global\let\HyPsd@LoadUnicode\relax
2115       \global\Hy@unicodetrue
2116       \global\let\Hy@unicodetrue\Hy@unicodetrue
2117     }%
2118   \fi
2119 }

2120 \define@key{Hyp}{pdfencoding}{%
2121   \edef\HyPsd@temp{#1}%
2122   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2123     \let\HyPsd@pdfencoding\HyPsd@temp
2124     \Hy@unicodetrue
2125   \else
2126     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2127       \z@
2128     \else
2129       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2130         \z@
2131       \else
2132         \@ne
2133       \fi
2134     \fi
2135     \let\HyPsd@pdfencoding\HyPsd@temp
2136     \hypersetup{unicode}%
2137     \ifHy@unicode
2138       \def\HyPsd@pdfencoding{#1}%
2139       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2140         \HyPsd@LoadStringEncoding
2141       \fi
2142     \else
2143       \Hy@Warning{Cannot switch to unicode bookmarks}%
2144       \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2145     \fi
2146   \else
2147     \@onelevel@sanitize\HyPsd@temp
2148     \Hy@Warning{%
2149       Values of option 'pdfencoding':\MessageBreak
2150       'pdfdoc', 'unicode', 'auto'.\MessageBreak
2151       Ignoring unknown value '\HyPsd@temp'%

```

```

2152     }%
2153     \fi
2154 \fi
2155 }
2156 \def\HyPsd@pdfencoding@auto{auto}
2157 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2158 \def\HyPsd@pdfencoding@unicode{unicode}
2159 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2160 \def\HyPsd@LoadStringEnc{%
2161   \RequirePackage{stringenc}[2007/06/14]%
2162   \let\HyPsd@LoadStringEnc\relax
2163 }
2164 \AtBeginDocument{%
2165   \ifpackageloaded{stringenc}{%
2166     \let\HyPsd@LoadStringEnc\relax
2167   }{%
2168     \def\HyPsd@LoadStringEnc{%
2169       \Hy@WarningNoLine{%
2170         Missing package ‘stringenc’. Use ‘pdfencoding=auto’\MessageBreak
2171         in the preamble or load the package there%
2172       }%
2173     }%
2174   }%
2175 }

2176 \newif\ifHy@setpdfversion
2177 \define@key{Hyp}{pdfversion}{%
2178   \ifundefined{Hy@pdfversion@#1}{%
2179     \PackageWarning{hyperref}{%
2180       Unsupported PDF version ‘#1’.\MessageBreak
2181       Valid values: 1.2 until 1.9%
2182     }%
2183   }{%
2184     \Hy@setpdfversiontrue
2185     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2186   }%
2187 }

2188 \@namedef{Hy@pdfversion@1.2}{2}%
2189 \@namedef{Hy@pdfversion@1.3}{3}%
2190 \@namedef{Hy@pdfversion@1.4}{4}%
2191 \@namedef{Hy@pdfversion@1.5}{5}%
2192 \@namedef{Hy@pdfversion@1.6}{6}%
2193 \@namedef{Hy@pdfversion@1.7}{7}%
2194 \@namedef{Hy@pdfversion@1.8}{8}%
2195 \@namedef{Hy@pdfversion@1.9}{9}%
2196 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2197 \define@key{Hyp}{hyperref}[true]{}
2198 \define@key{Hyp}{tex4ht}[true]{}
2199 \Hy@texhttrue
2200 \setkeys{Hyp}{colorlinks=true}%
2201 \def\BeforeTeXIVht{\usepackage{color}}%
2202 \def\Hy@driver{htex4ht}%
2203 \def\MaybeStopEarly{%
2204   \typeout{Hyperref stopped early}%
2205   \AfterBeginDocument{}

```

```

2206     \PDF@FinishDoc
2207     \gdef\PDF@FinishDoc{}%
2208 }%
2209 \endinput
2210 }%
2211 }
2212 \define@key{Hyp}{pdftex}[true]{%
2213   \def\Hy@driver{hpdftex}%
2214 }
2215 \define@key{Hyp}{nativepdf}[true]{%
2216   \def\Hy@driver{hdvips}%
2217 }
2218 \define@key{Hyp}{dvipdfm}[true]{%
2219   \def\Hy@driver{hdvipdfm}%
2220 }
2221 \define@key{Hyp}{dvipdfmx}[true]{%
2222   \def\Hy@driver{hdvipdfm}%
2223 }
2224 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2225   \expandafter\ifx\csname if#1\expandafter\endcsname
2226     \csname iftrue\endcsname
2227     \chardef\SpecialDvipdfmxOutlineOpen\@ne
2228   \else
2229     \chardef\SpecialDvipdfmxOutlineOpen\z@
2230   \fi
2231 }
2232 \define@key{Hyp}{xetex}[true]{%
2233   \def\Hy@driver{hdvipdfm}%
2234 }
2235 \define@key{Hyp}{pdfmark}[true]{%
2236   \def\Hy@driver{hdvips}%
2237 }
2238 \define@key{Hyp}{dvips}[true]{%
2239   \def\Hy@driver{hdvips}%
2240 }
2241 \define@key{Hyp}{hypertex}[true]{%
2242   \def\Hy@driver{hypertex}%
2243 }
2244 \let\Hy@MaybeStopNow\relax
2245 \define@key{Hyp}{vtex}[true]{%
2246   \begingroup\expandafter\expandafter\expandafter\endgroup
2247   \expandafter\ifx\csname OpMode\endcsname\relax
2248     \@latex@error{Non-VTeX processor}{}%
2249     \global\let\Hy@MaybeStopNow\endinput
2250   \endinput
2251   \else
2252     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2253     \def\Hy@driver{hvtex}%
2254   \else
2255     \ifnum\OpMode=10\relax
2256       \def\Hy@driver{hvtexhtm}%
2257       \def\MaybeStopEarly{%
2258         \typeout{Hyperref stopped early}%
2259         \AfterBeginDocument{%
2260           \PDF@FinishDoc
2261           \gdef\PDF@FinishDoc{}%
2262         }%

```



```

2263         \endinput
2264     }%
2265     \else
2266         \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2267         \global\let\Hy@MaybeStopNow\endinput
2268         \endinput
2269     \fi
2270 \fi
2271 \fi
2272 }
2273 \define@key{Hyp}{vtexpdfmark}[true]{%
2274     \begingroup\expandafter\expandafter\expandafter\endgroup
2275     \expandafter\ifx\cname OpMode\endcsname\relax
2276         \@latex@error{Non-VTeX processor}{}%
2277         \let\Hy@MaybeStopNow\endinput
2278         \endinput
2279     \else
2280         \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2281         \def\Hy@driver{hvtexmrk}%
2282     \else
2283         \@latex@error{Mode (\the\OpMode) has no hyperref driver}{}%
2284         \let\Hy@MaybeStopNow\endinput
2285         \endinput
2286     \fi
2287 \fi
2288 }
2289 \define@key{Hyp}{dviwindo}[true]{%
2290     \def\Hy@driver{hdviwind}%
2291     \setkeys{Hyp}{colorlinks}%
2292     \PassOptionsToPackage{dviwindo}{color}%
2293 }
2294 \define@key{Hyp}{dvipsone}[true]{%
2295     \def\Hy@driver{hdvipson}%
2296 }
2297 \define@key{Hyp}{textures}[true]{%
2298     \def\Hy@driver{htexture}%
2299 }
2300 \define@key{Hyp}{latex2html}[true]{%
2301     \AtBeginDocument{\@@latextohtmlX}%
2302 }

```

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

```

2303 \define@key{Hyp}{ps2pdf}[true]{%
2304     \def\Hy@driver{hdvips}%
2305     \providecommand*\@pdfborder{0 0 1}%
2306 }

```

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.

```

2307 \define@key{Hyp}{hyperfigures}[true]{%
2308     \Hy@boolkey[hyperfigures]{figures}{#1}%
2309 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2310 \define@key{Hyp}{hyperfootnotes}[true]{%
2311     \Hy@boolkey[hyperfootnotes]{#1}%

```

2312 }

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

```
2313 \def\back@none{none}
2314 \def\back@section{section}
2315 \def\back@page{page}
2316 \def\back@slide{slide}
2317 \define@key{Hyp}{backref}[section]{%
2318   \lowercase{\def\Hy@tempa{#1}}%
2319   \ifx\Hy@tempa\@empty
2320     \let\Hy@tempa\back@section
2321   \fi
2322   \ifx\Hy@tempa\Hy@false
2323     \let\Hy@tempa\back@none
2324   \fi
2325   \ifx\Hy@tempa\back@slide
2326     \let\Hy@tempa\back@section
2327   \fi
2328   \ifx\Hy@tempa\back@page
2329     \PassOptionsToPackage{hyperpageref}{backref}%
2330     \Hy@backreftrue
2331   \else
2332     \ifx\Hy@tempa\back@section
2333       \PassOptionsToPackage{hyperref}{backref}%
2334       \Hy@backreftrue
2335     \else
2336       \ifx\Hy@tempa\back@none
2337         \Hy@backreffalse
2338       \else
2339         \Hy@WarnOptionValue{#1}{backref}{%
2340           'section', 'slide', 'page', 'none', \MessageBreak
2341           or 'false'}%
2342       \fi
2343     \fi
2344   \fi
2345 }
2346 \define@key{Hyp}{pagebackref}[true]{%
2347   \edef\Hy@tempa{#1}%
2348   \lowercase\expandafter{%
2349     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2350   }%
2351   \ifx\Hy@tempa\@empty
2352     \let\Hy@tempa\Hy@true
2353   \fi
2354   \ifx\Hy@tempa\Hy@true
2355     \PassOptionsToPackage{hyperpageref}{backref}%
2356     \Hy@backreftrue
2357   \else
2358     \ifx\Hy@tempa\Hy@false
2359       \Hy@backreffalse
2360     \else
2361       \Hy@WarnOptionValue{#1}{pagebackref}{'true' or 'false'}%
2362     \fi
2363   \fi
2364 }
```

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

```

2365 \define@key{Hyp}{hyperindex}[true]{%
2366   \Hy@boolkey{hyperindex}{#1}%
2367 }

```

Configuration of encap char.

```

2368 \define@key{Hyp}{encap}[|]{%
2369   \def\HyInd@EncapChar{#1}%
2370 }

```

12 Language options

The \autoref feature depends on the language.

```

2371 \def\HyLang@afrikaans{%
2372   \def\equationautorefname{Vergelyking}%
2373   \def\footnoteautorefname{Voetnota}%
2374   \def\itemautorefname{Item}%
2375   \def\figureautorefname{Figuur}%
2376   \def\tableautorefname{Tabel}%
2377   \def\partautorefname{Deel}%
2378   \def\appendixautorefname{Bylae}%
2379   \def\chapterautorefname{Hoofstuk}%
2380   \def\sectionautorefname{Afdeling}%
2381   \def\subsectionautorefname{Subafdeling}%
2382   \def\subsubsectionautorefname{Subsubafdeling}%
2383   \def\paragraphautorefname{Paragraaf}%
2384   \def\subparagraphautorefname{Subparagraaf}%
2385   \def\FancyVerbLineautorefname{Lyn}%
2386   \def\theoremautorefname{Teorema}%
2387   \def\pageautorefname{Bladsy}%
2388 }
2389 \def\HyLang@english{%
2390   \def\equationautorefname{Equation}%
2391   \def\footnoteautorefname{footnote}%
2392   \def\itemautorefname{item}%
2393   \def\figureautorefname{Figure}%
2394   \def\tableautorefname{Table}%
2395   \def\partautorefname{Part}%
2396   \def\appendixautorefname{Appendix}%
2397   \def\chapterautorefname{chapter}%
2398   \def\sectionautorefname{section}%
2399   \def\subsectionautorefname{subsection}%
2400   \def\subsubsectionautorefname{subsubsection}%
2401   \def\paragraphautorefname{paragraph}%
2402   \def\subparagraphautorefname{subparagraph}%
2403   \def\FancyVerbLineautorefname{line}%
2404   \def\theoremautorefname{Theorem}%
2405   \def\pageautorefname{page}%
2406 }
2407 \def\HyLang@french{%
2408   \def\equationautorefname{\`Equation}%
2409   \def\footnoteautorefname{note}%
2410   \def\itemautorefname{item}%
2411   \def\figureautorefname{Figure}%
2412   \def\tableautorefname{Tableau}%
2413   \def\partautorefname{Partie}%
2414   \def\appendixautorefname{Appendice}%
2415   \def\chapterautorefname{chapitre}%

```

```

2416 \def\sectionautorefname{section}%
2417 \def\subsectionautorefname{sous-section}%
2418 \def\subsubsectionautorefname{sous-sous-section}%
2419 \def\paragraphautorefname{paragraphe}%
2420 \def\subparagraphautorefname{sous-paragraphe}%
2421 \def\FancyVerbLineautorefname{ligne}%
2422 \def\theoremautorefname{Th\'eor\'eme}%
2423 \def\pageautorefname{page}%
2424 }
2425 \def\HyLang@german{%
2426 \def\equationautorefname{Gleichung}%
2427 \def\footnoteautorefname{Fu\ss note}%
2428 \def\itemautorefname{Punkt}%
2429 \def\figureautorefname{Abbildung}%
2430 \def\tableautorefname{Tabelle}%
2431 \def\partautorefname{Teil}%
2432 \def\appendixautorefname{Anhang}%
2433 \def\chapterautorefname{Kapitel}%
2434 \def\sectionautorefname{Abschnitt}%
2435 \def\subsectionautorefname{Unterabschnitt}%
2436 \def\subsubsectionautorefname{Unterunterabschnitt}%
2437 \def\paragraphautorefname{Absatz}%
2438 \def\subparagraphautorefname{Unterabsatz}%
2439 \def\FancyVerbLineautorefname{Zeile}%
2440 \def\theoremautorefname{Theorem}%
2441 \def\pageautorefname{Seite}%
2442 }
2443 \def\HyLang@italian{%
2444 \def\equationautorefname{Equazione}%
2445 \def\footnoteautorefname{nota}%
2446 \def\itemautorefname{punto}%
2447 \def\figureautorefname{Figura}%
2448 \def\tableautorefname{Tabella}%
2449 \def\partautorefname{Parte}%
2450 \def\appendixautorefname{Appendice}%
2451 \def\chapterautorefname{Capitolo}%
2452 \def\sectionautorefname{sezione}%
2453 \def\subsectionautorefname{sottosezione}%
2454 \def\subsubsectionautorefname{sottosottosezione}%
2455 \def\paragraphautorefname{paragrafo}%
2456 \def\subparagraphautorefname{sottoparagrafo}%
2457 \def\FancyVerbLineautorefname{linea}%
2458 \def\theoremautorefname{Teorema}%
2459 \def\pageautorefname{Pag.\@}%
2460 }
2461 \def\HyLang@magyar{%
2462 \def\equationautorefname{Egyenlet}%
2463 \def\footnoteautorefname{l\'abjegyzet}%
2464 \def\itemautorefname{Elem}%
2465 \def\figureautorefname{\`Abra}%
2466 \def\tableautorefname{T\'abl\'azat}%
2467 \def\partautorefname{R\'esz}%
2468 \def\appendixautorefname{F\'uggel\'ek}%
2469 \def\chapterautorefname{fejezet}%
2470 \def\sectionautorefname{szakasz}%
2471 \def\subsectionautorefname{alszakasz}%
2472 \def\subsubsectionautorefname{alalszakasz}%

```

```

2473 \def\paragraphautorefname{bekezd\'}es}%
2474 \def\subparagraphautorefname{albekezd\'}es}%
2475 \def\FancyVerbLineautorefname{sor}%
2476 \def\theoremautorefname{T\'}etel}%
2477 \def\pageautorefname{oldal}%
2478 }
2479 \def\HyLang@portuges{%
2480 \def\equationautorefname{Equa\c c\~ao}%
2481 \def\footnoteautorefname{Nota de rodap\'}e}%
2482 \def\itemautorefname{Item}%
2483 \def\figureautorefname{Figura}%
2484 \def\tableautorefname{Tabela}%
2485 \def\partautorefname{Parte}%
2486 \def\appendixautorefname{Ap\'}endice}%
2487 \def\chapterautorefname{Cap\'}itulo}%
2488 \def\sectionautorefname{Se\c c\~ao}%
2489 \def\subsectionautorefname{Subse\c c\~ao}%
2490 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
2491 \def\paragraphautorefname{par\'}agrafo}%
2492 \def\subparagraphautorefname{subpar\'}agrafo}%
2493 \def\FancyVerbLineautorefname{linha}%
2494 \def\theoremautorefname{Teorema}%
2495 \def\pageautorefname{P\'}agina}%
2496 }

```

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`.

```

2497 \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`?

```

2498 \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`.

```

2499 % \def\equationautorefname{%
2500 % \cyr\cyrv\cyrery\cyr\cyrzh\cyre\cyrn\cyri\cyre
2501 % }%

```

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

```

2502 \def\footnoteautorefname{%
2503 \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyr. \cyrp\cyr\cyri\cyrm.%
2504 }%

```

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}`”

```

2505 % \def\footnoteautorefname{%
2506 % \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyr\cyro\cyrch\cyrn\cyro\cyre\ %
2507 % \cyrp\cyr\cyri\cyrm\cyre\cyrch\cyra\cyrn\cyri\cyre
2508 % }%

```

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

```
2509 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
2510 % \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.

```
2511 \def\itemautorefname{\cyr\cyrp.}%
2512 % \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.

```
2513 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
2514 \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.

```
2515 \def\partautorefname{\cyr\cyrch.}%
2516 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
2517 \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.

```
2518 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
2519 % \def\appendixautorefname{%
2520 % \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrz\cyre\cyrn\cyri\cyre
2521 % }%
```

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.

```
2522 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
2523 \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.

```
2524 \def\paragraphautorefname{\cyr\cyrp.}%
2525 \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.

```
2526 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
2527 % \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.

```
2528 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
2529 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
2530 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
2531 % \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 ...

```
2532 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
2533 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrn\cyrk}%
```

```
2534 % \def\Accttheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrn\cyrk}%
```

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

```
2535 \def\pageautorefname{\cyr\cyrs.}%
```

```
2536 }
```

```
2537 \def\HyLang@spanish{%
```

```
2538 \def\equationautorefname{Ecuaci'on}%
```

```
2539 \def\footnoteautorefname{Nota a pie de p'agina}%
```

```
2540 \def\itemautorefname{Elemento}%
```

```
2541 \def\figureautorefname{Figura}%
```

```
2542 \def\tableautorefname{Tabla}%
```

```
2543 \def\partautorefname{Parte}%
```

```
2544 \def\appendixautorefname{Ap'endice}%
```

```
2545 \def\chapterautorefname{Cap'itulo}%
```

```
2546 \def\sectionautorefname{Secci'on}%
```

```
2547 \def\subsectionautorefname{Subsecci'on}%
```

```
2548 \def\subsubsectionautorefname{Subsubsecci'on}%
```

```
2549 \def\paragraphautorefname{P'arrafo}%
```

```
2550 \def\subparagraphautorefname{Subp'arrafo}%
```

```
2551 \def\FancyVerbLineautorefname{L'inea}%
```

```
2552 \def\theoremautorefname{Teorema}%
```

```
2553 \def\pageautorefname{P'agina}%
```

```
2554 }
```

```
2555 \def\HyLang@vietnamese{%
```

```
2556 \def\equationautorefname{Ph\uhorn{}\ohorn{}ng tr'inh}%
```

```
2557 \def\footnoteautorefname{Ch'u th'ich}%
```

```
2558 \def\itemautorefname{m\du{c}}%
```

```
2559 \def\figureautorefname{H'inh}%
```

```
2560 \def\tableautorefname{B\h{a}ng}%
```

```
2561 \def\partautorefname{Ph'\acircumflex{n}}%
```

```
2562 \def\appendixautorefname{Ph\du{1}\du{c}}%
```

```
2563 \def\chapterautorefname{ch\uhorn{}\ohorn{}ng}%
```

```
2564 \def\sectionautorefname{m\du{c}}%
```

```
2565 \def\subsectionautorefname{m\du{c}}%
```

```
2566 \def\subsubsectionautorefname{m\du{c}}%
```

```
2567 \def\paragraphautorefname{dj{o}\da{n}}%
```

```
2568 \def\subparagraphautorefname{dj{o}\da{n}}%
```

```
2569 \def\FancyVerbLineautorefname{d'ong}%
```

```
2570 \def\theoremautorefname{DJ\di{nh} l'y}%
```

```
2571 \def\pageautorefname{Trang}%
```

```
2572 }
```

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

```
2573 \def\HyLang@addto#1#2{%
```

```
2574 #2%
```

```
2575 \@temptokena{#2}%
```

```

2576 \ifx#1\relax
2577   \let#1\@empty
2578 \fi
2579 \ifx#1\undefined
2580   \edef#1{\the\@temptokena}%
2581 \else
2582   \toks@\expandafter{#1}%
2583   \edef#1{\the\toks@\the\@temptokena}%
2584 \fi
2585 \@temptokena{}\toks@\@temptokena
2586 }

2587 \def\HyLang@DeclareLang#1#2#3{%
2588   \begingroup
2589   \edef\x##1##2{%
2590     \noexpand\ifx##2\relax
2591       \errmessage{No definitions for language #2' found!}%
2592     \noexpand\fi
2593   \endgroup
2594   \noexpand\define@key{Hyp}{#1}[]{%
2595     \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
2596     #3%
2597   }%
2598   }%
2599   \expandafter\x\csname extras#1\expandafter\endcsname
2600     \csname HyLang@#2\endcsname
2601 }

2602 \HyLang@DeclareLang{english}{english}{}
2603 \HyLang@DeclareLang{UKenglish}{english}{}
2604 \HyLang@DeclareLang{british}{english}{}
2605 \HyLang@DeclareLang{USenglish}{english}{}
2606 \HyLang@DeclareLang{american}{english}{}
2607 \HyLang@DeclareLang{german}{german}{}
2608 \HyLang@DeclareLang{austrian}{german}{}
2609 \HyLang@DeclareLang{ngerman}{german}{}
2610 \HyLang@DeclareLang{naustrian}{german}{}
2611 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
2612 \HyLang@DeclareLang{brazil}{portuges}{}
2613 \HyLang@DeclareLang{brazilian}{portuges}{}
2614 \HyLang@DeclareLang{portuguese}{portuges}{}
2615 \HyLang@DeclareLang{spanish}{spanish}{}
2616 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
2617 \HyLang@DeclareLang{french}{french}{}
2618 \HyLang@DeclareLang{frenchb}{french}{}
2619 \HyLang@DeclareLang{français}{french}{}
2620 \HyLang@DeclareLang{acadian}{french}{}
2621 \HyLang@DeclareLang{canadien}{french}{}
2622 \HyLang@DeclareLang{italian}{italian}{}
2623 \HyLang@DeclareLang{magyar}{magyar}{}
2624 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

2625 \define@key{Hyp}{vietnamese}[]{}
2626 \HyLang@addto\extravietnamese\HyLang@vietnamese
2627 \AtEndOfPackage{%
2628   \ifundefined{T@PU}{}{}
2629   \input{puvnenc.def}%
2630 }%

```



```

2631 }%
2632 }
2633 \define@key{Hyp}{vietnam}[]{%
2634   \HyLang@addto\extravietnam\HyLang@vietnamese
2635   \AtEndOfPackage{%
2636     \ifundefined{T@PU}{-}{%
2637       \input{puvnenc.def}%
2638     }%
2639   }%
2640 }

```

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

```

2641 \define@key{Hyp}{arabic}[]{%
2642   \AtEndOfPackage{%
2643     \ifundefined{T@PU}{-}{%
2644       \input{puarenc.def}%
2645     }%
2646   }%
2647 }

```

13 Options to change appearance of links

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

```

2648 \define@key{Hyp}{colorlinks}[true]{%
2649   \Hy@boolkey{colorlinks}{#1}%
2650 }
2651 \define@key{Hyp}{ocgcolorlinks}[true]{%
2652   \Hy@boolkey{ocgcolorlinks}{#1}%
2653 }
2654 \AtBeginDocument{%
2655   \begingroup
2656     \ifundefined{OBJ@OCG@view}{%
2657       \ifHy@ocgcolorlinks
2658         \Hy@Warning{%
2659           Driver does not support ‘ocgcolorlinks’,\MessageBreak
2660           using ‘colorlinks’ instead%
2661         }%
2662       \fi
2663     }{}%
2664   \endgroup
2665 }
2666 \define@key{Hyp}{frenchlinks}[true]{%
2667   \Hy@boolkey{frenchlinks}{#1}%
2668 }

```

14 Bookmarking

```

2669 \begingroup\expandafter\expandafter\expandafter\endgroup
2670 \expandafter\ifx\csname chapter\endcsname\relax
2671   \def\toclevel@part{0}%
2672 \else
2673   \def\toclevel@part{-1}%
2674 \fi
2675 \def\toclevel@chapter{0}
2676 \def\toclevel@section{1}

```

```

2677 \def\toclevel@subsection{2}
2678 \def\toclevel@subsubsection{3}
2679 \def\toclevel@paragraph{4}
2680 \def\toclevel@subparagraph{5}
2681 \def\toclevel@figure{0}
2682 \def\toclevel@table{0}
2683 \@ifpackageloaded{listings}{%
2684   \providecommand*\theHlstlisting{\thelstlisting}%
2685   \providecommand*\toclevel@lstlisting{0}%
2686 }{}
2687 \@ifpackageloaded{listing}{%
2688   \providecommand*\theHlisting{\thelisting}%
2689   \providecommand*\toclevel@listing{0}%
2690 }{}

2691 \define@key{Hyp}{bookmarks}[true]{%
2692   \Hy@boolkey{bookmarks}{#1}%
2693 }

2694 \define@key{Hyp}{bookmarksopen}[true]{%
2695   \Hy@boolkey{bookmarksopen}{#1}%
2696 }

```

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.

```

2697 \let\Hy@bookmarksdepth\c@tocdepth
2698 \define@key{Hyp}{bookmarksdepth}[]{%
2699   \begingroup
2700     \edef\x{#1}%
2701     \ifx\x\empty
2702       \global\let\Hy@bookmarksdepth\c@tocdepth
2703     \else
2704       \@ifundefined{toclevel@\x}{%
2705         \@onelevel@sanitize\x
2706         \edef\y{\expandafter\@car\x\@nil}%
2707         \ifcase 0\expandafter\ifx\y-1\fi
2708           \expandafter\ifnum\expandafter'\y>47 %
2709             \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
2710           \Hy@Warning{Unknown document division name (\x)}%
2711         \else
2712           \setbox\z@=\hbox{%
2713             \count@=\x
2714             \xdef\Hy@bookmarksdepth{\the\count@}%
2715           }%
2716         \fi
2717       }{%
2718         \setbox\z@=\hbox{%
2719           \count@=\csname toclevel@\x\endcsname
2720           \xdef\Hy@bookmarksdepth{\the\count@}%
2721         }%

```

```

2722     }%
2723     \fi
2724   \endgroup
2725 }

```

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

```

2726 \define@key{Hyp}{bookmarksopenlevel}{%
2727   \def\@bookmarksopenlevel{#1}%
2728 }
2729 \def\@bookmarksopenlevel{\maxdimen}
2730 % ‘bookmarkstyle’ to specify which ‘toc’ file to mimic
2731 \define@key{Hyp}{bookmarkstyle}{%
2732   \def\Hy@bookmarkstyle{#1}%
2733 }
2734 \def\Hy@bookmarkstyle{toc}

```

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

```

2735 \define@key{Hyp}{bookmarksnumbered}[true]{%
2736   \Hy@boolkey{bookmarksnumbered}{#1}%
2737 }

```

Option CJKbookmarks enables the patch for CJK bookmarks.

```

2738 \define@key{Hyp}{CJKbookmarks}[true]{%
2739   \Hy@boolkey{CJKbookmarks}{#1}%
2740 }
2741 \def\Hy@temp#1{%
2742   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
2743 }
2744 \def\Hy@@temp#1#2#3{%
2745   \define@key{Hyp}{#2color}{%
2746     \HyColor@HyperrefColor{##1}#1%
2747   }%
2748   \def#1{#3}%
2749 }
2750 \Hy@temp{link}{red}
2751 \Hy@temp{anchor}{black}
2752 \Hy@temp{cite}{green}
2753 \Hy@temp{file}{cyan}
2754 \Hy@temp{url}{magenta}
2755 \Hy@temp{menu}{red}
2756 \Hy@temp{run}{\@filecolor}
2757 \define@key{Hyp}{pagecolor}{%
2758   \Hy@WarningPageColor
2759 }
2760 \def\Hy@WarningPageColor{%
2761   \Hy@WarningNoLine{Option ‘pagecolor’ is not available anymore}%
2762   \global\let\Hy@WarningPageColor\relax
2763 }
2764 \def\hyperbaseurl#1{\def\@baseurl{#1}}
2765 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
2766 \let\@baseurl\empty
2767 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
2768 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
2769 \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.

```
2770 \let\pdfpagetransition\relax
2771 \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.

```
2772 \let\pdfpageduration\relax
2773 \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.

```
2774 \newif\ifHy@useHidKey
2775 \Hy@useHidKeyfalse
2776 \define@key{Hyp}{pdfpagehidden}[true]{%
2777   \Hy@boolkey{pdfpagehidden}{#1}%
2778   \ifHy@pdfpagehidden
2779     \global\Hy@useHidKeytrue
2780   \fi
2781 }
```

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).

```
2782 \def\Hy@ColorList{cite,file,link,menu,run,url}
2783 \for\Hy@temp:=\Hy@ColorList\do{%
2784   \edef\Hy@temp{%
2785     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
2786       \noexpand\HyColor@HyperrefBorderColor
2787         {##1}%
2788       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
2789       {hyperref}%
2790       {\Hy@temp bordercolor}%
2791     }%
2792   }%
2793   \Hy@temp
2794 }
2795 \define@key{Hyp}{pagebordercolor}{%
2796   \Hy@WarningPageBorderColor
2797 }
2798 \def\Hy@WarningPageBorderColor{%
2799   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
2800   \global\let\Hy@WarningPageBorderColor\relax
2801 }
2802 \define@key{Hyp}{pdfhighlight}{\def\pdfhighlight{#1}}
2803 \Hy@DefNameKey{pdfhighlight}{%
2804   \do{/I}{Invert}%
```

```

2805 \do{/N}{None}%
2806 \do{/O}{Outline}%
2807 \do{/P}{Push}%
2808 }
2809 \define@key{Hyp}{pdfborder}{\def\@pdfborder{#1}}
2810 \define@key{Hyp}{pdfborderstyle}{\def\@pdfborderstyle{#1}}
2811 \def\Hy@setpdfborder{%
2812   \ifx\@pdfborder\@empty
2813   \else
2814     /Border[\@pdfborder]%
2815   \fi
2816   \ifx\@pdfborderstyle\@empty
2817   \else
2818     /BS<<\@pdfborderstyle>>%
2819   \fi
2820 }
2821 \Hy@DefNameKey{pdfpagemode}{%
2822   \do{UseNone}{}%
2823   \do{UseOutlines}{}%
2824   \do{UseThumbs}{}%
2825   \do{FullScreen}{}%
2826   \do{UseOC}{PDF 1.5}%
2827   \do{UseAttachments}{PDF 1.6}%
2828 }
2829 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
2830   \do{UseNone}{}%
2831   \do{UseOutlines}{}%
2832   \do{UseThumbs}{}%
2833   \do{FullScreen}{}%
2834   \do{UseOC}{PDF 1.5}%
2835   \do{UseAttachments}{PDF 1.6}%
2836 }
2837 \Hy@DefNameKey{pdfdirection}{%
2838   \do{L2R}{Left to right}%
2839   \do{R2L}{Right to left}%
2840 }
2841 \Hy@DefNameKey{pdfviewarea}{%
2842   \do{MediaBox}{}%
2843   \do{CropBox}{}%
2844   \do{BleedBox}{}%
2845   \do{TrimBox}{}%
2846   \do{ArtBox}{}%
2847 }
2848 \Hy@DefNameKey{pdfviewclip}{%
2849   \do{MediaBox}{}%
2850   \do{CropBox}{}%
2851   \do{BleedBox}{}%
2852   \do{TrimBox}{}%
2853   \do{ArtBox}{}%
2854 }
2855 \Hy@DefNameKey{pdfprintarea}{%
2856   \do{MediaBox}{}%
2857   \do{CropBox}{}%
2858   \do{BleedBox}{}%
2859   \do{TrimBox}{}%
2860   \do{ArtBox}{}%
2861 }

```

```

2862 \Hy@DefNameKey{pdfprintclip}{%
2863   \do{MediaBox}{}%
2864   \do{CropBox}{}%
2865   \do{BleedBox}{}%
2866   \do{TrimBox}{}%
2867   \do{ArtBox}{}%
2868 }
2869 \Hy@DefNameKey{pdfprintscaling}{%
2870   \do{AppDefault}{}%
2871   \do{None}{}%
2872 }
2873 \Hy@DefNameKey{pdfduplex}{%
2874   \do{Simplex}{}%
2875   \do{DuplexFlipShortEdge}{}%
2876   \do{DuplexFlipLongEdge}{}%
2877 }
2878 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
2879   \do{true}{}%
2880   \do{false}{}%
2881 }
2882 \define@key{Hyp}{pdfprintpagerange}{%
2883   \def\@pdfprintpagerange{#1}%
2884 }
2885 \Hy@DefNameKey{pdfnumcopies}{%
2886   \do{2}{two copies}%
2887   \do{3}{three copies}%
2888   \do{4}{four copies}%
2889   \do{5}{five copies}%
2890 }
2891 \define@key{Hyp}{pdfusetitle}[true]{%
2892   \Hy@boolkey[pdfusetitle]{usetitle}{#1}%
2893 }
2894 \define@key{Hyp}{pdftitle}{\pdfstringdef\@pdftitle{#1}}
2895 \define@key{Hyp}{pdfauthor}{\pdfstringdef\@pdfauthor{#1}}
2896 \define@key{Hyp}{pdfproducer}{\pdfstringdef\@pdfproducer{#1}}
2897 \define@key{Hyp}{pdfcreator}{\pdfstringdef\@pdfcreator{#1}}
2898 \define@key{Hyp}{pdfcreationdate}{%
2899   \begingroup
2900     \Hy@unicodedefalse
2901     \pdfstringdef\@pdfcreationdate{#1}%
2902   \endgroup
2903 }
2904 \define@key{Hyp}{pdfmoddate}{%
2905   \begingroup
2906     \Hy@unicodedefalse
2907     \pdfstringdef\@pdfmoddate{#1}%
2908   \endgroup
2909 }
2910 \define@key{Hyp}{pdfsubject}{\pdfstringdef\@pdfsubject{#1}}
2911 \define@key{Hyp}{pdfkeywords}{\pdfstringdef\@pdfkeywords{#1}}
2912 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \\\}
2913 \define@key{Hyp}{pdflinkmargin}{\setpdflinkmargin{#1}}
2914 \let\setpdflinkmargin\@gobble
2915 \def\calculate@pdfview#1 #2\{\%
2916   \def\@pdfview{#1}%
2917   \ifx\#2\%
2918     \def\@pdfviewparams{ -32768}%

```

```

2919 \else
2920   \def\@pdfviewparams{ #2}%
2921 \fi
2922 }
2923 \begingroup\expandafter\expandafter\expandafter\endgroup
2924 \expandafter\ifx\csname numexpr\endcsname\relax
2925   \def\Hy@number#1{%
2926     \expandafter\@firstofone\expandafter{\number#1}%
2927   }%
2928 \else
2929   \def\Hy@number#1{%
2930     \the\numexpr#1\relax
2931   }%
2932 \fi
2933 \define@key{Hyp}{pdfstartpage}{%
2934   \ifx\#1\%
2935     \def\@pdfstartpage{%
2936   \else
2937     \edef\@pdfstartpage{\Hy@number{#1}}%
2938   \fi
2939 }%
2940 \define@key{Hyp}{pdfstartview}{%
2941   \ifx\#1\%
2942     \def\@pdfstartview{%
2943   \else
2944     \hypercalcbpdef\@pdfstartview{ /#1 }%
2945   \fi
2946 }
2947 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
2948 \define@key{Hyp}{pdftoolbar}[true]{%
2949   \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
2950 }
2951 \define@key{Hyp}{pdfmenubar}[true]{%
2952   \Hy@boolkey[pdfmenubar]{menubar}{#1}%
2953 }
2954 \define@key{Hyp}{pdfwindowui}[true]{%
2955   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
2956 }
2957 \define@key{Hyp}{pdffitwindow}[true]{%
2958   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
2959 }
2960 \define@key{Hyp}{pdfcenterwindow}[true]{%
2961   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
2962 }
2963 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
2964   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
2965 }
2966 \define@key{Hyp}{pdfa}[true]{%
2967   \Hy@boolkey{pdfa}{#1}%
2968 }
2969 \define@key{Hyp}{pdfnewwindow}[true]{%
2970   \def\Hy@temp{#1}%
2971   \ifx\Hy@temp\@empty
2972     \Hy@newwindowsetfalse
2973   \else
2974     \Hy@newwindowsettrue
2975     \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%

```

```

2976 \fi
2977 }
2978 \def\Hy@SetNewWindow{%
2979 \ifHy@newwindowset
2980 /NewWindow %
2981 \ifHy@newwindow true\else false\fi
2982 \fi
2983 }
2984 \Hy@DefNameKey{pdfpagelayout}{%
2985 \do{SinglePage}{}%
2986 \do{OneColumn}{}%
2987 \do{TwoColumnLeft}{}%
2988 \do{TwoColumnRight}{}%
2989 \do{TwoPageLeft}{PDF 1.5}%
2990 \do{TwoPageRight}{PDF 1.5}%
2991 }
2992 \define@key{Hyp}{pdflang}{%
2993 \def\@pdflang{#1}%
2994 }
2995 \define@key{Hyp}{pdfpagelabels}[true]{%
2996 \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
2997 }
2998 \define@key{Hyp}{pdfescapeform}[true]{%
2999 \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3000 }

```

Default values:

```

3001 \def\@linkbordercolor{1 0 0}
3002 \def\@urlbordercolor{0 1 1}
3003 \def\@menubordercolor{1 0 0}
3004 \def\@filebordercolor{0 .5 .5}
3005 \def\@runbordercolor{0 .7 .7}
3006 \def\@citebordercolor{0 1 0}
3007 \def\@pdfhighlight{/I}
3008 \def\@pdftitle{}
3009 \def\@pdfauthor{}
3010 \let\@pdfproducer\relax
3011 \def\@pdfcreator{LaTeX with hyperref package}
3012 \def\@pdfcreationdate{}
3013 \def\@pdfmoddate{}
3014 \def\@pdfsubject{}
3015 \def\@pdfkeywords{}
3016 \def\@pdfpagescrop{}
3017 \def\@pdfstartview{/Fit }
3018 \def\@pdfstartpage{1}
3019 \def\@pdfprintpagerange{}
3020 \def\@pdflang{}
3021 \let\PDF@SetupDoc\@empty
3022 \let\PDF@FinishDoc\@empty
3023 \let\phantomsection\@empty
3024 \let\special@paper\@empty
3025 \def\HyperDestNameFilter#1{#1}
3026 \@ifundefined{stockwidth}{%
3027 \ifdim\paperwidth>\z@
3028 \ifdim\paperheight>\z@
3029 \edef\special@paper{\the\paperwidth,\the\paperheight}%
3030 \fi
3031 \fi

```



```

3032 }{%
3033   \ifdim\stockwidth>\z@
3034     \ifdim\stockheight>\z@
3035       \edef\special@paper{\the\stockwidth,\the\stockheight}%
3036     \fi
3037   \fi
3038 }
3039 \begingroup
3040 \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3041 \dimen@=\x\relax
3042 \ifdim\dimen@>\z@
3043   \else
3044     \dimen@=11in\relax
3045     \Hy@WarningNoLine{%
3046       Height of page (\expandafter\string\x) %
3047       is invalid (\the\x),\MessageBreak
3048       using 11in%
3049     }%
3050   \fi
3051   \dimen@=0.99626401\dimen@
3052   \xdef\Hy@pageheight{\strip@pt\dimen@}%
3053 \endgroup
3054 \def\HyInd@EncapChar{\|}
3055 \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.

```

3056 \let\hyper@normalise\ExecuteOptions
3057 \let\ExecuteOptions\hypersetup
3058 \Hy@RestoreCatcodes
3059 \InputIfFileExists{hyperref.cfg}{-}{-}
3060 \Hy@SetCatcodes
3061 \let\ExecuteOptions\hyper@normalise
3062 \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`.

```

3063 \RequirePackage{kvoptions}[2006/08/17]
3064 \AddOption{tex4ht}{Add option tex4ht if package tex4ht is loaded.}
3065 \@ifpackageloaded{tex4ht}{%
3066   \@ifpackagewith{hyperref}{tex4ht}{-}{-}
3067   \PassOptionsToPackage{tex4ht}{hyperref}%
3068 }{-}
3069 \let\ReadBookmarks\relax
3070 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

3071 \AtBeginDocument{%
3072   \ifHy@draft
3073     \let\hyper@@anchor@gobble
3074     \gdef\hyper@link#1#2#3{#3}%
3075     \let\hyper@anchorstart@gobble

```

```

3076 \let\hyper@anchorend\@empty
3077 \let\hyper@linkstart\@gobbletwo
3078 \let\hyper@linkend\@empty
3079 \def\hyper@linkurl#1#2{#1}%
3080 \def\hyper@linkfile#1#2#3{#1}%
3081 \def\hyper@link@[#1]#2#3{}%
3082 \def\Acrobatmenu#1#2{\leavevmode#2}%
3083 \let\PDF@SetupDoc\@empty
3084 \let\PDF@FinishDoc\@empty
3085 \let\@fifthoffive\@secondoftwo
3086 \let\@secondoffive\@secondoftwo
3087 \let\ReadBookmarks\relax
3088 \let\WriteBookmarks\relax
3089 \Hy@WarningNoLine{ draft mode on}%
3090 \fi
3091 \Hy@DisableOption{draft}%
3092 \Hy@DisableOption{nolinks}%
3093 \Hy@DisableOption{final}%
3094 }

```

15.1 PDF/A

```

3095 \Hy@DisableOption{pdfa}

3096 \ifHy@pdfa
3097 \setkeys{Hyp}{pdfversion=1.4}%
3098 \def\Hy@Acrobatmenu#1#2{%
3099 \leavevmode
3100 \begingroup
3101 \edef\x{#1}%
3102 \@onelevel@sanitize\x
3103 \ifx\x\Hy@NextPage
3104 \let\y=Y%
3105 \else
3106 \ifx\x\Hy@PrevPage
3107 \let\y=Y%
3108 \else
3109 \ifx\x\Hy@FirstPage
3110 \let\y=Y%
3111 \else
3112 \ifx\x\Hy@LastPage
3113 \let\y=Y%
3114 \else
3115 \let\y=N%
3116 \fi
3117 \fi
3118 \fi
3119 \fi
3120 \expandafter\endgroup
3121 \ifx\y Y%
3122 \else
3123 \PackageError{hyperref}{%
3124 PDF/A: Named action ‘#1’ is not permitted%
3125 }\@ehc
3126 {#2}%
3127 \expandafter\@gobble
3128 \fi
3129 }%

```

```

3130 \def\Hy@temp#1{%
3131   \expandafter\def\csname Hy@#1\endcsname{#1}%
3132   \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
3133 }%
3134 \Hy@temp{NextPage}%
3135 \Hy@temp{PrevPage}%
3136 \Hy@temp{FirstPage}%
3137 \Hy@temp{LastPage}%
3138 \else
3139   \def\Hy@Acrobatmenu#1#2{\leavevmode}%
3140 \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.

```

3141 \Hy@nextfalse
3142 \@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
3143 \@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
3144 \@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
3145 \ifHy@next
3146   \let\texttilde~%
3147 \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.

```

3148 \@ifpackageloaded{babel}{%
3149   \@ifpackagelater{babel}{2008/03/16}{%
3150     \def\Hy@PatchLanguageShorthands#1{%
3151       \begingroup
3152         \edef\x{#1}%
3153         \@onelevel@sanitize\x
3154         \def\y{system}%
3155         \@onelevel@sanitize\y
3156       \expandafter\endgroup
3157       \ifx\x\y
3158       \else
3159         \HyOrg@languageshorthands{#1}%
3160       \fi
3161     }%
3162     \AtBeginDocument{%
3163       \begingroup
3164         \toks0=\expandafter{\pdfstringdefPreHook}%
3165         \xdef\pdfstringdefPreHook{%
3166           \let\noexpand\HyOrg@languageshorthands
3167           \noexpand\languageshorthands
3168           \let\noexpand\languageshorthands
3169           \noexpand\Hy@PatchLanguageShorthands
3170           \the\toks0 %
3171           \let\noexpand\languageshorthands
3172           \noexpand\HyOrg@languageshorthands
3173         }%
3174       \endgroup
3175     }%
3176   }{}%

```

```

3177 }{}
3178 \ifHy@figures
3179   \Hy@Info{Hyper figures ON}%
3180 \else
3181   \Hy@Info{Hyper figures OFF}%
3182 \fi
3183 \ifHy@nesting
3184   \Hy@Info{Link nesting ON}%
3185 \else
3186   \Hy@Info{Link nesting OFF}%
3187 \fi
3188 \ifHy@hyperindex
3189   \Hy@Info{Hyper index ON}%
3190 \else
3191   \Hy@Info{Hyper index OFF}%
3192 \fi
3193 \ifHy@plainpages
3194   \Hy@Info{Plain pages ON}%
3195 \else
3196   \Hy@Info{Plain pages OFF}%
3197 \fi
3198 \ifHy@backref
3199   \Hy@Info{Backreferencing ON}%
3200 \else
3201   \Hy@Info{Backreferencing OFF}%
3202 \fi
3203 \ifHy@typexml
3204   \AtEndOfPackage{%
3205     \RequirePackage{color}%
3206     \RequirePackage{nameref}%
3207   }%
3208 \fi
3209 \Hy@DisableOption{typexml}
3210 \ifHy@implicit
3211   \typeout{Implicit mode ON; LaTeX internals redefined}%
3212 \else
3213   \typeout{Implicit mode OFF; no redefinition of LaTeX internals}%
3214   \def\MaybeStopEarly{%
3215     \typeout{Hyperref stopped early}%
3216     \AfterBeginDocument{%
3217       \PDF@FinishDoc
3218       \gdef\PDF@FinishDoc{}}%
3219   }%
3220   \endinput
3221 }%
3222 \AtBeginDocument{%
3223   \let\autoref\ref
3224   \let\autopageref\pageref
3225   \ifx\@pdfpagemode\@empty
3226     \gdef\@pdfpagemode{UseNone}%
3227   \fi
3228   \global\Hy@backreffalse
3229 }%
3230 \AtEndOfPackage{%
3231   \global\let\ReadBookmarks\relax
3232   \global\let\WriteBookmarks\relax
3233 }%

```

```

3234 \fi
3235 \Hy@DisableOption{implicit}

```

15.3.1 Driver loading

```

3236 \AtEndOfPackage{%
3237   \@ifpackageloaded{tex4ht}{%
3238     \def\Hy@driver{htex4ht}%
3239     \Hy@texhttrue
3240   }{}%

```

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.

```

3241   \ifx\Hy@driver\@empty
3242   \else
3243     \def\Hy@temp{hpdftex}%
3244     \ifpdf
3245       \ifx\Hy@driver\Hy@temp
3246       \else
3247         \Hy@WarningNoLine{%
3248           Wrong driver ‘\Hy@driver.def’;\MessageBreak
3249           pdfTeX is running in PDF mode.\MessageBreak
3250           Forcing driver ‘\Hy@temp.def’%
3251         }%
3252         \let\Hy@driver\Hy@temp
3253       \fi
3254     \else
3255       \ifx\Hy@driver\Hy@temp
3256       \Hy@WarningNoLine{%
3257         Wrong driver ‘\Hy@driver.def’;\MessageBreak
3258         pdfTeX is not running in PDF mode.\MessageBreak
3259         Using default driver%
3260       }%
3261       \let\Hy@driver\@empty
3262     \fi
3263   \fi
3264 \fi
3265 \ifx\Hy@driver\@empty
3266 \else
3267   \def\Hy@temp{hdvipdfm}%
3268   \ifxetex
3269     \ifx\Hy@driver\Hy@temp
3270     \else
3271       \Hy@WarningNoLine{%
3272         Wrong driver ‘\Hy@driver.def’;\MessageBreak
3273         XeTeX is running.\MessageBreak
3274         Forcing driver ‘\Hy@temp.def’ for XeTeX%
3275       }%
3276       \let\Hy@driver\Hy@temp
3277     \fi
3278   \fi
3279 \fi
3280 \ifx\Hy@driver\@empty
3281 \else
3282   \def\Hy@temp{hvtexhtm}%
3283   \ifvtexhtml
3284     \ifx\Hy@driver\Hy@temp
3285     \else

```

```

3286     \Hy@WarningNoLine{%
3287       Wrong driver '\Hy@driver.def';\MessageBreak
3288       VTeX is running in HTML mode.\MessageBreak
3289       Forcing driver '\Hy@temp.def'%
3290     }%
3291     \let\Hy@driver\Hy@temp
3292   \fi
3293 \else
3294   \ifx\Hy@driver\Hy@temp
3295     \Hy@WarningNoLine{%
3296       Wrong driver '\Hy@driver.def';\MessageBreak
3297       VTeX is not running in HTML mode.\MessageBreak
3298       Using default driver%
3299     }%
3300     \let\Hy@driver\@empty
3301   \fi
3302 \fi
3303 \fi

```

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

```

3304 \ifx\Hy@driver\@empty
3305   \providecommand*{\Hy@defaultdriver}{hypertex}%
3306   \ifpdf
3307     \def\Hy@driver{hpdfptex}%
3308   \else
3309     \ifxetex
3310       \def\Hy@driver{hdvipdfm}%
3311     \else
3312       \ifvtexhtml
3313         \def\Hy@driver{hvtexhtm}%
3314         \def\MaybeStopEarly{%
3315           \typeout{Hyperref stopped early}%
3316           \AfterBeginDocument{%
3317             \PDF@FinishDoc
3318             \gdef\PDF@FinishDoc{}}%
3319         }%
3320         \endinput
3321       }%
3322     \else
3323       \ifvtexpdf
3324         \def\Hy@driver{hvtex}%
3325       \else
3326         \ifvtexps
3327           \def\Hy@driver{hvtex}%
3328         \else
3329           \let\Hy@driver\Hy@defaultdriver
3330         \fi
3331       \fi
3332     \fi
3333   \fi
3334 \fi
3335 \ifx\Hy@driver\Hy@defaultdriver
3336   \def\Hy@temp{hdviwind}%
3337   \ifx\Hy@temp\Hy@driver
3338     \setkeys{Hyp}{colorlinks}%
3339     \PassOptionsToPackage{dviwindo}{color}%
3340   \fi
3341 \fi

```

```

3342 \typeout{*hyperref using default driver \Hy@driver*}%
3343 \else
3344 \typeout{*hyperref using driver \Hy@driver*}%
3345 \fi
3346 \input{\Hy@driver.def}%
3347 \let\@unprocessedoptions\relax
3348 \Hy@RestoreCatcodes
3349 }

```

Support for open outlines is enabled for XeTeX $\epsilon = 0.9995$. I don't know, if older versions also support this. AFAIK older dvipdfmx versions will break, thus the switch cannot be turned on by default.

```

3350 \newif\ifHy@DvipdfmxOutlineOpen
3351 \ifxetex
3352 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
3353 \else
3354 \Hy@DvipdfmxOutlineOpentrue
3355 \fi
3356 \fi
3357 \begingroup\expandafter\expandafter\expandafter\endgroup
3358 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
3359 \else
3360 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
3361 \Hy@DvipdfmxOutlineOpentrue
3362 \fi
3363 \fi
3364 \Hy@DisableOption{tex4ht}
3365 \Hy@DisableOption{pdftex}
3366 \Hy@DisableOption{nativepdf}
3367 \Hy@DisableOption{dvipdfm}
3368 \Hy@DisableOption{dvipdfmx}
3369 \Hy@DisableOption{dvipdfmx-outline-open}
3370 \Hy@DisableOption{pdfmark}
3371 \Hy@DisableOption{dvips}
3372 \Hy@DisableOption{hypertex}
3373 \Hy@DisableOption{vtex}
3374 \Hy@DisableOption{vtexpdfmark}
3375 \Hy@DisableOption{dviwindo}
3376 \Hy@DisableOption{dvipsone}
3377 \Hy@DisableOption{textures}
3378 \Hy@DisableOption{latex2html}
3379 \Hy@DisableOption{ps2pdf}
3380 \Hy@DisableOption{xetex}
3381 \AtEndOfPackage{%
3382 \Hy@DisableOption{pdfversion}%
3383 }

```

15.3.2 Bookmarks

```

3384 \def\WriteBookmarks{0}
3385 \def\@bookmarkopenstatus#1{%
3386 \ifHy@bookmarksopen

```

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

```

3387 \ifnum#1<\expandafter\@firstofone\expandafter
3388 \{number\@bookmarkopenlevel\} % explicit space
3389 \else
3390 -%

```

```

3391 \fi
3392 \else
3393 -%
3394 \fi
3395 }
3396 \ifHy@bookmarks
3397 \Hy@Info{Bookmarks ON}%
3398 \ifx\@pdfpagemode\@empty
3399 \def\@pdfpagemode{UseOutlines}%
3400 \fi
3401 \else
3402 \def\@bookmarkopenstatus#1{%
3403 \Hy@Info{Bookmarks OFF}%
3404 \AtEndOfPackage{%
3405 \global\let\ReadBookmarks\relax
3406 \global\let\WriteBookmarks\relax
3407 }%
3408 \ifx\@pdfpagemode\@empty
3409 \def\@pdfpagemode{UseNone}%
3410 \fi
3411 \fi
3412 \Hy@DisableOption{bookmarks}

Add wrapper for setting standard catcodes (babel's shorthands).
3413 \def\Hy@CatcodeWrapper#1{%
3414 \def\Hy@endWrap{%
3415 \def\TMP@EnsureCode##1##2{%
3416 \edef\Hy@endWrap{%
3417 \Hy@endWrap
3418 \catcode##1 \the\catcode##1\relax
3419 }%
3420 \catcode##1 ##2\relax
3421 }%
3422 \TMP@EnsureCode{10}{12}% ^^J
3423 \TMP@EnsureCode{33}{12}% !
3424 \TMP@EnsureCode{34}{12}% "
3425 \TMP@EnsureCode{36}{3}% $ (math)
3426 \TMP@EnsureCode{38}{4}% & (alignment)
3427 \TMP@EnsureCode{39}{12}% '
3428 \TMP@EnsureCode{40}{12}% (
3429 \TMP@EnsureCode{41}{12}% )
3430 \TMP@EnsureCode{42}{12}% *
3431 \TMP@EnsureCode{43}{12}% +
3432 \TMP@EnsureCode{44}{12}% ,
3433 \TMP@EnsureCode{45}{12}% -
3434 \TMP@EnsureCode{46}{12}% .
3435 \TMP@EnsureCode{47}{12}% /
3436 \TMP@EnsureCode{58}{12}% :
3437 \TMP@EnsureCode{59}{12}% ;
3438 \TMP@EnsureCode{60}{12}% <
3439 \TMP@EnsureCode{61}{12}% =
3440 \TMP@EnsureCode{62}{12}% >
3441 \TMP@EnsureCode{63}{12}% ?
3442 \TMP@EnsureCode{91}{12}% [
3443 \TMP@EnsureCode{93}{12}% ]
3444 \TMP@EnsureCode{94}{7}% ^ (superscript)
3445 \TMP@EnsureCode{95}{8}% _ (subscript)
3446 \TMP@EnsureCode{96}{12}% '

```



```

3447 \TMP@EnsureCode{124}{12}% |
3448 \TMP@EnsureCode{126}{13}% ~ (active)
3449 #1\relax
3450 \Hy@endWrap
3451 }

```

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

```

3452 \AtBeginDocument{%
3453   \ifHy@ocgcolorlinks
3454     \setkeys{Hyp}{colorlinks}%
3455     \ifHy@pdfa
3456       \Hy@Warning{%
3457         PDF/A: Optional Content Groups are prohibited,\MessageBreak
3458         using 'colorlinks' instead of 'ocgcolorlinks'%
3459       }%
3460     \Hy@ocgcolorlinksfalse
3461   \fi
3462 \fi
3463 \ifHy@ocgcolorlinks
3464 \else
3465   \Hy@DisableOption{ocgcolorlinks}%
3466 \fi
3467 \ifHy@colorlinks
3468   \def\@pdfborder{0 0 0}%
3469   \let\@pdfborderstyle\@empty
3470   \ifHy@typexml
3471   \else
3472     \Hy@CatcodeWrapper{%
3473       \RequirePackage{color}%
3474     }%
3475   \fi
3476   \def\Hy@colorlink#1{%
3477     \begingroup
3478     \HyColor@UseColor#1%
3479   }%
3480   \def\Hy@endcolorlink{\endgroup}%
3481   \Hy@Info{Link coloring ON}%
3482 \else
3483   \ifHy@frenchlinks
3484     \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
3485     \def\Hy@endcolorlink{\endgroup}%
3486     \Hy@Info{French linking ON}%
3487   \else

```

for grouping consistency:

```

3488     \def\Hy@colorlink#1{\begingroup}%
3489     \def\Hy@endcolorlink{\endgroup}%
3490     \Hy@Info{Link coloring OFF}%
3491   \fi
3492 \fi
3493 \Hy@DisableOption{colorlinks}%
3494 \Hy@DisableOption{frenchlinks}%
3495 \ifHy@texht
3496   \long\def\@firstoffive#1#2#3#4#5{#1}%
3497   \long\def\@secondoffive#1#2#3#4#5{#2}%
3498   \long\def\@thirdoffive#1#2#3#4#5{#3}%
3499   \long\def\@fourthoffive#1#2#3#4#5{#4}%
3500   \long\def\@fifthoffive#1#2#3#4#5{#5}%

```

```

3501 \providecommand*\@safe@activetrue{%
3502 \providecommand*\@safe@activesfalse{%
3503 \def\T@ref#1{%
3504 \Hy@safe@activetrue
3505 \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
3506 \Hy@safe@activesfalse
3507 }%
3508 \def\T@pageref#1{%
3509 \Hy@safe@activetrue
3510 \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
3511 \Hy@safe@activesfalse
3512 }%
3513 \else
3514 \ifHy@typexml
3515 \else
3516 \Hy@CatcodeWrapper{%
3517 \RequirePackage{nameref}%
3518 }%
3519 \fi
3520 \fi
3521 \DeclareRobustCommand\ref{\@ifstar\@refstar\T@ref}%
3522 \DeclareRobustCommand\pageref{%
3523 \@ifstar\@pagerefstar\T@pageref
3524 }%
3525 }
3526 \AfterBeginDocument{%
3527 \ifHy@texht
3528 \else
3529 \Hy@CatcodeWrapper{%
3530 \ReadBookmarks
3531 }%
3532 \fi
3533 }
3534 \ifHy@backref
3535 \RequirePackage{backref}%
3536 \else
3537 \let\Hy@backout\@gobble
3538 \fi
3539 \Hy@DisableOption{backref}
3540 \Hy@DisableOption{pagebackref}
3541 \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.

```

3542 \begingroup
3543 \endlinechar=-1 %
3544 \catcode'\^^A=14 %
3545 \catcode'\^^M\active
3546 \catcode'\%\active
3547 \catcode'\#\active

```

```

3548 \catcode'\_ \active
3549 \catcode'\$ \active
3550 \catcode'\& \active
3551 \gdef\hyper@normalise{^^A
3552   \begingroup
3553   \catcode'\^^M \active
3554   \def^^M{ }^^A
3555   \catcode'\% \active
3556   \let%\@percentchar
3557   \let\%\@percentchar
3558   \catcode'\# \active
3559   \def#{\hyper@hash}^^A
3560   \def\#{\hyper@hash}^^A
3561   \@makeother\&^^A
3562   \edef&{\string&}^^A
3563   \edef&{\string&}^^A
3564   \edef\textunderscore{\string_}^^A
3565   \let\_ \textunderscore
3566   \catcode'\_ \active
3567   \let\_ \textunderscore
3568   \let~\hyper@tilde
3569   \let~\hyper@tilde
3570   \let\textasciitilde\hyper@tilde
3571   \let\\ \@backslashchar
3572   \edef$\string$}^^A
3573   \Hy@safe@activestrue
3574   \hyper@n@rmalise
3575 }^^A
3576 \catcode'\#=6 ^^A
3577 \gdef\Hy@ActiveCarriageReturn{^^M}^^A
3578 \gdef\hyper@n@rmalise#1#2{^^A
3579   \def\Hy@tempa{#2}^^A
3580   \ifx\Hy@tempa\Hy@ActiveCarriageReturn
3581     \Hy@ReturnAfterElseFi{^^A
3582       \hyper@@normalise{#1}^^A
3583     }^^A
3584   \else
3585     \Hy@ReturnAfterFi{^^A
3586       \hyper@@normalise{#1}{#2}^^A
3587     }^^A
3588   \fi
3589 }^^A
3590 \gdef\hyper@@normalise#1#2{^^A
3591   \edef\Hy@tempa{^^A
3592     \endgroup
3593     \noexpand#1{\Hy@RemovePercentCr#2%\^^M\@nil}^^A
3594   }^^A
3595   \Hy@tempa
3596 }^^A
3597 \gdef\Hy@RemovePercentCr#1%\^^M#2\@nil{^^A
3598   #1^^A
3599   \ifx\limits#2\limits
3600   \else
3601     \Hy@ReturnAfterFi{^^A
3602       \Hy@RemovePercentCr #2\@nil
3603     }^^A
3604   \fi

```

```

3605 }^^A
3606 \endgroup
3607 \providecommand*\hyper@chars{%
3608   \let#\hyper@hash
3609   \let%\hyper@percentchar
3610   \Hy@safe@activetrue
3611 }

3612 \def\hyperlink#1#2{%
3613   \hyper@@link{#1}{#2}%
3614 }

3615 \DeclareRobustCommand*\href{%
3616   \ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
3617 }
3618 \def\Hy@href#1{%
3619   \hyper@normalise\href@
3620 }
3621 \begingroup
3622   \catcode'\$=6 %
3623   \catcode'\#=12 %
3624   \gdef\href@#1{\expandafter\href@split$1##\}%
3625   \gdef\href@split$1#$2#$3\{%
3626     \hyper@@link{#1}{#2}%
3627   }%
3628 \endgroup

```

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

```

3629 \RequirePackage{url}
3630 \let\HyOrg@url\url
3631 \def\Hurl{\begingroup \Url}
3632 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
3633 \def\nolinkurl@#1{\Hurl{#1}}
3634 \DeclareRobustCommand*\url{\hyper@normalise\url@}
3635 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}

3636 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
3637 \providecommand\hyper@image[2]{#2}

3638 \def\hypertarget#1#2{%
3639   \ifHy@nesting
3640     \hyper@@anchor{#1}{#2}%
3641   \else
3642     \hyper@@anchor{#1}{\relax}#2%
3643   \fi
3644 }

```

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

```

3645 \DeclareRobustCommand*\hyperref{%
3646   \ifnextchar[{\Hy@babelnormalise\label@hyperref}\@hyperref
3647 }
3648 \def\Hy@babelnormalise#1[#2]{%
3649   \begingroup
3650     \Hy@safe@activetrue
3651     \edef\Hy@tempa{%

```

```

3652 \endgroup
3653 \noexpand#1[#{#2}]%
3654 }%
3655 \Hy@tempa
3656 }
3657 \def\@hyperref{\hyper@normalise\@hyperref}
3658 \def\@hyperref#1#2#3{%
3659 \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
3660 \expandafter\tryhyper@link\ref@one\{#1}%
3661 }
3662 \def\tryhyper@link#1\#2{%
3663 \hyper@link{#2}{#1}%
3664 }
3665 \def\hyperdef{\@ifnextchar[{\label\hyperdef}{\@hyperdef}}
3666 \def\@hyperdef#1#2#3{%, category, name, text
3667 \ifHy@nesting
3668 \hyper@anchor{#1.#2}{#3}%
3669 \else
3670 \hyper@anchor{#1.#2}{\relax}#3%
3671 \fi
3672 }

```

```

3673 \def\label@hyperref[#1]{%
3674   \expandafter\label@@hyperref\curname r@#1\endcsname{#1}%
3675 }%
3676 \def\label@@hyperref#1#2#3{%
3677   \ifx#1\relax
3678     \protect\G@refundefinedtrue
3679     \@latex@warning{%
3680       Hyper reference ‘#2’ on page \thepage \space undefined%
3681     }%
3682     \hyper@@link{}{??}{#3}%
3683   \else
3684     \hyper@@link{\expandafter\@fifthoffive#1}%
3685       {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
3686   \fi
3687 }
3688 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
3689                                     % anchor text
3690   \@bsphack
3691   \if@filesw
3692     \protected@write\@auxout{%
3693       {\string\newlabel{#1}{\{#\}\}\@##2.#3}}%
3694   \fi
3695   \@esphack
3696   \ifHy@nesting
3697     \hyper@@anchor{#2.#3}{#4}%
3698   \else
3699     \hyper@@anchor{#2.#3}{\relax}#4%
3700   \fi
3701 }

```

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.

```
3702 \def\hyper@link{\let\Hy@reserved@a\relax
3703 \@ifnextchar[{\hyper@link@}{\hyper@link@[link]}}%
3704 }
3705 \def\hyper@link@[#1]#2#3#4{%
3706   \begingroup
3707     \protected@edef\Hy@tempa{#2}%
3708     \Hy@safe@activestrue
3709     \edef\x{#3}%
3710     \ifx\Hy@tempa\@empty
3711       \toks0{\hyper@link{#1}}%
3712     \else
3713       \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
3714     \fi
3715     \toks2{%
3716       \Hy@safe@activesfalse
3717       #4%
3718     }%
3719     \edef\Hy@tempa{\the\toks2}%
3720     \edef\x{\endgroup
3721       \ifx\Hy@tempa\@empty
3722         \noexpand\Hy@Warning{Suppressing empty link}%
3723       \else
3724         \the\toks0 \{ \x \} \the\toks2 }%
3725     \fi
3726   }%
3727   \x
3728 }
```

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.

```
3729 \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.

```
3730   \expandafter\@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
3731 }
```

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

```

3732 \def\@pdftempwordfile{file}%
3733 \def\@pdftempwordrun{run}%
3734 \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 :

```

3735 \ifx\\#6\\%
3736 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
3737 \else
3738 \ifx\\#4\\%
3739 \expandafter\@hyper@linkfile file:#7\\{#3}{#2}%
3740 \else

```

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

```

3741 \def\@pdftempa{#4}%
3742 \ifx\@pdftempa\@pdftempwordfile
3743 \expandafter\@hyper@linkfile#7\\{#3}{#2}%
3744 \else

```

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

```

3745 \ifx\@pdftempa\@pdftempwordrun
3746 \ifHy@pdfa
3747 \PackageError{hyperref}{%
3748 PDF/A: Launch action is prohibited%
3749 }\@ehc
3750 \begingroup
3751 \leavevmode
3752 #2%
3753 \endgroup
3754 \else
3755 \expandafter\@hyper@launch#7\\{#3}{#2}%
3756 \fi
3757 \else

```

otherwise its a URL

```

3758 \hyper@linkurl{#3}{#7\ifx\\#2\\#3\\#4\\#5\\#6\\#7}%
3759 \fi
3760 \fi
3761 \fi
3762 \fi
3763 }

```

By default, turn run: into file:

```

3764 \def\@hyper@launch run:#1\\#2#3{% filename, anchor text, linkname
3765 \hyper@linkurl{#2}{%
3766 \Hy@linkfileprefix
3767 #1%
3768 \ifx\\#3\\%
3769 \else
3770 \hyper@hash
3771 #3%
3772 \fi
3773 }%
3774 }

```

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

```

3775 \def\@hyper@linkfile file:#1\|#2#3{%
3776     %file url,link string, name
3777     \filename@parse{#1}%
3778     \ifx\filename@ext\relax
3779         \edef\filename@ext{\XR@ext}%
3780     \fi
3781     \def\use@file{\filename@area\filename@base.\filename@ext}%
3782     \ifx\filename@ext\XR@ext
3783         \hyper@linkfile{#2}{\use@file}{#3}%
3784     \else
3785         \ifx\@baseurl\@empty
3786             \hyper@linkurl{#2}{%
3787                 \Hy@linkfileprefix\use@file\ifx\|#3\\\else\hyper@hash#3\fi
3788             }%
3789         \else
3790             \hyper@linkurl{#2}{\use@file\ifx\|#3\\\else\hyper@hash#3\fi}%
3791         \fi
3792     \fi
3793 }

```

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.

```

3794 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
3795 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
3796     \ifx\|#1\%
3797         #2\Hy@WarningNoLine{empty link? #1: #2#3}%
3798     \else
3799         \def\anchor@spot{#2#3}%
3800         \let\put@me@back\@empty
3801         \ifx\relax#2\relax
3802         \else
3803             \ifHy@nesting
3804             \else
3805                 \ifcat a\noexpand#2\relax
3806                 \else
3807                     \ifcat 0\noexpand#2 \relax
3808                     \else
3809 %                     \typeout{Anchor start is not alphanumeric %
3810 %                         on input line\the\inputlineno%
3811 %                     }%
3812                     \let\anchor@spot\@empty
3813                     \def\put@me@back{#2#3}%
3814                 \fi
3815             \fi
3816         \fi
3817     \fi
3818     \ifHy@activeanchor
3819         \anchor@spot
3820     \else
3821         \hyper@anchor{#1}%
3822     \fi
3823     \expandafter\put@me@back

```



```

3824 \fi
3825 \let\anchor@spot\@empty
3826 }

```

18 Compatibility with the *LT_{EX}2html* 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.

```

3827 \let\htmladding\hyperimage
3828 \def\htmladdnormallink#1#2{\href{#2}{#1}}
3829 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
3830 \def\htmlref#1#2{% anchor text, label
3831   \label@hyperref[{#2}]{#1}%
3832 }

```

This is really too much. The *LT_{EX}2html* 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.

```

3833 \def\@l@texttohtmlX{%
3834   \let\hhyperref\hyperref
3835   \def\hyperref##1##2##3##4{% anchor text for HTML
3836                                     % text to print before label in print
3837                                     % label
3838                                     % post-label text in print
3839     ##2\ref{##4}##3%
3840   }%
3841 }

```

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.

```

3842 \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
3843 \def\HyField@NewFlag#1#2{%
3844   \lowercase{\HyField@NewOption{#2}}%

```

```

3845 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3846 }

```

\HyField@NewFlagOnly

```

3847 \def\HyField@NewFlagOnly#1#2{%
3848 \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
3849 }

```

\HyField@NewOption #1: option name

```

3850 \def\HyField@NewOption#1{%
3851 \expandafter\newif\csname ifFld@#1\endcsname
3852 \define@key{Field}{#1}[true]{%
3853 \lowercase{\Field@boolkey{##1}}{#1}%
3854 }%
3855 }

```

\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

```

3856 \def\HyField@NewBitsetFlag#1#2#3#4{%
3857 \begingroup
3858 \count@=#4\relax
3859 \advance\count@\m@ne
3860 \def\x##1{%
3861 \endgroup
3862 \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
3863 \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
3864 \expandafter\edef\csname HyField@#3@##1\endcsname{%
3865 (\number#4) #2%
3866 }%
3867 \else
3868 \expandafter\edef\csname HyField@#3@##1\endcsname{%
3869 \csname HyField@#3@##1\endcsname
3870 /#2%
3871 }%
3872 \fi
3873 }%
3874 \expandafter\x\expandafter{\the\count@}%
3875 }

```

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

```

3876 \def\HyField@UseFlag#1#2{%
3877 \lowercase{\HyField@@UseFlag{#2}}{#1}%
3878 }

```

\HyField@@UseFlag

```

3879 \def\HyField@@UseFlag#1#2{%
3880 \bitsetSetValue{HyField@#2}{%
3881 \csname HyField@#2@#1\endcsname
3882 }{%
3883 \csname ifFld@#1\endcsname 1\else 0\fi
3884 }%
3885 }

```

```

\HyField@SetFlag The bit set is HyField@#1
3886 \def\HyField@SetFlag#1#2{%
3887   \lowercase{\HyField@@SetFlag{#2}}{#1}%
3888 }

\HyField@@SetFlag
3889 \def\HyField@@SetFlag#1#2{%
3890   \bitsetSetValue{HyField@#2}{%
3891     \csname HyField@#2@#1\endcsname
3892   }{1}%
3893 }

\HyField@PrintFlags
3894 \def\HyField@PrintFlags#1#2{%
3895   \ifHy@verbose
3896     \begingroup
3897     \let\Hy@temp\@empty
3898     \let\MessageBreak\relax
3899     \expandafter\@for\expandafter\x\expandafter:\expandafter=%
3900     \bitsetGetSetBitList{HyField@#1}\do{%
3901       \edef\Hy@temp{%
3902         \Hy@temp
3903         \csname HyField@#1@\x\endcsname\MessageBreak
3904       }%
3905     }%
3906   \edef\x{\endgroup
3907     \noexpand\Hy@Info{%
3908       Field flags: %
3909       \expandafter\ifx\@car#1\@nil S\else/\fi
3910       #1 %
3911       \bitsetGetDec{HyField@#1} %
3912       (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
3913       \Hy@temp
3914       for #2%
3915     }%
3916   }\x
3917 \fi
3918 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

3919 \HyField@NewFlag{Ff}{ReadOnly}{1}
3920 \HyField@NewFlag{Ff}{Required}{2}
3921 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

3922 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
3923 \HyField@NewFlag{Ff}{Radio}{16}
3924 \HyField@NewFlag{Ff}{Pushbutton}{17}
3925 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

3926 \HyField@NewFlag{Ff}{Multiline}{13}
3927 \HyField@NewFlag{Ff}{Password}{14}
3928 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
3929 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4

```

```

3930 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
3931 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
3932 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

3933 \HyField@NewFlag{Ff}{Combo}{18}
3934 \HyField@NewFlag{Ff}{Edit}{19}
3935 \HyField@NewFlag{Ff}{Sort}{20}
3936 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
3937 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
3938 \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.

```

3939 \newif\ifFld@popdown
3940 \define@key{Field}{popdown}[true]{%
3941   \lowercase{\Field@boolkey{#1}}{popdown}%
3942 }

```

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.

```

3943 \HyField@NewFlag{F}{Invisible}{1}
3944 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
3945 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
3946 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
3947 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
3948 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
3949 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
3950 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
3951 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

3952 \ifHy@pdfa
3953   \def\HyField@PDFAFflagWarning#1#2{%
3954     \Hy@Warning{%
3955       PDF/A: Annotation flag ‘#1’ must\MessageBreak
3956       be set to ‘#2’%
3957     }%
3958   }%
3959   \Fld@invisiblefalse
3960   \def\Fld@invisibletrue{%
3961     \HyField@PDFAFflagWarning{invisible}{false}%
3962   }%
3963   \Fld@hiddenfalse
3964   \def\Fld@hiddentrue{%
3965     \HyField@PDFAFflagWarning{hidden}{false}%
3966   }%
3967   \Fld@printtrue
3968   \def\Fld@printfalse{%
3969     \HyField@PDFAFflagWarning{print}{true}%
3970   }%
3971   \Fld@nozoomtrue
3972   \def\Fld@nozoomfalse{%
3973     \HyField@PDFAFflagWarning{nozoom}{true}%
3974   }%
3975   \Fld@norotatetrue

```

```

3976 \def\Fld@norotatefalse{%
3977   \HyField@PDFAFIWarning{norotate}{true}%
3978 }%
3979 \Fld@noviewfalse
3980 \def\Fld@noviewtrue{%
3981   \HyField@PDFAFIWarning{noview}{false}%
3982 }%
3983 \fi

```

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

```

3984 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
3985 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
3986 \HyField@NewFlag{Submit}{GetMethod}{4}
3987 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
3988 \HyField@NewFlagOnly{Submit}{XFDF}{6}
3989 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
3990 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
3991 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
3992 \HyField@NewFlag{Submit}{CanonicalFormat}{10}
3993 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
3994 \HyField@NewFlag{Submit}{ExclFKey}{12}
3995 \HyField@NewFlag{Submit}{EmbedForm}{14}

3996 \define@key{Field}{export}{%
3997   \lowercase{\def\Hy@temp{#1}}%
3998   \@ifundefined{Fld@export@\Hy@temp}{%
3999     \@onelevel@sanitize\Hy@temp
4000     \PackageError{hyperref}{%
4001       Unknown export format '\Hy@temp'.\MessageBreak
4002       Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
4003     }\@ehc
4004   }{%
4005     \let\Fld@export\Hy@temp
4006   }%
4007 }
4008 \def\Fld@export{fdf}
4009 \@namedef{Fld@export@fdf}{0}%
4010 \@namedef{Fld@export@html}{1}%
4011 \@namedef{Fld@export@xfdf}{2}%
4012 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

4013 \def\HyField@FlagsSubmit{%
4014   \bitsetReset{HyField@Submit}%
4015   \ifcase\@nameuse{Fld@export@\Fld@export} %
4016     % FDF
4017     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4018     \HyField@UseFlag{Submit}{SubmitCoordinates}%
4019     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
4020     \HyField@UseFlag{Submit}{IncludeAnnotations}%
4021     \HyField@UseFlag{Submit}{CanonicalFormat}%
4022     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
4023     \HyField@UseFlag{Submit}{ExclFKey}%
4024     \HyField@UseFlag{Submit}{EmbedForm}%
4025   \or % HTML
4026     \HyField@SetFlag{Submit}{ExportFormat}%

```

```

4027 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4028 \HyField@UseFlag{Submit}{GetMethod}%
4029 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4030 \HyField@UseFlag{Submit}{CanonicalFormat}%
4031 \or % XFDF
4032 \HyField@SetFlag{Submit}{XFDF}%
4033 \HyField@UseFlag{Submit}{IncludeNoValueFields}%
4034 \HyField@UseFlag{Submit}{SubmitCoordinates}%
4035 \HyField@UseFlag{Submit}{CanonicalFormat}%
4036 \or % PDF
4037 \HyField@SetFlag{Submit}{SubmitPDF}%
4038 \HyField@UseFlag{Submit}{GetMethod}%
4039 \fi
4040 \HyField@PrintFlags{Submit}{submit button field}%
4041 \bitsetIsEmpty{HyField@Submit}{%
4042 \def\Fld@submitflags{%
4043 }{%
4044 \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
4045 }%
4046 }

```

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```

4047 \def\HyField@FlagsAnnot#1{%
4048 \bitsetReset{HyField@F}%
4049 \HyField@UseFlag{F}{Invisible}%
4050 \HyField@UseFlag{F}{Hidden}%
4051 \HyField@UseFlag{F}{Print}%
4052 \HyField@UseFlag{F}{NoZoom}%
4053 \HyField@UseFlag{F}{NoRotate}%
4054 \HyField@UseFlag{F}{NoView}%
4055 \HyField@UseFlag{F}{Locked}%
4056 \HyField@UseFlag{F}{ToggleNoView}%
4057 \HyField@UseFlag{F}{LockedContents}%
4058 \HyField@PrintFlags{F}{#1}%
4059 \bitsetIsEmpty{HyField@F}{%
4060 \def\Fld@annotflags{%
4061 }{%
4062 \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}%
4063 }%
4064 }

```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```

4065 \def\HyField@FlagsPushButton{%
4066 \HyField@FlagsAnnot{push button field}%
4067 \bitsetReset{HyField@Ff}%
4068 \HyField@UseFlag{Ff}{ReadOnly}%
4069 \HyField@UseFlag{Ff}{Required}%
4070 \HyField@UseFlag{Ff}{NoExport}%
4071 \HyField@SetFlag{Ff}{PushButton}%
4072 \HyField@PrintFlags{Ff}{push button field}%
4073 \bitsetIsEmpty{HyField@Ff}{%
4074 \def\Fld@flags{%

```

```

4075 }{%
4076     \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4077 }%
4078 }

```

19.1.5 Check box field

\HyField@FlagsCheckBox

```

4079 \def\HyField@FlagsCheckBox{%
4080     \HyField@FlagsAnnot{check box field}%
4081     \bitsetReset{HyField@Ff}%
4082     \HyField@UseFlag{Ff}{ReadOnly}%
4083     \HyField@UseFlag{Ff}{Required}%
4084     \HyField@UseFlag{Ff}{NoExport}%
4085     \HyField@PrintFlags{Ff}{check box field}%
4086     \bitsetIsEmpty{HyField@Ff}{%
4087         \def\Fld@flags{%
4088             }{%
4089                 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4090             }%
4091         }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

4092 \def\HyField@FlagsRadioButton{%
4093     \HyField@FlagsAnnot{radio button field}%
4094     \bitsetReset{HyField@Ff}%
4095     \HyField@UseFlag{Ff}{ReadOnly}%
4096     \HyField@UseFlag{Ff}{Required}%
4097     \HyField@UseFlag{Ff}{NoExport}%
4098     \HyField@UseFlag{Ff}{NoToggleToOff}%
4099     \HyField@SetFlag{Ff}{Radio}%
4100     \HyField@UseFlag{Ff}{RadiosInUnison}%
4101     \HyField@PrintFlags{Ff}{radio button field}%
4102     \bitsetIsEmpty{HyField@Ff}{%
4103         \def\Fld@flags{%
4104             }{%
4105                 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4106             }%
4107         }

```

19.1.7 Text fields

\HyField@FlagsText

```

4108 \def\HyField@FlagsText{%
4109     \HyField@FlagsAnnot{text field}%
4110     \bitsetReset{HyField@Ff}%
4111     \HyField@UseFlag{Ff}{ReadOnly}%
4112     \HyField@UseFlag{Ff}{Required}%
4113     \HyField@UseFlag{Ff}{NoExport}%
4114     \HyField@UseFlag{Ff}{Multiline}%
4115     \HyField@UseFlag{Ff}{Password}%
4116     \HyField@UseFlag{Ff}{FileSelect}%
4117     \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4118     \HyField@UseFlag{Ff}{DoNotScroll}%

```

```

4119 \ifFld@comb
4120   \ifcase0\ifFld@multiline
4121       \else\ifFld@password
4122       \else\ifFld@fileselect
4123       \else 1\fi\fi\fi\relax
4124   \PackageError{hyperref}{%
4125       Field option 'comb' cannot used together with\MessageBreak
4126       'multiline', 'password', or 'fileselect'%
4127   }\@ehc
4128   \else
4129   \HyField@UseFlag{Ff}{Comb}%
4130   \fi
4131 \fi
4132 \HyField@UseFlag{Ff}{RichText}%
4133 \HyField@PrintFlags{Ff}{text field}%
4134 \bitsetIsEmpty{HyField@Ff}{%
4135   \def\Fld@flags{%
4136 }{%
4137   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4138 }%
4139 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

4140 \def\HyField@FlagsChoice{%
4141   \HyField@FlagsAnnot{choice field}%
4142   \bitsetReset{HyField@Ff}%
4143   \HyField@UseFlag{Ff}{ReadOnly}%
4144   \HyField@UseFlag{Ff}{Required}%
4145   \HyField@UseFlag{Ff}{NoExport}%
4146   \HyField@UseFlag{Ff}{Combo}%
4147   \ifFld@combo
4148     \HyField@UseFlag{Ff}{Edit}%
4149   \fi
4150   \HyField@UseFlag{Ff}{Sort}%
4151   \HyField@UseFlag{Ff}{MultiSelect}%
4152   \ifFld@combo
4153     \ifFld@edit
4154     \HyField@UseFlag{Ff}{DoNotSpellCheck}%
4155   \fi
4156   \fi
4157   \HyField@UseFlag{Ff}{CommitOnSelChange}%
4158   \HyField@PrintFlags{Ff}{choice field}%
4159   \bitsetIsEmpty{HyField@Ff}{%
4160     \def\Fld@flags{%
4161 }{%
4162   \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
4163 }%
4164 }

```

19.2 Choice field

4165 \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.

```

4166 \def\HyField@PDFChoices#1{%
4167   \begingroup
4168     \gdef\Fld@choices{}%
4169     \def\HyTmp@optlist{}%
4170     \let\HyTmp@optitem\relax
4171     \count@=0 %
4172     \kv@parse{#1}{%
4173       \Hy@pdfstringdef\kv@key\kv@key
4174       \ifx\kv@value\relax
4175         \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
4176           \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
4177         \else
4178           \xdef\Fld@choices{\Fld@choices(\kv@key)}%
4179         \fi
4180       \else
4181         \Hy@pdfstringdef\kv@value\kv@value
4182         \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
4183       \fi
4184     \edef\HyTmp@optlist{%
4185       \HyTmp@optlist
4186       \HyTmp@optitem{the\count@}{\kv@key}0%
4187     }%
4188     \advance\count@ by 1 %
4189     \@gobbletwo
4190   }%
4191   \xdef\Fld@choices{/Opt[\Fld@choices]}%
4192   \ifFld@multiselect
4193     \HyField@@PDFChoices{DV}\Fld@default
4194     \HyField@@PDFChoices{V}\Fld@value
4195   \else
4196     \ifx\Fld@default\relax
4197     \else
4198       \pdfstringdef\Hy@gtemp\Fld@default
4199       \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtemp)}%
4200     \fi
4201     \ifx\Fld@value\relax
4202     \else
4203       \pdfstringdef\Hy@gtemp\Fld@value
4204       \xdef\Fld@choices{\Fld@choices/V(\Hy@gtemp)}%
4205     \fi
4206   \fi
4207 \endgroup
4208 }

```

\HyField@@PDFChoices

```

4209 \def\HyField@@PDFChoices#1#2{%
4210   \ifx#2\relax
4211   \else
4212     \count@=0 %
4213     \def\HyTmp@optitem##1##2##3{%
4214       \def\HyTmp@key{##2}%
4215       \ifx\HyTmp@key\Hy@gtemp
4216         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4217           \HyTmp@optlist
4218           \HyTmp@optitem{##1}{##2}1%
4219         }%

```

```

4220         \let\HyTmp@found=Y%
4221     \else
4222         \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
4223             \HyTmp@optlist
4224             \HyTmp@optitem{##1}{##2}##3%
4225         }%
4226     \fi
4227 }%
4228 \expandafter\comma@parse\expandafter{#2}{%
4229     \pdfstringdef\Hy@gtemp\comma@entry
4230     \let\HyTmp@found=N %
4231     \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
4232     \HyTmp@optlist
4233     \ifx\HyTmp@found Y%
4234         \advance\count@ by 1 %
4235     \else
4236         \@onelevel@sanitize\comma@entry
4237         \PackageWarning{hyperref}{%
4238             \string\ChoiceBox: Ignoring value ‘\comma@entry’,%
4239             \MessageBreak
4240             it cannot be found in the choices%
4241         }%
4242     \fi
4243     \@gobble
4244 }%
4245 \def\HyTmp@optitem##1##2##3{%
4246     \ifnum##3=1 %
4247         (##2)%
4248     \fi
4249 }%
4250 \ifcase\count@
4251 \or
4252     \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
4253 \else
4254     \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
4255     \ifx#1V%
4256         \def\HyTmp@optitem##1##2##3{%
4257             \ifnum##3=1 %
4258                 \@firstofone{ ##1}%
4259             \fi
4260         }%
4261         \edef\HyTmp@optlist{\HyTmp@optlist}%
4262         \xdef\Fld@choices{%
4263             \Fld@choices
4264             /I[\expandafter\@firstofone\HyTmp@optlist]%
4265         }%
4266     \fi
4267 \fi
4268 \fi
4269 }

```

19.3 Forms

\HyField@SetKeys

```

4270 \def\HyField@SetKeys{%
4271     \setkeys{Field}%
4272 }

```

```

4273 \newif\ifFld@checked
4274 \newif\ifFld@disabled
4275 \Fld@checkedfalse
4276 \Fld@disabledfalse
4277 \newcount\Fld@menulength
4278 \newdimen\Fld@Width
4279 \newdimen\Fld@charsize
4280 \Fld@charsize=10\p@
4281 \def\Fld@maxlen{0}
4282 \def\Fld@align{0}
4283 \def\Fld@color{0 0 0 rg}
4284 \def\Fld@bcolor{1 1 1}
4285 \def\Fld@bordercolor{1 0 0}
4286 \def\Fld@bordersep{1\p@}
4287 \def\Fld@borderwidth{1}
4288 \def\Fld@borderstyle{S}
4289 \def\Fld@cbsymbol{4}
4290 \def\Fld@radiosymbol{H}
4291 \def\Fld@rotation{0}
4292 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
4293 \def\endForm{\@endForm}
4294 \newif\ifForm@html
4295 \Form@htmlfalse
4296 \def\Form@boolkey#1#2{%
4297   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4298 }
4299 \define@key{Form}{action}{%
4300   \hyper@normalise\Hy@DefFormAction{#1}%
4301 }
4302 \def\Hy@DefFormAction{\def\Form@action}
4303 \def\enc@html{html}
4304 \define@key{Form}{encoding}{%
4305   \def\Hy@tempa{#1}%
4306   \ifx\Hy@tempa\enc@html
4307     \Form@htmltrue
4308     \def\Fld@export{html}%
4309   \else
4310     \typeout{hyperref: form 'encoding' key set to #1 %
4311       -- unknown type%
4312     }%
4313     \Form@htmlfalse
4314   \fi
4315 }
4316 \define@key{Form}{method}{%
4317   \lowercase{\def\Hy@temp{#1}}%
4318   \@ifundefined{Form@method@Hy@temp}{%
4319     \onelevel@sanitize\Hy@temp
4320     \PackageError{hyperref}{%
4321       Unknown method '\Hy@temp'.\MessageBreak
4322       Known values are 'post' and 'get'%
4323     }\@ehc
4324   }{%
4325     \let\Form@method\Hy@temp
4326     \ifcase\@nameuse{Form@method@Hy@temp} %
4327       \Fld@getmethodfalse
4328     \else
4329       \Fld@getmethodtrue

```

```

4330     \fi
4331   }%
4332 }
4333 \def\Form@method{}
4334 \@namedef{Form@method@post}{0}
4335 \@namedef{Form@method@get}{1}
4336 \def\Field@boolkey#1#2{%
4337   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
4338 }
4339 \newtoks\Field@toks
4340 \Field@toks={ }%
4341 \def\Field@addtoks#1#2{%
4342   \edef\@processme{\Field@toks{\the\Field@toks\space #1="#2"}}%
4343   \@processme
4344 }
4345 \def\Fld@checkequals#1=#2=#3\{%
4346   \def\@currDisplay{#1}%
4347   \ifx\#2\%
4348     \def\@currValue{#1}%
4349   \else
4350     \def\@currValue{#2}%
4351   \fi
4352 }
4353 \define@key{Field}{loc}{%
4354   \def\Fld@loc{#1}%
4355 }
4356 \define@key{Field}{checked}[true]{%
4357   \lowercase{\Field@boolkey{#1}}{checked}%
4358 }
4359 \define@key{Field}{disabled}[true]{%
4360   \lowercase{\Field@boolkey{#1}}{disabled}%
4361 }
4362 \define@key{Field}{accesskey}{%
4363   \Field@addtoks{accesskey}{#1}%
4364 }
4365 \define@key{Field}{tabkey}{%
4366   \Field@addtoks{tabkey}{#1}%
4367 }
4368 \define@key{Field}{name}{%
4369   \def\Fld@name{#1}%
4370 }
4371 \define@key{Field}{width}{%
4372   \def\Fld@width{#1}%
4373   \Field@Width#1\setbox0=\hbox{m}%
4374 }
4375 \define@key{Field}{maxlen}{%
4376   \def\Fld@maxlen{#1}%
4377 }
4378 \define@key{Field}{menulength}{%
4379   \Fld@menulength=#1\relax
4380 }
4381 \define@key{Field}{height}{%
4382   \def\Fld@height{#1}%
4383 }
4384 \define@key{Field}{charsize}{%
4385   \Fld@charsize#1%
4386 }

```

```

4387 \define@key{Field}{borderwidth}{%
4388   \def\Fld@borderwidth{#1}%
4389 }
4390 \define@key{Field}{borderstyle}{%
4391   \def\Fld@borderstyle{#1}%
4392 }
4393 \define@key{Field}{bordersep}{%
4394   \def\Fld@bordersep{#1}%
4395 }
4396 \define@key{Field}{default}{%
4397   \def\Fld@default{#1}%
4398 }
4399 \define@key{Field}{align}{%
4400   \def\Fld@align{#1}%
4401 }
4402 \define@key{Field}{value}{%
4403   \def\Fld@value{#1}%
4404 }
4405 \define@key{Field}{checkboxsymbol}{%
4406   \Fld@DingDef\Fld@cbsymbol{#1}%
4407 }
4408 \define@key{Field}{radiosymbol}{%
4409   \Fld@DingDef\Fld@radiosymbol{#1}%
4410 }
4411 \def\Fld@DingDef#1#2{%
4412   \def\Fld@temp{%
4413     \Fld@@DingDef#2\ding{}\@nil
4414     \let#1\Fld@temp
4415 }
4416 \def\Fld@@DingDef#1\ding#2#3\@nil{%
4417   \expandafter\def\expandafter\Fld@temp\expandafter{%
4418     \Fld@temp
4419     #1%
4420   }%
4421   \ifx\#3\%
4422     \expandafter\@gobble
4423   \else
4424     \begingroup
4425     \lccode'0=#2\relax
4426     \lowercase{\endgroup
4427     \expandafter\def\expandafter\Fld@temp\expandafter{%
4428       \Fld@temp
4429       0%
4430     }%
4431   }%
4432   \expandafter\@firstofone
4433 \fi
4434 {%
4435   \Fld@@DingDef#3\@nil
4436 }%
4437 }
4438 \define@key{Field}{rotation}{%
4439   \def\Fld@rotation{#1}%
4440 }
4441 \define@key{Field}{backgroundcolor}{%
4442   \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
4443 }

```

```

4444 \define@key{Field}{bordercolor}{%
4445   \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
4446 }
4447 \define@key{Field}{color}{%
4448   \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
4449 }

4450 \def\Fld@onclick@code{}
4451 \def\Fld@format@code{}
4452 \def\Fld@validate@code{}
4453 \def\Fld@calculate@code{}
4454 \def\Fld@keystroke@code{}
4455 \def\Fld@onfocus@code{}
4456 \def\Fld@onblur@code{}
4457 \def\Fld@onmousedown@code{}
4458 \def\Fld@onmouseup@code{}
4459 \def\Fld@onenter@code{}
4460 \def\Fld@onexit@code{}
4461 \def\Hy@temp#1{%
4462   \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
4463 }
4464 \def\Hy@@temp#1#2{%
4465   \ifHy@pdfa
4466     \define@key{Field}{#2}{%
4467       \PackageError{hyperref}{%
4468         PDF/A: Additional action ‘#2’ is prohibited%
4469       }\@ehc
4470     }%
4471   \else
4472     \define@key{Field}{#2}{%
4473       \def#1{##1}%
4474     }%
4475   \fi
4476 }
4477 \Hy@temp{keystroke}
4478 \Hy@temp{format}
4479 \Hy@temp{validate}
4480 \Hy@temp{calculate}
4481 \Hy@temp{onfocus}
4482 \Hy@temp{onblur}
4483 \Hy@temp{onenter}
4484 \Hy@temp{onexit}
4485 \def\Hy@temp#1{%
4486   \define@key{Field}{#1}{%
4487     \Field@addtoks{#1}{##1}%
4488   }%
4489 }
4490 \Hy@temp{onselect}
4491 \Hy@temp{onchange}
4492 \Hy@temp{ondblclick}
4493 \Hy@temp{onmousedown}
4494 \Hy@temp{onmouseup}
4495 \Hy@temp{onmouseover}
4496 \Hy@temp{onmousemove}
4497 \Hy@temp{onmouseout}
4498 \Hy@temp{onkeypress}
4499 \Hy@temp{onkeydown}
4500 \Hy@temp{onkeyup}

```

```

4501 \ifHy@pdfa
4502   \define@key{Field}{onclick}{%
4503     \PackageError{hyperref}{%
4504       PDF/A: Action 'onclick' is prohibited%
4505     }\@ehc
4506   }%
4507 \else
4508   \define@key{Field}{onclick}{%
4509     \def\Fld@onclick@code{#1}%
4510     \Field@addtoks{onclick}{#1}%
4511   }%
4512 \fi

4513 \DeclareRobustCommand\TextField{%
4514   \@ifnextchar[{\@TextField}{\@TextField[]}%
4515 }
4516 \DeclareRobustCommand\ChoiceMenu{%
4517   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
4518 }
4519 \DeclareRobustCommand\CheckBox{%
4520   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
4521 }
4522 \DeclareRobustCommand\PushButton{%
4523   \@ifnextchar[{\@PushButton}{\@PushButton[]}%
4524 }
4525 \DeclareRobustCommand\Gauge{%
4526   \@ifnextchar[{\@Gauge}{\@Gauge[]}%
4527 }
4528 \DeclareRobustCommand\Submit{%
4529   \@ifnextchar[{\@Submit}{\@Submit[]}%
4530 }
4531 \DeclareRobustCommand\Reset{%
4532   \@ifnextchar[{\@Reset}{\@Reset[]}%
4533 }
4534 \def\LayoutTextField#1#2{% label, field
4535   #1 #2%
4536 }
4537 \def\LayoutChoiceField#1#2{% label, field
4538   #1 #2%
4539 }
4540 \def\LayoutCheckField#1#2{% label, field
4541   #1 #2%
4542 }
4543 \def\LayoutPushButtonField#1{% button
4544   #1%
4545 }
4546 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4547 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4548 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4549 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
4550 \def\MakeButtonField#1{%
4551   \sbox0{%
4552     \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
4553   }%
4554   \@tempdima\ht0 %
4555   \advance\@tempdima by \Fld@borderwidth bp %
4556   \advance\@tempdima by \Fld@borderwidth bp %
4557   \ht0\@tempdima

```

```

4558 \@tempdima\dp0 %
4559 \advance\@tempdima by \Fld@borderwidth bp %
4560 \advance\@tempdima by \Fld@borderwidth bp %
4561 \dp0\@tempdima
4562 \box0\relax
4563 }
4564 \def\DefaultHeightofSubmit{14pt}
4565 \def\DefaultWidthofSubmit{2cm}
4566 \def\DefaultHeightofReset{14pt}
4567 \def\DefaultWidthofReset{2cm}
4568 \def\DefaultHeightofCheckBox{\baselineskip}
4569 \def\DefaultWidthofCheckBox{\baselineskip}
4570 \def\DefaultHeightofChoiceMenu{\baselineskip}
4571 \def\DefaultWidthofChoiceMenu{\baselineskip}
4572 \def\DefaultHeightofText{\baselineskip}
4573 \def\DefaultHeightofTextMultiline{4\baselineskip}
4574 \def\DefaultWidthofText{3cm}
4575 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
4576 \def\DefaultOptionsofReset{print,name=Reset,noexport}
4577 \def\DefaultOptionsofPushButton{print}
4578 \def\DefaultOptionsofCheckBox{print}
4579 \def\DefaultOptionsofText{print}

```

Default options for the types of \ChoiceMenu.

```

4580 \def\DefaultOptionsofListBox{print}
4581 \def\DefaultOptionsofComboBox{print,edit,sort}
4582 \def\DefaultOptionsofPopdownBox{print}
4583 \def\DefaultOptionsofRadio{print,notoggletooff}

```

20 Setup

```

4584 \ifHy@figures
4585 \Hy@Info{Hyper figures ON}%
4586 \else
4587 \Hy@Info{Hyper figures OFF}%
4588 \fi
4589 \ifHy@nesting
4590 \Hy@Info{Link nesting ON}%
4591 \else
4592 \Hy@Info{Link nesting OFF}%
4593 \fi
4594 \ifHy@hyperindex
4595 \Hy@Info{Hyper index ON}%
4596 \else
4597 \Hy@Info{Hyper index OFF}%
4598 \fi
4599 \ifHy@backref
4600 \Hy@Info{backreferencing ON}%
4601 \else
4602 \Hy@Info{backreferencing OFF}%
4603 \fi
4604 \ifHy@colorlinks
4605 \Hy@Info{Link coloring ON}%
4606 \else
4607 \Hy@Info{Link coloring OFF}%
4608 \fi
4609 \ifHy@ocgcolorlinks

```



```

4610 \Hy@Info{Link coloring with OCG ON}%
4611 \else
4612 \Hy@Info{Link coloring with OCG OFF}%
4613 \fi
4614 \ifHy@pdfa
4615 \Hy@Info{PDF/A mode ON}%
4616 \else
4617 \Hy@Info{PDF/A mode OFF}%
4618 \fi

```

21 Low-level utility macros

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

```

4619 \edef\hyper@hash{\string#}
4620 \edef\hyper@tilde{\string~}
4621 \edef\hyper@quote{\string"}
4622 \let\@currentHref\@empty
4623 \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.

```

4624 \AfterBeginDocument{%
4625 \Hy@pdfstringtrue
4626 \PDF@SetupDoc
4627 \let\PDF@SetupDoc\@empty
4628 \Hy@DisableOption{pdfpagescrop}%
4629 \Hy@DisableOption{pdfpagemode}%
4630 \Hy@DisableOption{pdfnonfullscreenpagemode}%
4631 \Hy@DisableOption{pdfdirection}%
4632 \Hy@DisableOption{pdfviewarea}%
4633 \Hy@DisableOption{pdfviewclip}%
4634 \Hy@DisableOption{pdfprintarea}%
4635 \Hy@DisableOption{pdfprintclip}%
4636 \Hy@DisableOption{pdfprintscaling}%
4637 \Hy@DisableOption{pdfduplex}%
4638 \Hy@DisableOption{pdfpicktraybypdfsize}%
4639 \Hy@DisableOption{pdfprintpagerange}%
4640 \Hy@DisableOption{pdfnumcopies}%
4641 \Hy@DisableOption{pdfstartview}%
4642 \Hy@DisableOption{pdfstartpage}%
4643 \Hy@DisableOption{pdftoolbar}%
4644 \Hy@DisableOption{pdfmenubar}%
4645 \Hy@DisableOption{pdfwindowui}%
4646 \Hy@DisableOption{pdffitwindow}%
4647 \Hy@DisableOption{pdfcenterwindow}%
4648 \Hy@DisableOption{pdfdisplaydoctitle}%
4649 \Hy@DisableOption{pdfpagelayout}%
4650 \Hy@DisableOption{pdflang}%
4651 \Hy@DisableOption{baseurl}%
4652 \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
4653 \Hy@pdfstringfalse
4654 }

```

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 func-

tions doing anything. This is used, for instance, in the Elsevier classes, to stop hyperref playing havoc in the front matter.

```

4655 \def\NoHyper{%
4656   \def\hyper@link@{##1}##2##3##4{##4}%
4657   \def\hyper@@anchor##1{%
4658     \global\let\hyper@livelink\hyper@link
4659     \gdef\hyper@link##1##2##3{##3}%
4660     \def\hyper@anchorstart##1{%
4661       \let\hyper@anchorend\@empty
4662       \def\hyper@linkstart##1##2{%
4663         \let\hyper@linkend\@empty
4664         \def\hyper@linkurl##1##2{##1}%
4665         \def\hyper@linkfile##1##2##3{##1}%
4666         \def\hyper@link@{##1}##2##3{%
4667           \let\Hy@backout\@gobble
4668         }
4669       \def\stop@hyper{%
4670         \def\hyper@link@{##1}##2##3##4{##4}%
4671         \let\Hy@backout\@gobble
4672         \def\hyper@@anchor##1{%
4673           \def\hyper@link##1##2##3{##3}%
4674           \def\hyper@anchorstart##1{%
4675             \let\hyper@anchorend\@empty
4676             \def\hyper@linkstart##1##2{%
4677               \let\hyper@linkend\@empty
4678               \def\hyper@linkurl##1##2{##1}%
4679               \def\hyper@linkfile##1##2##3{##1}%
4680               \def\hyper@link@{##1}##2##3{%
4681             }
4682           \def\endNoHyper{%
4683             \global\let\hyper@link\hyper@livelink
4684           }
4685 \</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:

```

4686 \*nohyperref
4687 \let\hyper@@anchor\@gobble
4688 \def\hyper@link#1#2#3{#3}%
4689 \let\hyper@anchorstart\@gobble
4690 \let\hyper@anchorend\@empty
4691 \let\hyper@linkstart\@gobbletwo
4692 \let\hyper@linkend\@empty
4693 \def\hyper@linkurl#1#2{#1}%
4694 \def\hyper@linkfile#1#2#3{#1}%
4695 \def\hyper@link@{#1}#2#3{%
4696   \let\PDF@SetupDoc\@empty
4697   \let\PDF@FinishDoc\@empty
4698 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

4699 \def\Acrobatmenu#1#2{\leavevmode#2}
4700 \let\pdfstringdefDisableCommands\@gobbletwo
4701 \let\texorpdfstring\@firstoftwo
4702 \let\pdfbookmark\@undefined
4703 \newcommand\pdfbookmark[3][]{\{}
4704 \let\phantomsection\@empty
4705 \let\hypersetup\@gobble
4706 \let\hyperbaseurl\@gobble
4707 \let\href\@gobble
4708 \let\hyperdef\@gobbletwo
4709 \let\hyperlink\@gobble
4710 \let\hypertarget\@gobble
4711 \def\hyperref{%
4712   \@ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
4713 }
4714 \long\def\@gobbleopt[#1]{\{}
4715 \let\hyperpage\@empty
4716 \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}`

```

4717 \*package
4718 \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.

```

4719 \if@filesw
4720   \ifHy@typexml
4721     \immediate\closeout\@mainaux
4722     \immediate\openout\@mainaux\jobname.aux\relax
4723     \immediate\write\@auxout{<relaxxml>\relax}%
4724   \fi
4725   \immediate\write\@auxout{%
4726     \string\ifx\string\hyper@anchor\string\@undefined^^J%
4727     \global\let\string\oldcontentsline\string\contentsline^^J%
4728     \gdef\string\contentsline%
4729       \string#1\string#2\string#3\string#4{%
4730       \string\oldcontentsline%
4731       {\string#1}{\string#2}{\string#3}}^^J%
4732     \global\let\string\oldnewlabel\string\newlabel^^J%
4733     \gdef\string\newlabel\string#1\string#2{%
4734       \string\newlabelxx{\string#1}\string#2}^^J%
4735     \gdef\string\newlabelxx%
4736       \string#1\string#2\string#3\string#4\string#5\string#6{%
4737       \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.

```

4738   \string\AtEndDocument{%
4739     \let\string\contentsline\string\oldcontentsline^^J%
4740     \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.

```

4741     \string\else^^J%
4742     \global\let\string\hyper@last\relax^^J%
4743     \string\fi^^J%
4744   }%
4745 \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.

```

4746 \ifx\hyper@last\@undefined
4747   \def\@starttoc#1{%
4748     \begingroup
4749     \makeatletter
4750     \IfFileExists{\jobname.#1}{%
4751       \Hy@WarningNoLine{%
4752         old #1 file detected, not used; run LaTeX again%
4753       }%
4754     }{%
4755       \if@filesw
4756         \expandafter\newwrite\csname tf@#1\endcsname
4757         \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
4758       \fi
4759       \@nobreakfalse
4760     \endgroup
4761   }%
4762   \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
4763 \fi
4764 }

```

25 Title strings

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

```

4765 \ifHy@usetitle
4766   \let\HyOrg@title\title
4767   \let\HyOrg@author\author
4768   \def\title{\@ifnextchar[{\Hy@scanopttitle}{\Hy@scantitle}}%
4769   \def\Hy@scanopttitle[#1]{%
4770     \gdef\Hy@title{#1}%
4771     \HyOrg@title[{#1}]%
4772   }%
4773   \def\Hy@scantitle#1{%
4774     \gdef\Hy@title{#1}%
4775     \HyOrg@title{#1}%
4776   }%
4777   \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
4778   \def\Hy@scanoptauthor[#1]{%
4779     \gdef\Hy@author{#1}%
4780     \HyOrg@author[{#1}]%
4781   }%
4782   \def\Hy@scanauthor#1{%
4783     \gdef\Hy@author{#1}%

```

```

4784 \HyOrg@author{#1}%
4785 }%

```

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.

```

4786 \begingroup
4787 \def\process@me#1\@nil#2{%
4788 \expandafter\let\expandafter\x\csname @#2\endcsname
4789 \edef\y{\expandafter\strip@prefix\meaning\x}%
4790 \def\c##1##2\@nil{%
4791 \ifx\\##1\\%
4792 \else
4793 \expandafter\gdef\csname Hy@#2\expandafter\endcsname
4794 \expandafter{\x}%
4795 \fi
4796 }%
4797 \expandafter\c\y\relax#1\@nil
4798 }%
4799 \expandafter\process@me\string\@latex@\@nil{title}%
4800 \expandafter\process@me\string\@latex@\@nil{author}%
4801 \endgroup
4802 \fi
4803 \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.

```

4804 \def\Hy@UseMaketitleString#1{%
4805 \@ifundefined{Hy@#1}{}%
4806 \begingroup
4807 \let\Hy@saved@hook\pdfstringdefPreHook
4808 \pdfstringdefDisableCommands{%
4809 \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
4810 \let\newline\\%
4811 }%
4812 \expandafter\ifx\csname @pdf#1\endcsname\@empty
4813 \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
4814 \csname Hy@#1\endcsname\@empty
4815 }%
4816 \fi
4817 \global\let\pdfstringdefPreHook\Hy@saved@hook
4818 \endgroup
4819 }%
4820 }
4821 \def\Hy@newline@title#1{ #1}
4822 \def\Hy@newline@author#1{, #1}
4823 \def\Hy@UseMaketitleInfos{%
4824 \Hy@UseMaketitleString{title}%
4825 \Hy@UseMaketitleString{author}%
4826 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```
4827 \RequirePackage{atbegshi}[2007/09/09]
4828 \def\Hy@EveryPageHook{}
4829 \def\Hy@EveryPageBoxHook{}
4830 \def\Hy@FirstPageHook{}
4831 \AtBeginShipout{%
4832   \Hy@EveryPageHook
4833   \ifx\Hy@EveryPageBoxHook\@empty
4834   \else
4835     \setbox\AtBeginShipoutBox=\vbox{%
4836       \offinterlineskip
4837       \Hy@EveryPageBoxHook
4838       \box\AtBeginShipoutBox
4839     }%
4840   \fi
4841 }
4842 \AtBeginShipoutFirst{%
4843   \Hy@FirstPageHook
4844 }
4845 \g@addto@macro\Hy@FirstPageHook{%
4846   \PDF@FinishDoc
4847   \gdef\PDF@FinishDoc{}}%
4848 }
```

27.1 PDF /PageLabels

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

```
4849 \ifHy@pagelabels
4850   \begingroup\expandafter\expandafter\expandafter\endgroup
4851   \expandafter\ifx\csname thepage\endcsname\relax
4852     \Hy@pagelabelsfalse
4853     \Hy@WarningNoLine{%
4854       Option 'pdfpagelabels' is turned off\MessageBreak
4855       because \string\thepage\space is undefined%
4856     }%
4857     \csname fi\endcsname
4858     \csname iffalse\expandafter\endcsname
4859   \fi
```

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

```
4860 \def\thispdfpagelabel#1{%
4861   \gdef\HyPL@thisLabel{#1}%
4862 }%
4863 \global\let\HyPL@thisLabel\relax
```

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

```
4864 \def\HyPL@Labels{}
```

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

```
4865 \newcount\Hy@abspage
4866 \Hy@abspage=0 %
```

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

```
4867 \def\HyPL@LastType{init}%
4868 \def\HyPL@LastNumber{0}%
4869 \def\HyPL@LastPrefix{}
```

Definitions for the PDF names of the \LaTeX pendants.

```
4870 \def\HyPL@arabic{D}%
4871 \def\HyPL@Roman{R}%
4872 \def\HyPL@roman{r}%
4873 \def\HyPL@Alph{A}%
4874 \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.

```
4875 \def\HyPL@EveryPage{%
4876   \begingroup
4877   \ifx\HyPL@thisLabel\relax
4878     \let\HyPL@page\thepage
4879   \else
4880     \let\HyPL@page\HyPL@thisLabel
4881     \global\let\HyPL@thisLabel\relax
4882   \fi
4883   \let\HyPL@Type\relax
4884   \ifnum\the\c@page>0 %
4885     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
4886   \fi
4887   \let\Hy@temp Y%
4888   \ifx\HyPL@Type\HyPL@LastType
4889   \else
4890     \let\Hy@temp N%
4891   \fi
4892   \ifx\HyPL@Type\relax
4893     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
4894   \else
4895     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
4896   \fi
4897   \ifx\HyPL@Prefix\HyPL@LastPrefix
4898   \else
4899     \let\Hy@temp N%
4900   \fi
4901   \if Y\Hy@temp
4902     \advance\c@page by -1 %
4903     \ifnum\HyPL@LastNumber=\the\c@page\relax
4904     \else
4905       \let\Hy@temp N%
4906     \fi
4907     \Hy@StepCount\c@page
4908   \fi
4909   \if N\Hy@temp
4910     \ifx\HyPL@Type\relax
4911       \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
4912     \else
4913       \HyPL@StorePageLabel{%
4914         \ifx\HyPL@Prefix\@empty
4915         \else
4916           /P(\HyPL@Prefix)%
4917         \fi
```

```

4918         /S/\csname HyPL\HyPL@Type\endcsname
4919         \ifnum\the\c@page=1 %
4920         \else
4921         \space/St \the\c@page
4922         \fi
4923     }%
4924     \fi
4925 \fi
4926 \xdef\HyPL@LastNumber{\the\c@page}%
4927 \global\let\HyPL@LastType\HyPL@Type
4928 \global\let\HyPL@LastPrefix\HyPL@Prefix
4929 \endgroup
4930 \Hy@GlobalStepCount\Hy@abspage
4931 }%

```

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

```

4932 \def\HyPL@CheckThePage#1\@nil{%
4933     \HyPL@@CheckThePage{#1}\csname\endcsname\c@page\@nil
4934 }%

```

`\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`.

```

4935 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
4936     \def\Hy@tempa{#4}%
4937     \def\Hy@tempb{\csname\endcsname\c@page}%
4938     \ifx\Hy@tempa\Hy@tempb
4939         \expandafter\ifx\csname HyPL#3\endcsname\relax
4940         \else
4941             \def\HyPL@Type{#3}%
4942             \def\HyPL@Prefix{#2}%
4943         \fi
4944     \else
4945         \begingroup
4946             \let\Hy@next\endgroup
4947             \let\HyPL@found\@undefined
4948             \def\arabic{\HyPL@Format{arabic}}%
4949             \def\Roman{\HyPL@Format{Roman}}%
4950             \def\roman{\HyPL@Format{roman}}%
4951             \def\Alph{\HyPL@Format{Alph}}%
4952             \def\alph{\HyPL@Format{alph}}%
4953             \protected@edef\Hy@temp{#1}%
4954             \ifx\HyPL@found\relax
4955                 \toks@{\expandafter{\Hy@temp}}%
4956                 \edef\Hy@next{\endgroup
4957                     \noexpand\HyPL@@@CheckThePage\the\toks@
4958                     \noexpand\HyPL@found\relax\noexpand\@nil
4959                 }%
4960             \fi
4961             \Hy@next
4962         \fi
4963     }%

```

`\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`.


```

4964 \def\HyPL@Format#1#2{%
4965   \ifx\HyPL@found\undefined
4966     \expandafter\ifx\csname c@#2\endcsname\c@page
4967       \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
4968     \else
4969       \expandafter\noexpand\csname#1\endcsname{#2}%
4970     \fi
4971   \else
4972     \expandafter\noexpand\csname#1\endcsname{#2}%
4973   \fi
4974 }%

```

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

```

4975 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
4976   \def\Hy@tempa{#3}%
4977   \def\Hy@tempb{\HyPL@found\relax}%
4978   \ifx\Hy@tempa\Hy@tempb
4979     \def\HyPL@Type{#2}%
4980     \def\HyPL@Prefix{#1}%
4981   \fi
4982 }%

```

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

```

4983 \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`.

```

4984 \def\HyPL@Useless{0<</S/D>>}%
4985 \@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.

```

4986 \def\HyPL@SetPageLabels{%
4987   \@onelevel@sanitize\HyPL@Labels
4988   \ifx\HyPL@Labels\@empty
4989     \else
4990       \ifx\HyPL@Labels\HyPL@Useless
4991       \else
4992         \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
4993       \fi
4994     \fi
4995 }%

```

```

4996 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
4997 \fi

```

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

```

4998 \Hy@DisableOption{pdfpagelabels}
4999 </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`

```
5000 <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.

```
5001 <*vTeX>
5002 \providecommand*{\XR@ext}{pdf}
5003 \edef\Hy@VTeXversion{%
5004   \ifx\VTeXversion\@undefined
5005     \z@
5006   \else
5007     \ifx\VTeXversion\relax
5008       \z@
5009     \else
5010       \VTeXversion
5011     \fi
5012   \fi
5013 }
5014 \begingroup
5015   \ifnum\Hy@VTeXversion<660 %
5016     \gdef\Hy@PutCatalog#1{%
5017       \Hy@WarningNoLine{%
5018         VTeX 6.59g or above required for pdfpagelabels%
5019       }%
5020     }%
5021   \else
5022     \gdef\Hy@PutCatalog#1{%
5023       \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
5024     }%
5025     \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
5026       \ifx\#2\%
5027         \else
5028           \immediate\special{!pdfpagelabels #2}%
5029         \fi
5030       }%
5031     \fi
5032 \endgroup
5033 </vTeX>

5034 <*pdfTeX | vTeX>
```

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

```
5035 \ifHy@pagelabels
5036   \def\HyPL@StorePageLabel#1{%
5037     \toks@{\expandafter{\HyPL@Labels}}%
5038     \xdef\HyPL@Labels{%
5039       \the\toks@
5040       \the\Hy@abspage<<#1>>%
5041     }%
5042   }%
```

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.

```
5043 \@ifclassloaded{revtex4}{%
5044   \g@addto@macro\clear@document{\HyPL@SetPageLabels}%
5045 }
```

```

5045 }{%
5046   \AtEndDocument{\clearpage\HyPL@SetPageLabels}%
5047 }%

5048 \fi
5049 </pdfTeX | vTeX>

```

27.1.2 pdfmarkbase, dvipdfm

```

5050 <*pdfmarkbase>
5051 \begingroup
5052   \toks@{\expandafter{\Hy@FirstPageHook}}%
5053   \xdef\Hy@FirstPageHook{%
5054     \noexpand\headerps@out{%
5055       systemdict /pdfmark known%
5056       {%
5057         userdict /?pdfmark systemdict /exec get put%
5058       }{%
5059         userdict /?pdfmark systemdict /pop get put %
5060         userdict /pdfmark systemdict /cleartomark get put%
5061       }%
5062       ifelse%
5063     }%
5064     \the\toks@
5065   }%
5066 \endgroup
5067 </pdfmarkbase>

\Hy@PutCatalog

5068 <dvipdfm>\def\Hy@PutCatalog#1{\@pdfmark{docview << #1 >>}}
5069 <*pdfmarkbase>
5070 \def\Hy@PutCatalog#1{%
5071   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog\string} << #1 >>}}%
5072 }
5073 </pdfmarkbase>

5074 <*pdfmarkbase | dvipdfm>
5075 \ifHy@pagelabels

```

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

```

5076 \def\HyPL@StorePageLabel#1{%
5077   \if@filesw
5078     \begingroup
5079       \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
5080       \immediate\write\@mainaux{%
5081         \string\HyPL@Entry{\Hy@tempa}%
5082       }%
5083     \endgroup
5084   \fi
5085 }%

```

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.

```

5086 \AfterBeginDocument{%
5087   \if@filesw
5088     \immediate\write\@mainaux{%
5089       \string\providecommand\string*\string\HyPL@Entry[1]{}%
5090     }%

```

```

5091 \fi
5092 \ifx\HyPL@Labels\@empty
5093 \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
5094 \else
5095 \HyPL@SetPageLabels
5096 \fi
5097 \let\HyPL@Entry\@gobble
5098 }%

\HyPL@Entry

5099 \def\HyPL@Entry#1{%
5100 \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
5101 \HyPL@Labels
5102 #1%
5103 }%
5104 }%

5105 \fi
5106 </pdfmarkbase | dvipdfm>

5107 <*package>

5108 \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

```

5109 \def\Hy@CounterExists#1{%
5110 \begingroup\expandafter\expandafter\expandafter\endgroup
5111 \expandafter\ifx\csname c@#1\endcsname\relax
5112 \expandafter\@gobble
5113 \else
5114 \begingroup\expandafter\expandafter\expandafter\endgroup
5115 \expandafter\ifx\csname the#1\endcsname\relax
5116 \expandafter\expandafter\expandafter\@gobble
5117 \else
5118 \expandafter\expandafter\expandafter\@firstofone
5119 \fi
5120 \fi
5121 }
5122 \Hy@CounterExists{section}{%

```

```

5123 \newcommand\theHequation{\theHsection.\arabic{equation}}%
5124 }
5125 \Hy@CounterExists{part}{%
5126 \newcommand\theHpart{\arabic{part}}%
5127 }
5128 \@ifundefined{thechapter}{%
5129 \newcommand\theHsection {\arabic{section}}%
5130 \newcommand\theHfigure {\arabic{figure}}%
5131 \newcommand\theHtable {\arabic{table}}%
5132 }{%
5133 \newcommand\theHchapter {\arabic{chapter}}%
5134 \newcommand\theHfigure {\theHchapter.\arabic{figure}}%
5135 \newcommand\theHtable {\theHchapter.\arabic{table}}%
5136 \newcommand\theHsection {\theHchapter.\arabic{section}}%
5137 }
5138 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
5139 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
5140 \newcommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
5141 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
5142 \newcommand\theHtheorem {\theHsection.\arabic{theorem}}
5143 \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.

```

5144 \let\H@item\item
5145 \newcounter{Item}
5146 \def\theHItem{\arabic{Item}}
5147 \def\item{%
5148 \@hyper@itemfalse
5149 \if@nmbrlist\@hyper@itemtrue\fi
5150 \H@item
5151 }
5152 \newcommand\theHenumi {\theHItem}
5153 \newcommand\theHenumii {\theHItem}
5154 \newcommand\theHenumiii {\theHItem}
5155 \newcommand\theHenumiv {\theHItem}
5156 \newcommand\theHHfootnote {\arabic{Hfootnote}}
5157 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
5158 \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.

```

5159 \let\H@refstepcounter\refstepcounter
5160 \edef\name@of@eq{equation}%
5161 \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.

```

5162 \newif\if@hyper@item
5163 \newif\if@skiphyperref
5164 \@hyper@itemfalse
5165 \@skiphyperreffalse
5166 \def\refstepcounter#1{%
5167 \ifHy@pdfstring
5168 \else

```

```

5169 \H@refstepcounter{#1}%
5170 \edef\This@name{#1}%
5171 \ifx\This@name\name@of@slide
5172 \else
5173 \if@skiphyperref
5174 \else
5175 \if@hyper@item
5176 \stepcounter{Item}%
5177 \hyper@refstepcounter{Item}%
5178 \@hyper@itemfalse
5179 \else
5180 \hyper@refstepcounter{#1}%
5181 \fi
5182 \fi
5183 \fi
5184 \fi
5185 }

```

AMS¹TeX processes all equations twice; we want to make sure that the hyper stuff is not executed twice, so we use the AMS `\ifmeasuring@`, initialized if AMS math is not used.

```

5186 \@ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

5187 \def\hyper@refstepcounter#1{%
5188 \edef\This@name{#1}%
5189 \ifx\This@name\name@of@eq
5190 \ifundefined{theHequation}{%
5191 \make@stripped@name{\theequation}%
5192 \let\theHequation\newname
5193 }{}%
5194 \fi
5195 \ifundefined{theH#1}{%
5196 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
5197 }{}%
5198 \hyper@makecurrent{#1}%
5199 \ifmeasuring@
5200 \else
5201 \Hy@raisedlink{%
5202 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5203 }%
5204 \fi
5205 }

```

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`.

```

5206 \begingroup\expandafter\expandafter\expandafter\endgroup
5207 \expandafter\ifx\csname chapter\endcsname\relax
5208 \def\Hy@chapterstring{section}%
5209 \else
5210 \def\Hy@chapterstring{chapter}%
5211 \fi
5212 \def\Hy@appendixstring{appendix}

```

```

5213 \def\Hy@chapapp{\Hy@chapterstring}
5214 \let\HyOrg@appendix\appendix
5215 \def\appendix{%
5216   \@ifundefined{chapter}%
5217     {\gdef\theHsection{\Alph{section}}}%
5218     {\gdef\theHchapter{\Alph{chapter}}}%
5219   \xdef\Hy@chapapp{\Hy@appendixstring}%
5220   \HyOrg@appendix
5221 }

```

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

```

5222 \def\hyper@makecurrent#1{%
5223   \begingroup
5224     \edef\Hy@param{#1}%
5225     \ifx\Hy@param\Hy@chapterstring
5226       \let\Hy@param\Hy@chapapp
5227     \fi
5228     \ifHy@hypertextnames
5229       \let\@number\@firstofone
5230       \@ifundefined{latin@Alph}{-}{%
5231         \ifx\@Alph\greek@Alph
5232           \def\@Alph{Alph\@arabic}%
5233         \fi
5234       }%
5235       \ifx\@Alph\@Alph@bul
5236         \def\@Alph{Alph\@arabic}%
5237       \fi
5238       \ifx\@alph\@alph@bul
5239         \def\@alph{alph\@arabic}%
5240       \fi
5241       \ifHy@naturalnames
5242         \let\textlatin\@firstofone
5243         \xdef\@currentHlabel{\csname the#1\endcsname}%
5244       \else
5245         \xdef\@currentHlabel{%
5246           \csname
5247             the%
5248             \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
5249             #1%
5250           \endcsname
5251         }%
5252       \fi
5253       \xdef\@currentHref{%
5254         \Hy@param.\expandafter\strip@prefix\meaning\@currentHlabel
5255       }%
5256       \else
5257         \Hy@GlobalStepCount\Hy@linkcounter
5258         \xdef\@currentHref{\Hy@param.the\Hy@linkcounter}%
5259       \fi
5260     \endgroup
5261 }

5262 \@ifpackageloaded{fancyvrb}{%
5263   \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
5264     \def\FV@StepLineNo{%
5265       \FV@SetLineNo
5266       \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%

```

```

5267      \FV@StepLineNo
5268    }%
5269  }%
5270 }{}

```

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`

```

5271 \AtBeginDocument{%
5272   \@ifclassloaded{revtex4}{%
5273     \@namedef{ver@lastpage.sty}{1994/06/25}%
5274   }{}%
5275   \@ifpackageloaded{lastpage}{%
5276     \ifHy@pageanchor
5277     \else
5278       \Hy@WarningNoLine{%
5279         The \string\pageref{LastPage} link doesn't work\MessageBreak
5280         with disabled option 'pageanchor'%
5281       }%
5282     \fi
5283     \def\lastpage@putlabel{%
5284       \addtocounter{page}{-1}%
5285       \if@filesw
5286         \begingroup
5287           \let\@number\@firstofone
5288           \ifHy@pageanchor
5289             \ifHy@hypertexnames
5290               \ifHy@plainpages
5291                 \def\Hy@temp{\arabic{page}}%
5292               \else
5293                 \Hy@unicodefalse
5294                 \pdfstringdef\Hy@temp{\thepage}%
5295               \fi
5296             \else
5297               \def\Hy@temp{\the\Hy@pagecounter}%
5298             \fi
5299           \fi
5300           \immediate\write\@auxout{%
5301             \string\newlabel
5302             {LastPage}{}{\thepage}{}{%
5303               \ifHy@pageanchor page.\Hy@temp\fi}{}%
5304             }%
5305           \endgroup
5306         \fi
5307       \addtocounter{page}{1}%
5308     }%
5309     \@ifclassloaded{revtex4}{%
5310       \begingroup
5311       \toks\@expandafter{\lastpage@putlabel}%

```



```

5312         \edef\x{\endgroup
5313             \def\noexpand\lastpage@putlabel{%
5314                 \noexpand\stepcounter{page}%
5315                 \the\toks@
5316                 \noexpand\addtocounter{page}\noexpand\m@ne
5317             }%
5318         }%
5319     \x
5320 }{}%
5321 }{}%
5322 }
5323 </package>
5324 <*check>
5325 \checkpackage{lastpage}[1994/06/25]
5326 \checkcommand\def\lastpage@putlabel{%
5327     \addtocounter{page}{-1}%
5328     \immediate\write\@auxout{%
5329         \string\newlabel{LastPage}{\the\thepage}}%
5330     }%
5331     \addtocounter{page}{1}%
5332 }
5333 </check>
5334 <*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.

```

5335 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
5336 \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:

```

5337 \@ifpackageloaded{titlesec}{%
5338     \def\ttl@Hy@steplink#1{%
5339         \Hy@GlobalStepCount\Hy@linkcounter
5340         \xdef\@currentHref{#1*.\the\Hy@linkcounter}%
5341         \def\ttl@Hy@saveanchor{%
5342             \Hy@raisedlink{%
5343                 \hyper@anchorstart{\@currentHref}\hyper@anchorend
5344             }%
5345         }%
5346     }%
5347     \def\ttl@Hy@refstepcounter#1{%
5348         \let\ttl@b\Hy@raisedlink
5349         \def\Hy@raisedlink##1{%
5350             \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
5351         }%
5352         \refstepcounter{#1}%
5353         \let\Hy@raisedlink\ttl@b
5354     }%
5355 }{}

```

Package titletoc support:

```
5356 \ifpackageloaded{titletoc}{%  
5357   \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%  
5358 }{}
```

32 Package varioref support

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

```
5359 \def\Hy@varioref@undefined{???}{??}{-}{-}{-}  
5360 \ifpackageloaded{varioref}{%  
5361   \def\vref@pagenum#1#2{%  
5362     \ifundefined{r@#2}{%  
5363       \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined  
5364     }{}%  
5365     \edef#1{\getpagerefnumber{#2}}%  
5366   }%  
5367 }
```

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

```
5368 \ifpackageloaded{longtable}{%  
5369   \begingroup  
5370     \def\y{\LT@array}%  
5371     \ifundefined{scr@LT@array}{-}{\def\y{\scr@LT@array}}%  
5372     \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%  
5373       \expandafter\endgroup  
5374       \expandafter\def\y[#1]##2{%  
5375         \H@refstepcounter{#1}%  
5376         \hyper@makecurrent{table}%  
5377         \let\Hy@LT@currentHlabel\@currentHlabel  
5378         \let\Hy@LT@currentHref\@currentHref  
5379         #2\@sharp####4%  
5380       }%  
5381     }%  
5382     \expandafter\expandafter\expandafter\x\y[#1]{#2}\@nil
```

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

```
5383   \begingroup  
5384     \def\x#1\ifvoid\LT@firsthead\copy#2\@nil{%  
5385     \endgroup  
5386     \def\LT@start{%  
5387       #1%  
5388       \let\@currentHlabel\Hy@LT@currentHlabel  
5389       \let\@currentHref\Hy@LT@currentHref  
5390       \Hy@raisedlink{%  
5391         \hyper@anchorstart{\@currentHref}\hyper@anchorend  
5392       }%  
5393       \ifvoid\LT@firsthead\copy
```

```

5394      #2%
5395    }%
5396  }%
5397  \expandafter\x\LT@start\@nil
5398 }{}

```

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.

```

5399 \let\new@refstepcounter\refstepcounter
5400 \let\H@equation\equation
5401 \let\H@endequation\endequation

5402 \@ifpackageloaded{amsmath}{%
5403   \long\def\Hy@temp{%
5404     \incr@eqnum
5405     \mathdisplay@push
5406     \st@rredfalse \global\@eqnswtrue
5407     \mathdisplay{equation}%
5408   }%
5409   \ifx\Hy@temp\equation
5410     \expandafter\ifx\csname if@fleqn\expandafter\endcsname
5411       \csname iftrue\endcsname
5412   \else
5413     \long\def\equation{%
5414       \mathdisplay@push
5415       \st@rredfalse \global\@eqnswtrue
5416       \mathdisplay{equation}%
5417       \incr@eqnum
5418     }%
5419   \fi
5420 \fi
5421 }{}%
5422 \def\equation{%
5423   \let\refstepcounter\H@refstepcounter
5424   \H@equation
5425   \@ifundefined{theHequation}{%
5426     \make@stripped@name{\theequation}%
5427     \let\theHequation\newname
5428   }{}%
5429   \hyper@makecurrent{equation}%
5430   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
5431   \let\refstepcounter\new@refstepcounter
5432 }%
5433 \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
5434 }

```

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.

```

5435 \newif\if@eqnstar
5436 \@eqnstarfalse
5437 \let\H@eqnarray\eqnarray
5438 \let\H@endeqnarray\endeqnarray
5439 \def\eqnarray{%
5440   \let\Hy@reserved@a\relax
5441   \def\@currentHref{}%
5442   \H@eqnarray
5443   \if@eqnstar
5444   \else
5445     \ifx\\ \@currentHref\\%
5446     \else
5447       \@ifundefined{theHequation}{%
5448         \make@stripped@name{\theequation}%
5449         \let\theHequation\newname
5450       }{}%
5451       \hyper@makecurrent{equation}%
5452       \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
5453     \fi
5454   \fi
5455 }
5456 \def\endeqnarray{%
5457   \H@endeqnarray
5458 }

```

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.

```

5459 \@namedef{eqnarray*}{%
5460   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
5461 }
5462 \@namedef{endeqnarray*}{%
5463   \nonumber\endeqnarray\@eqnstarfalse
5464 }

```

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

```

5465 \@ifundefined{subeqnarray}{%
5466   \let\H@subeqnarray\subeqnarray
5467   \let\H@endsubeqnarray\endsubeqnarray
5468   \def\subeqnarray{%
5469     \let\Hy@reserved@a\relax
5470     \H@subeqnarray
5471     \@ifundefined{theHequation}{%
5472       \make@stripped@name{\theequation}%
5473       \let\theHequation\newname
5474     }{}%
5475     \hyper@makecurrent{equation}%
5476     \hyper@anchorstart{\@currentHref}{ }\hyper@anchorend
5477   }%
5478   \def\endsubeqnarray{%
5479     \H@endsubeqnarray
5480   }%
5481   \newcommand\theHsubequation{\theHequation\alph{subequation}}%
5482 }

```

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

```

5483 \def\make@stripped@name#1{%
5484   \begingroup
5485     \escapechar\m@ne

```

```

5486 \global\let\newname\@empty
5487 \protected@edef\Hy@tempa{#1}%
5488 \edef\@tempb{%
5489   \noexpand\@tfor\noexpand\Hy@tempa:=%
5490   \expandafter\strip@prefix\meaning\Hy@tempa
5491 }%
5492 \@tempb\do{%
5493   \if\Hy@tempa\else
5494     \if}\Hy@tempa\else
5495       \xdef\newname{\newname\Hy@tempa}%
5496     \fi
5497   \fi
5498 }%
5499 \endgroup
5500 }

```

Support for amsmath's subequations:

```

5501 \begingroup\expandafter\expandafter\expandafter\endgroup
5502 \expandafter\ifx\csname subequations\endcsname\relax
5503 \else
5504   \let\HyOrg@subequations\subequations
5505   \def\subequations{%
5506     \stepcounter{equation}%
5507     \protected@edef\theHparentequation{%
5508       \ifundefined{theHequation}\theequation\theHequation
5509     }%
5510     \addtocounter{equation}{-1}%
5511     \HyOrg@subequations
5512     \def\theHequation{\theHparentequation\alph{equation}}%
5513     \ignorespaces
5514   }%
5515 \fi

```

Support for package amsthm (Daniel Müllner):

```

5516 \@ifpackageloaded{amsthm}{%
5517   \def\@thm#1#2#3{%
5518     \ifhmode
5519       \unskip\unskip\par
5520     \fi
5521     \normalfont
5522     \trivlist
5523     \let\thmheadnl\relax
5524     \let\thm@swap\@gobble
5525     \thm@notefont{\fontseries\mddefault\upshape}%
5526     \thm@headpunct{.}% add period after heading
5527     \thm@headsep 5\p@ plus\p@ minus\p@\relax
5528     \thm@space@setup
5529     #1% style overrides
5530     \@topsep \thm@preskip % used by thm head
5531     \@topsepadd \thm@postskip % used by \@endparenv
5532     \def\dth@counter{#2}%
5533     \ifx\@empty\dth@counter
5534       \def\@tempa{%
5535         \@oparg{\@begintheorem{#3}{}} []%
5536       }%
5537     \else
5538       \H@refstepcounter{#2}%
5539       \hyper@makecurrent{#2}%

```

```

5540     \def\@tempa{%
5541       \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}{[]}%
5542     }%
5543     \fi
5544     \@tempa
5545 }%
5546 \dth@everypar={%
5547   \@minipagefalse
5548   \global\@newlistfalse
5549   \@noparitemfalse
5550   \if@inlabel
5551     \global\@inlabelfalse
5552     \begingroup
5553       \setbox\z@\lastbox
5554       \ifvoid\z@
5555         \kern-\itemindent
5556       \fi
5557     \endgroup
5558     \ifx\@empty\dth@counter
5559     \else
5560       \Hy@raisedlink{%
5561         \hyper@anchorstart{\@currentHref}\hyper@anchorend
5562       }%
5563     \fi
5564     \unhbox\@labels
5565   \fi
5566   \if@nobreak
5567     \@nobreakfalse \clubpenalty\@M
5568   \else
5569     \clubpenalty\@clubpenalty \everypar{}%
5570   \fi
5571 }%
5572 }{}

```

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.

```

5573 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
5574 \ifHy@hyperfootnotes
5575   \newcounter{Hfootnote}%
5576   \let\H@@footnotetext\@footnotetext
5577   \let\H@@footnotemark\@footnotemark
5578   \def\@xfootnotenext[#1]{%
5579     \begingroup
5580       \csname c@\@mpfn\endcsname #1\relax
5581       \unrestored@protected@xdef\@thefnmark{\thempfn}%
5582     \endgroup
5583     \ifx\@footnotetext\@mpfootnotetext
5584       \expandafter\H@@mpfootnotetext
5585     \else
5586       \expandafter\H@@footnotetext
5587     \fi

```

```

5588 }%
5589 \def\@footnotemark[#1]{%
5590   \begingroup
5591     \c@footnote #1\relax
5592     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5593   \endgroup
5594   \H@@footnotemark
5595 }%
5596 \let\H@@mpfootnotetext\@mpfootnotetext
5597 \long\def\@mpfootnotetext#1{%
5598   \H@@mpfootnotetext{%
5599     \ifHy@nesting
5600       \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5601     \else
5602       \Hy@raisedlink{%
5603         \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5604       }#1%
5605     \fi
5606   }%
5607 }%
5608 \long\def\@footnotetext#1{%
5609   \H@@footnotetext{%
5610     \ifHy@nesting
5611       \hyper@@anchor{\Hy@footnote@currentHref}{#1}%
5612     \else
5613       \Hy@raisedlink{%
5614         \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5615       }%
5616       \let\@currentHlabel\Hy@footnote@currentHlabel
5617       \let\@currentHref\Hy@footnote@currentHref
5618       \let\@currentlabelname\@empty
5619       #1%
5620     \fi
5621   }%
5622 }%

```

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.

```

5623 \def\@footnotemark{%
5624   \leavevmode
5625   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
5626   \stepcounter{Hfootnote}%
5627   \global\let\Hy@saved@currentHlabel\@currentHlabel
5628   \global\let\Hy@saved@currentHref\@currentHref
5629   \hyper@makecurrent{Hfootnote}%
5630   \global\let\Hy@footnote@currentHlabel\@currentHlabel
5631   \global\let\Hy@footnote@currentHref\@currentHref
5632   \global\let\@currentHlabel\Hy@saved@currentHlabel
5633   \global\let\@currentHref\Hy@saved@currentHref
5634   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
5635   \@makefnmark
5636   \hyper@linkend
5637   \ifhmode\spacefactor\x@sf\fi
5638   \relax
5639 }%

```

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

```

5640 \ifpackageloaded{longtable}{%
5641   \CheckCommand*{\LT@p@ftntext}[1]{%
5642     \edef\@tempa{%
5643       \the\LT@p@ftn
5644       \noexpand\footnotetext[\the\c@footnote]%
5645     }%
5646     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
5647   }%
5648   \long\def\LT@p@ftntext#1{%
5649     \edef\@tempa{%
5650       \the\LT@p@ftn
5651       \begingroup
5652         \noexpand\c@footnote=\the\c@footnote\relax
5653         \noexpand\protected@xdef
5654           \noexpand\@thefnmark{\noexpand\thempfn}%
5655         \noexpand\protected@xdef\noexpand\@thefnmark{%
5656           \noexpand\thempfn
5657         }%
5658         \expandafter\expandafter\expandafter\noexpand
5659         \expandafter\expandafter\expandafter\Hy@LT@footnotetext
5660         \expandafter\expandafter\expandafter{%
5661           \expandafter\Hy@footnote@currentHref\expandafter
5662           }\expandafter{\Hy@footnote@currentHlabel}%
5663       }%
5664       \global\LT@p@ftn\expandafter{%
5665         \@tempa{#1}%
5666       \endgroup
5667     }%
5668   }%
5669   \long\def\Hy@LT@footnotetext#1#2#3{%
5670     \H@@footnotetext{%
5671       \ifHy@nesting
5672         \hyper@@anchor{#1}{#3}%
5673       \else
5674         \Hy@raisedlink{%
5675           \hyper@@anchor{#1}{\relax}%
5676         }%
5677         \def\@currentHlabel{#2}%
5678         \def\@currentHref{#1}%
5679         \let\@currentlabelname\@empty
5680         #3%
5681       \fi
5682     }%
5683   }%
5684 }-%

```

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

```

5685 \ifpackageloaded{fancyvrb}{%
5686   \def\V@@footnotetext{%
5687     \insert\footins\bgroup
5688     \csname reset@font\endcsname
5689     \footnotesize
5690     \interlinepenalty\interfootnotelinepenalty

```



```

5691 \splittopskip\footnotesep
5692 \splitmaxdepth\dp\strutbox
5693 \floatingpenalty \@MM
5694 \hsize\columnwidth
5695 \@parboxrestore
5696 \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
5697 \@makefnmark}%
5698 \rule{\z@}{\footnotesep}%
5699 \bgroup
5700 \aftergroup\V@@@footnotetext
5701 \Hy@raisedlink{%
5702   \hyper@@anchor{\Hy@footnote@currentHref}{\relax}%
5703 }%
5704 \let\@currentHlabel\Hy@footnote@currentHlabel
5705 \let\@currentHref\Hy@footnote@currentHref
5706 \let\@currentlabelname\@empty
5707 \ignorespaces
5708 }%
5709 }{}%

```

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.

```

5710 \let\HyOrg@maketitle\maketitle
5711 \def\maketitle{%
5712   \let\Hy@saved@footnotemark\@footnotemark
5713   \let\Hy@saved@footnotetext\@footnotetext
5714   \let\@footnotemark\H@@footnotemark
5715   \let\@footnotetext\H@@footnotetext
5716   \@ifnextchar[\Hy@maketitle@optarg{% ]
5717     \HyOrg@maketitle
5718     \Hy@maketitle@end
5719   }%
5720 }%
5721 \def\Hy@maketitle@optarg[#1]{%
5722   \HyOrg@maketitle[#{#1}]%
5723   \Hy@maketitle@end
5724 }%
5725 \def\Hy@maketitle@end{%
5726   \ifx\@footnotemark\H@@footnotemark
5727     \let\@footnotemark\Hy@saved@footnotemark
5728   \fi
5729   \ifx\@footnotetext\H@@footnotetext
5730     \let\@footnotetext\Hy@saved@footnotetext
5731   \fi
5732 }%

```

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

```

5733 \def\realfootnote{%
5734   \@ifnextchar[\@xfootnote{%
5735     \stepcounter{\@mpfn}%
5736     \protected@xdef\@thefnmark{\thempfn}%
5737     \H@@@footnotemark\H@@@footnotetext
5738   }%
5739 }%

5740 \fi
5741 \Hy@DisableOption{hyperfootnotes}

```

```

5742 </package>
5743 <*check>
5744 \checklatex
5745 \checkcommand\def\@xfootnotenext[#1]{%
5746   \begingroup
5747     \csname c@\mpfn\endcsname #1\relax
5748     \unrestored@protected@xdef\@thefnmark{\thempfn}%
5749   \endgroup
5750   \@footnotetext
5751 }
5752 \checkcommand\def\@xfootnotemark[#1]{%
5753   \begingroup
5754     \c@footnote #1\relax
5755     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
5756   \endgroup
5757   \@footnotemark
5758 }
5759 \checkcommand\def\@footnotemark{%
5760   \leavevmode
5761   \ifhmode\edef\@xsf{\the\spacefactor}\nobreak\fi
5762   \@makefnmark
5763   \ifhmode\spacefactor\@xsf\fi
5764   \relax
5765 }
5766 </check>
5767 <*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.

```

5768 \def\caption{%
5769   \ifx\@captype\@undefined
5770     \@latex@error{\noexpand\caption outside float}\@ehd
5771     \expandafter\@gobble
5772   \else
5773     \H@refstepcounter\@captype
5774     \let\Hy@tempa\@caption
5775     \@ifundefined{float@caption}{%
5776       {%
5777         \expandafter\ifx\csname @float@c@\@captype\endcsname
5778           \float@caption
5779         \let\Hy@tempa\Hy@float@caption
5780       \fi
5781     }%
5782     \expandafter\@firstofone
5783   \fi
5784   {\@dblarg{\Hy@tempa\@captype}}%
5785 }
5786 \long\def\@caption#1[#2]#3{%
5787   \expandafter\ifx\csname if@capstart\expandafter\endcsname
5788     \csname iftrue\endcsname
5789     \global\let\@currentHref\hc@currentHref
5790   \else
5791     \hyper@makecurrent{\@captype}%
5792   \fi

```

```

5793 \def\@currentlabelname{#2}%
5794 \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
5795   \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
5796 }%
5797 \begingroup
5798   \@parboxrestore
5799   \if@minipage
5800     \@setminipage
5801   \fi
5802   \normalsize
5803   \expandafter\ifx\csname if@capstart\endcsname
5804     \csname iftrue\endcsname
5805     \global\@capstartfalse
5806     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
5807   \else
5808     \@makecaption{\csname fnum@#1\endcsname}{%
5809       \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

5810     \ifHy@nesting
5811       \hyper@@anchor{\@currentHref}{#3}%
5812     \else
5813       \Hy@raisedlink{\hyper@@anchor{\@currentHref}{\relax}}#3%
5814     \fi
5815   }%
5816 \fi
5817 \par
5818 \endgroup
5819 }

```

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.

```

5820 \let\Hy@float@caption\@caption
5821 \ifpackageloaded{float}{%
5822   \def\Hy@float@caption{%
5823     \ifx\Hy@float@currentHref\@undefined
5824       \hyper@makecurrent{\@cuptype}%
5825       \global\let\Hy@float@currentHref\@currentHref
5826     \else
5827       \let\@currentHref\Hy@float@currentHref
5828     \fi
5829     \float@caption
5830   }%
5831   \let\HyOrg@float@makebox\float@makebox
5832   \renewcommand{\float@makebox}[1]{%
5833     \HyOrg@float@makebox{%
5834       #1\relax
5835       \ifx\Hy@float@currentHref\@undefined
5836       \else
5837         \hyper@@anchor{\Hy@float@currentHref}{\relax}%
5838       \global\let\Hy@float@currentHref\@undefined
5839       \fi
5840     }%
5841   }%
5842 }{}
5843 \</package>
5844 \*check
5845 \checklatex[1999/06/01 - 2000/06/01]

```

```

5846 \checkcommand\def\caption{%
5847   \ifx\@capttype\undefined
5848     \@latex@error{\noexpand\caption outside float}\@ehd
5849     \expandafter\@gobble
5850   \else
5851     \refstepcounter\@capttype
5852     \expandafter\@firstofone
5853   \fi
5854   {\@dblarg{\@caption\@capttype}}%
5855 }
5856 \checkcommand\long\def\@caption#1[#2]#3{%
5857   \par
5858   \addcontentsline{\csname ext@#1\endcsname}{#1}%
5859   {\protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}}%
5860   \begingroup
5861     \@parboxrestore
5862     \if@minipage
5863       \@setminipage
5864     \fi
5865     \normalsize
5866     \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
5867   \endgroup
5868 }
5869 \</check>
5870 \<package>

```

37 Bibliographic references

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

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

```

5871 \def\hyper@natlinkstart#1{%
5872   \Hy@backout{#1}%
5873   \hyper@linkstart{cite}{cite.#1}%
5874   \def\hyper@nat@current{#1}%
5875 }
5876 \def\hyper@natlinkend{%
5877   \hyper@linkend
5878 }
5879 \def\hyper@natlinkbreak#1#2{%
5880   \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
5881 }
5882 \def\hyper@natanchorstart#1{%
5883   \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
5884 }
5885 \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.

```

5886 \@ifundefined{NAT@parse}{%
5887   \providecommand*\@extra@binfo{}%
5888   \providecommand*\@extra@b@citeb{}%
5889   \def\bibcite#1#2{%
5890     \newl@bel{b}{#1\@extra@binfo}{%
5891       \hyper@link[cite]{}{cite.#1\@extra@b@citeb}{#2}%
5892     }%
5893   }%
5894   \gdef\@extra@binfo{}%

```

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

```

5895 \let\Hy@bibcite\bibcite
5896 \begingroup
5897   \@ifundefined{bbl@cite@choice}{}{%
5898     \g@addto@macro\bbl@cite@choice{%
5899       \let\bibcite\Hy@bibcite
5900     }%
5901   }%
5902 \endgroup

```

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

```

5903 \providecommand*\@BIBLABEL{\@biblabel}%
5904 \def\@lbibitem[#1]#2{%
5905   \@skiphyperreftrue
5906   \H@item[%
5907     \ifx\Hy@raisedlink\@empty
5908       \hyper@anchorstart{cite.#2\@extra@b@citeb}%
5909       \@BIBLABEL{#1}%
5910       \hyper@anchorend
5911     \else
5912       \Hy@raisedlink{%
5913         \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
5914       }%
5915       \@BIBLABEL{#1}%
5916     \fi
5917     \hfill
5918   ]%
5919   \@skiphyperreffalse
5920   \if@filesw
5921     \begingroup
5922       \let\protect\noexpand
5923       \immediate\write\@auxout{%
5924         \string\bibcite{#2}{#1}%
5925       }%
5926     \endgroup
5927   \fi
5928   \ignorespaces
5929 }%

```

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

```

5930 \def\@bibitem#1{%
5931   \@skiphyperreftrue\H@item\@skiphyperreffalse
5932   \Hy@raisedlink{%
5933     \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
5934   }%
5935   \if@filesw
5936     \begingroup

```

```

5937         \let\protect\noexpand
5938         \immediate\write\@auxout{%
5939             \string\bibcite{#1}{\the\value{\@listctr}}}%
5940         }%
5941     \endgroup
5942 \fi
5943 \ignorespaces
5944 }%
5945 }{}

5946 </package>
5947 <*check>
5948 \checklatex
5949 \checkcommand\def\@lbibitem[#1]#2{%
5950     \item[\@biblabel{#1}\hfill]%
5951     \if@files
5952     {%
5953         \let\protect\noexpand
5954         \immediate\write\@auxout{%
5955             \string\bibcite{#2}{#1}%
5956         }%
5957     }%
5958 \fi
5959 \ignorespaces
5960 }
5961 \checkcommand\def\@bibitem#1{%
5962     \item
5963     \if@files
5964         \immediate\write\@auxout{%
5965             \string\bibcite{#1}{\the\value{\@listctr}}}%
5966         }%
5967     \fi
5968     \ignorespaces
5969 }
5970 </check>
5971 <*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.

```

5972 \@ifclassloaded{revtex}{%
5973     \Hy@Info{*** compatibility with revtex **** }%
5974     \def\revtex@checking#1#2{%
5975         \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
5976         \expandafter\def\csname b@#1\endcsname{#2}%
5977         \@SetMaxRnhefLabel{#1}%
5978         \expandafter\let\csname b@#1\endcsname\T@temp
5979     }%

```

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

```

5980 \ifundefined{CITE}{\def\CITE{\@cite}}{}%
5981 \providecommand*{\@extra@b@citeb}{}%
5982 \def\CITE[#1]#2{%
5983     \let\@citea\@empty
5984     \leavevmode
5985     \unskip
5986     $^{}%

```

```

5987 \scriptstyle
5988 \@CITE{%
5989   \@for\@citeb:=#2\do{%
5990     \@citea
5991     \def\@citea{\penalty\@m\ }%
5992     \edef\@citeb{\expandafter\@firstofone\@citeb}%
5993     \if@filesw
5994       \immediate\write\@auxout{\string\citation{\@citeb}}%
5995     \fi
5996     \@ifundefined{b@\@citeb\extra@b@citeb}{%
5997       \mbox{\reset@font\bfseries ?}%
5998       \G@refundefinedtrue
5999       \@latex@warning{%
6000         Citation ‘\@citeb’ on page \thepage \space undefined%
6001       }%
6002     }{%
6003       {\csname b@\@citeb\extra@b@citeb\endcsname}%
6004     }%
6005   }%
6006 }{\#1}%
6007 }$%
6008 }%

```

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.

```

6009 \def\@citex[#1]#2{%
6010   \let\@citea\@empty
6011   \@cite{%
6012     \@for\@citeb:=#2\do{%
6013       \@citea
6014       \def\@citea{\penalty\@m\ }%
6015       \edef\@citeb{\expandafter\@firstofone\@citeb}%
6016       \if@filesw
6017         \immediate\write\@auxout{\string\citation{\@citeb}}%
6018       \fi
6019       \@ifundefined{b@\@citeb\extra@b@citeb}{%
6020         \mbox{\reset@font\bfseries ?}%
6021         \G@refundefinedtrue
6022         \@latex@warning{%
6023           Citation ‘\@citeb’ on page \thepage \space undefined%
6024         }%
6025       }{%
6026         \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
6027       }%
6028     }%
6029   }{\#1}%
6030 }%
6031 }{}

```

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.

```

6032 \@ifpackageloaded{harvard}{%
6033   \AtBeginDocument{%
6034     \Hy@Info{*** compatibility with harvard **** }%
6035     \Hy@raiselinksfalse
6036     \def\harvardcite#1#2#3#4{%
6037       \global\@namedef{HAR@fn@#1}{\hyper@link[cite]{}{cite.#1}{#2}}%
6038       \global\@namedef{HAR@an@#1}{\hyper@link[cite]{}{cite.#1}{#3}}%
6039       \global\@namedef{HAR@yr@#1}{\hyper@link[cite]{}{cite.#1}{#4}}%
6040       \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
6041     }%
6042     \def\HAR@citetoaux#1{%
6043       \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
6044       \ifHy@backref
6045         \ifx\@empty\@currentlabel
6046           \else
6047             \@bsphack
6048             \if@filesw
6049               \protected@write\@auxout{}{%
6050                 \string\writefile{brf}{%
6051                   \string\backcite{#1}{%
6052                     {\thepage}{\@currentlabel}{\@currentHref}%
6053                   }%
6054                 }%
6055               }%
6056             \fi
6057             \@esphack
6058           \fi
6059         \fi
6060       }%
6061     \def\harvarditem{%
6062       \@ifnextchar[{\@harvarditem}{\@harvarditem[\null]}}%
6063     }%
6064     \def\@harvarditem[#1]#2#3#4#5\par{%
6065       \item[]%
6066       \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
6067       \if@filesw
6068         \begingroup
6069           \def\protect##1{\string ##1\space}%
6070           \ifthenelse{\equal{#1}{\null}}{%
6071             {\def\next{{#4}{#2}{#3}}}%
6072             {\def\next{{#4}{#2}{#1}{#3}}}%
6073             \immediate\write\@auxout{\string\harvardcite\codeof\next}%
6074           \endgroup
6075         \fi
6076         \protect\hspace*{-\labelwidth}%
6077         \protect\hspace*{-\labelsep}%
6078         \ignorespaces
6079         #5%
6080         \ifHy@backref
6081           \newblock
6082           \backref{\csname br@#4\endcsname}%
6083         \fi
6084       \par
6085     }%

```

`\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:
6086 \long\def\HAR@checkcitations#1#2#3#4{%
6087 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#2}}%
6088 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa
6089 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
6090 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
6091 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
6092 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
6093 \else
6094 \@tempswatrue
6095 \fi
6096 \else
6097 \@tempswatrue
6098 \fi
6099 \else
6100 \@tempswatrue
6101 \fi
6102 }%
6103 }%

6104 }{}

```

37.2 Package chicago

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

```

6105 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

6106 \def\citeN{%
6107 \def\@citeseppen{-1000}%
6108 \def\@cite##1##2{##1}%
6109 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
6110 \@citedata@opt
6111 }%

```

`\shortciteN`

```

6112 \def\shortciteN{%
6113 \def\@citeseppen{-1000}%
6114 \def\@cite##1##2{##1}%
6115 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
6116 \@citedata@opt
6117 }%

```

`\@citedata@opt`

```

6118 \def\@citedata@opt{%
6119 \let\@cite@opt\@empty
6120 \@ifnextchar [{%
6121 \@tempswatrue
6122 \@citedatax@opt
6123 }{%
6124 \@tempswafalse
6125 \@citedatax[]%
6126 }%
6127 }%

```

\@citedatax@opt

```
6128 \def\@citedatax@opt[#1]{%
6129   \def\@cite@opt{, #1}%
6130   \@citedatax[#1]}%
6131 }%
6132 }{}
```

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.

```
6133 \def\Hy@EveryPageAnchor{%
6134   \Hy@DistillerDestFix
6135   \ifHy@pageanchor
6136     \ifHy@hypertextnames
6137       \ifHy@plainpages
6138         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
6139       \else
6140         \begingroup
6141           \let\@number\@firstofone
6142           \Hy@unicodedefalse
6143           \pdfstringdef\@the@H@page{\thepage}%
6144         \endgroup
6145         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
6146       \fi
6147     \else
6148       \Hy@GlobalStepCount\Hy@pagecounter
6149       \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\Hy@pagecounter}}%
6150     \fi
6151   \vbox to 0pt{%
6152     \kern\voffset
6153     \kern\topmargin
6154     \kern-1bp\relax
6155     \hbox to 0pt{%
6156       \kern\hoffset
6157       \kern\ifodd\value{page}%
6158         \oddsidemargin
6159       \else
6160         \evensidemargin
6161       \fi
6162       \kern-1bp\relax
6163       \Hy@TempPageAnchor
6164     \hss
6165   }%
6166   \vss
6167 }%
6168 \fi
6169 }
6170 \g@addto@macro\Hy@EveryPageBoxHook{%
6171   \Hy@EveryPageAnchor
6172 }
```

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.

```

6173 \def\addcontentsline#1#2#3{% toc extension, type, tag
6174   \begingroup
6175     \let\label@gobble
6176     \ifx\@currentHref\@empty
6177       \Hy@Warning{%
6178         No destination for bookmark of \string\addcontentsline,%
6179         \MessageBreak destination is added%
6180       }%
6181     \phantomsection
6182   \fi
6183   \expandafter\ifx\csname toplevel@#2\endcsname\relax
6184     \begingroup
6185       \def\Hy@tempa{#1}%
6186       \ifx\Hy@tempa\Hy@bookmarkstype
6187         \Hy@WarningNoLine{%
6188           bookmark level for unknown #2 defaults to 0%
6189         }%
6190       \else
6191         \Hy@Info{bookmark level for unknown #2 defaults to 0}%
6192       \fi
6193     \endgroup
6194     \expandafter\gdef\csname toplevel@#2\endcsname{0}%
6195   \fi
6196   \edef\Hy@toclevel{\csname toplevel@#2\endcsname}%
6197   \Hy@writebookmark{\csname the#2\endcsname}%
6198     {#3}%
6199     {\@currentHref}%
6200     {\Hy@toclevel}%
6201     {#1}%
6202   \ifHy@verbose
6203     \def\Hy@tempa{#3}%
6204     \@onelevel@sanitize\Hy@tempa
6205     \typeout{pdfTeX: bookmark at \the\inputlineno: %
6206       {\csname the#2\endcsname}%
6207       {\Hy@tempa}%
6208       {\@currentHref}%
6209       {\Hy@toclevel}%
6210       {#1}%
6211     }%
6212   \fi
6213   \addtocontents{#1}{%
6214     \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
6215   }%
6216 \endgroup
6217 }
6218 \def\contentsline#1#2#3#4{%
6219   \ifx\#4\%
6220     \csname l@#1\endcsname{#2}{#3}%
6221   \else
6222     \ifcase\Hy@linktoc % none
6223       \csname l@#1\endcsname{#2}{#3}%
6224     \or % section

```

```

6225     \csname l@#1\endcsname{%
6226       \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6227     }{#3}%
6228   \or % page
6229     \csname l@#1\endcsname{#{2}}{%
6230       \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6231     }%
6232   \else % all
6233     \csname l@#1\endcsname{%
6234       \hyper@linkstart{link}{#4}{#2}\hyper@linkend
6235     }{%
6236       \hyper@linkstart{link}{#4}{#3}\hyper@linkend
6237     }%
6238   \fi
6239 \fi
6240 }

6241 </package>
6242 <*check>
6243 \checklatex
6244 \checkcommand\def\addcontentsline#1#2#3{%
6245   \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
6246 }
6247 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
6248 </check>
6249 <*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.

```

6250 \let\H@definecounter\@definecounter
6251 \def\@definecounter#1{%
6252   \H@definecounter{#1}%
6253   \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6254 }

```

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.

```

6255 \let\H@newctr\@newctr
6256 \def\@newctr#1[#2]{%
6257   \H@newctr#1[#2]%
6258   \expandafter\def\csname theH#1\endcsname{%
6259     \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
6260   }%
6261 }

```

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.

```

6262 \@ifpackageloaded{amsmath}{%
6263   \def\Hy@make@anchor{%
6264     \Hy@GlobalStepCount\Hy@linkcounter
6265     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6266     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6267   }%
6268   \def\Hy@make@df@tag@@#1{%
6269     \gdef\df@tag{%
6270       \maketag@@@{\Hy@make@anchor#1}%
6271       \def\@currentlabel{#1}%
6272     }%
6273   }%
6274   \def\Hy@make@df@tag@@@#1{%
6275     \gdef\df@tag{%
6276       \tagform@{\Hy@make@anchor#1}%
6277       \toks@{\xp{\p@equation{#1}}}%
6278       \edef\@currentlabel{\the\toks@}%
6279     }%
6280   }%
6281   \let\HyOrg@make@df@tag@@\make@df@tag@@
6282   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
6283   \let\make@df@tag@@\Hy@make@df@tag@@
6284   \let\make@df@tag@@@\Hy@make@df@tag@@@
6285 }{}

```

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

```

6286 \@ifpackagewith{hyperref}{pdftex}{%
6287   \let\H@seteqlabel\@seteqlabel
6288   \def\@seteqlabel#1{%
6289     \H@seteqlabel{#1}%
6290     \xdef\@currentHref{AMS.\the\Hy@linkcounter}%
6291     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
6292   }%
6293 }{}

```

This code I simply cannot remember what I was trying to achieve. The final result seems to do nothing anyway.

```

\let\H@tagform@tagform@
\def\tagform@#1{%
  \maketag@@@{\hyper@@anchor{\@currentHref}%
    {\ignorespaces#1\unskip}}%
}
\def\eqref#1{\textup{\H@tagform@{\ref{#1}}}}

```

41.1 \@addtoreset and \numberwithin patches

\@addtoreset puts a counter to the reset list of another counter. After a reset the counter starts again with perhaps already used values. Therefore the hyperref version of the counter print command \theHcounter is redefined in order to add the parent counter.

```

6294 \let\HyOrg@addtoreset\@addtoreset
6295 \def\@addtoreset#1#2{%
6296   \HyOrg@addtoreset{#1}{#2}%
6297   \expandafter\xdef\csname theH#1\endcsname{%
6298     \expandafter\noexpand
6299     \csname the\@ifundefined{theH#2}{H#2}\endcsname
6300     .\noexpand\the\noexpand\value{#1}%

```

```

6301 }%
6302 }

```

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

```

6303 </package>
6304 <*check>
6305 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
6306 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
6307   \ifundefined{c@#2}{\@nocounterr{#2}}{%
6308     \ifundefined{c@#3}{\@nocnterr{#3}}{%
6309       \addtoreset{#2}{#3}%
6310       \exp\xdef\csname the#2\endcsname{%
6311         \exp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6312       }%
6313     }%
6314   }%
6315 }%
6316 </check>
6317 <*package>
6318 \ifpackageloaded{amsmath}{%
6319   \ifpackagelater{amsmath}{1999/12/14}{%
6320     \renewcommand*\numberwithin[3][\arabic]{%
6321       \ifundefined{c@#2}{\@nocounterr{#2}}{%
6322         \ifundefined{c@#3}{\@nocnterr{#3}}{%
6323           \HyOrg@addtoreset{#2}{#3}%
6324           \exp\xdef\csname the#2\endcsname{%
6325             \exp\@nx\csname the#3\endcsname .\@nx#1{#2}%
6326           }%
6327           \exp\xdef\csname theH#2\endcsname{%
6328             \exp\@nx
6329             \csname the\ifundefined{theH#3}{H#3}\endcsname
6330             .\@nx#1{#2}%
6331           }%
6332         }%
6333       }%
6334     }%
6335   }{%
6336     \Hy@WarningNoLine{%
6337       \string\numberwithin\space of package 'amsmath' %
6338       only fixed\MessageBreak
6339       for version 2000/06/06 v2.12 or newer%
6340     }%
6341   }%
6342 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

6343 \ifHy@figures
6344   \let\Hy@Gin@setfile\Gin@setfile
6345   \def\Gin@setfile#1#2#3{%
6346     \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
6347   }%
6348 \fi
6349 \Hy@DisableOption{hyperfigures}

```

43 hyperindex entries

Internal command names are prefixed with `\HyInd@`.

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

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

```
6350 \ifHy@hyperindex
6351   \def\HyInd@ParenLeft{ }%
6352   \def\HyInd@ParenRight{ }%
6353   \def\hyperindexformat#1#2{%
6354     \let\HyOrg@hyperpage\hyperpage
6355     \let\hyperpage\@firstofone
6356     #1{\HyOrg@hyperpage{#2}}%
6357     \let\hyperpage\HyOrg@hyperpage
6358   }%
6359   \Hy@nextfalse
6360   \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
6361   \@ifpackageloaded{index}{\Hy@nexttrue}{}%
6362   \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
6363   \begingroup
6364     \lccode'\|=\expandafter'\HyInd@EncapChar\relax
6365     \lccode'\|/\|=\relax
6366   \lowercase{\endgroup
6367     \ifHy@next
6368       \let\HyInd@org@wrindex\@wrindex
6369       \def\@wrindex#1#2{\HyInd@wrindex{#1}#2||\}%
6370       \def\HyInd@@wrindex#1#2|#3|#4\|{%
6371         \ifx\|#3\|
6372           \HyInd@org@wrindex{#1}{#2|hyperpage}%
6373         \else
6374           \HyInd@@@wrindex{#1}{#2}#3\|
6375         \fi
6376       }%
6377       \def\HyInd@@@wrindex#1#2#3#4\|{%
6378         \def\Hy@temp@A{#3}%
6379         \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6380           \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6381           \relax
6382         \HyInd@org@wrindex{#1}{%
6383           #2|hyperindexformat{/#3#4}%
6384         }%
6385       \else
6386         \ifx\|#4\|
6387           \ifx\Hy@temp@A\HyInd@ParenRight
6388             \HyInd@org@wrindex{#1}{#2|#3}%
6389           \else
6390             \HyInd@org@wrindex{#1}{#2|#3hyperpage}%
6391           \fi
6392         \else
6393           \HyInd@org@wrindex{#1}{%
6394             #2|#3hyperindexformat{/#4}%
```

```

6395         }%
6396     \fi
6397 \fi
6398 }%
6399 \else
6400 \def\@wrindex#1{\@wrindex#1||\}%
6401 \def\@wrindex#1|#2|#3\{\%
6402 \if@filesw
6403 \ifx\|#2\%
6404 \protected@write\@indexfile{}\%
6405 \string\indexentry{#1|hyperpage}{\thepage}%
6406 }%
6407 \else
6408 \HyInd@@@wrindex{#1}#2\%
6409 \fi
6410 \fi
6411 \endgroup
6412 \@esphack
6413 }%
6414 \def\HyInd@@@wrindex#1#2#3\{\%
6415 \def\Hy@temp@A{#2}%
6416 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
6417 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
6418 \relax
6419 \protected@write\@indexfile{}\%
6420 \string\indexentry{%
6421 #1|hyperindexformat{/#2#3}%
6422 }{\thepage}%
6423 }%
6424 \else
6425 \ifx\|#3\%
6426 \ifx\Hy@temp@A\HyInd@ParenRight
6427 \protected@write\@indexfile{}\%
6428 \string\indexentry{#1|#2}{\thepage}%
6429 }%
6430 \else
6431 \protected@write\@indexfile{}\%
6432 \string\indexentry{#1|#2hyperpage}{\thepage}%
6433 }%
6434 \fi
6435 \else
6436 \protected@write\@indexfile{}\%
6437 \string\indexentry{%
6438 #1|#2hyperindexformat{/#3}%
6439 }{\thepage}%
6440 }%
6441 \fi
6442 \fi
6443 }%
6444 \fi
6445 }%
6446 \fi
6447 \Hy@DisableOption{hyperindex}
6448 \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.


```
6449 \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.

```
6450 \def\hyperpage#1{%
6451   \HyInd@hyperpage#1\nohyperpage{}\@nil
6452 }
6453 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
6454   \HyInd@@hyperpage{#1}%
6455   #2%
6456   \def\Hy@temp{#3}%
6457   \ifx\Hy@temp\@empty
6458   \else
6459     \Hy@ReturnAfterFi{%
6460       \HyInd@hyperpage#3\@nil
6461     }%
6462   \fi
6463 }
6464 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
6465 \def\@hyperpage#1--#2--#3\{%
6466   \ifx\#2\%
6467     \@commahyperpage{#1}%
6468   \else
6469     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
6470   \fi
6471 }
6472 \def\@commahyperpage#1{\@commahyperpage#1, ,\}
6473 \def\@commahyperpage#1, #2,#3\{%
6474   \ifx\#2\%
6475     \HyInd@pagelink{#1}%
6476   \else
6477     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
6478   \fi
6479 }
```

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

```
6480 \def\HyInd@pagelink#1{%
6481   \begingroup
6482     \toks@={}%
6483     \HyInd@removespaces#1 \@nil
6484   \endgroup
6485 }
6486 \def\HyInd@removespaces#1 #2\@nil{%
6487   \toks@=\expandafter{\the\toks@#1}%
6488   \ifx\#2\%
6489     \edef\x{\the\toks@}%
6490     \ifx\x\@empty
6491     \else
6492       \hyperlink{page.\the\toks@}{\the\toks@}%
6493     \fi
6494   \else
6495     \Hy@ReturnAfterFi{%
6496       \HyInd@removespaces#2\@nil
6497     }%
6498   \fi
6499 }
```

44 Compatibility with foiltex

```
6500 \@ifclassloaded{foils}{%
6501   \providecommand*\ext@table{lot}%
6502   \providecommand*\ext@figure{lof}%
6503 }{}
```

45 Compatibility with seminar slide package

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

```
6504 \@ifclassloaded{seminar}{%
6505   \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}%
6506 }{%
6507   \Hy@seminarslidesfalse
6508 }
6509 \@ifpackageloaded{slidesec}{%
6510   \newcommand\theHslidesection {\arabic{slidesection}}%
6511   \newcommand\theHslidesubsection{%
6512     \theHslidesection.\arabic{slidesubsection}%
6513   }%
6514   \def\slide@heading[#1]#2{%
6515     \H@refstepcounter{slidesection}%
6516     \@addtoreset{slidesubsection}{slidesection}%
6517     \addtocontents{los}{%
6518       \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}%
6519       {\@SCTR}{slideheading.\theslidesection}%
6520     }%
6521     \def\Hy@tempa{#2}%
6522     \ifx\Hy@tempa\@empty
6523     \else
6524       {%
6525         \edef\@currentlabel{%
6526           \csname p@slidesection\endcsname\theslidesection
6527         }%
6528         \makeslideheading{#2}%
6529       }%
6530     \fi
6531     \gdef\theslideheading{#1}%
6532     \gdef\theslidesubheading{}%
6533     \ifHy@bookmarksnumbered
6534       \def\Hy@slidetitle{\theslidesection\space #1}%
6535     \else
6536       \def\Hy@slidetitle{#1}%
6537     \fi
6538     \ifHy@hypertextnames
6539       \ifHy@naturalnames
6540         \hyper@@anchor{slideheading.\theslidesection}{\relax}%
6541         \Hy@writebookmark
6542           {\theslidesection}%
6543           {\Hy@slidetitle}%
6544           {slideheading.\theslidesection}%
6545           {1}%
6546           {toc}%
6547       \else
6548         \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
6549         \Hy@writebookmark
```

```

6550         {\theslidesection}%
6551         {\Hy@slidetitle}%
6552         {slideheading.\theHslidesection}%
6553         {1}%
6554         {toc}%
6555     \fi
6556 \else
6557     \Hy@GlobalStepCount\Hy@linkcounter
6558     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6559     \Hy@writebookmark
6560         {\theslidesection}%
6561         {\Hy@slidetitle}%
6562         {slideheading.\the\Hy@linkcounter}%
6563         {1}%
6564         {toc}%
6565 \fi
6566 }%
6567 \def\slide@subheading[#1]#2{%
6568     \H@refstepcounter{slidesubsection}%
6569     \addtocontents{los}{%
6570         \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
6571         {\@SCTR}{slideheading.\theslidesubsection}%
6572     }%
6573     \def\Hy@tempa{#2}%
6574     \ifx\Hy@tempa\@empty
6575     \else
6576         {%
6577             \edef\@currentlabel{%
6578                 \csname p@slidesubsection\endcsname\theslidesubsection
6579             }%
6580             \makeslidesubheading{#2}%
6581         }%
6582     \fi
6583     \gdef\theslidesubheading{#1}%
6584     \ifHy@bookmarksnumbered
6585         \def\Hy@slidetitle{\theslidesubsection\space #1}%
6586     \else
6587         \def\Hy@slidetitle{#1}%
6588     \fi
6589     \ifHy@hypertextnames
6590         \ifHy@naturalnames
6591             \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
6592             \Hy@writebookmark
6593                 {\theslidesubsection}%
6594                 {\Hy@slidetitle}%
6595                 {slideheading.\theslidesubsection}%
6596                 {2}%
6597                 {toc}%
6598         \else
6599             \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
6600             \Hy@writebookmark
6601                 {\theslidesubsection}%
6602                 {\Hy@slidetitle}%
6603                 {slideheading.\theHslidesubsection}%
6604                 {2}%
6605                 {toc}%
6606         \fi

```

```

6607 \else
6608 \Hy@GlobalStepCount\Hy@linkcounter
6609 \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
6610 \Hy@writebookmark
6611 {\theslidesubsection}%
6612 {\Hy@slidetitle}%
6613 {slideheading.\the\Hy@linkcounter}%
6614 {1}%
6615 {toc}%
6616 \fi
6617 }%
6618 \providecommand*{\listslidenam}{List of Slides}%
6619 \def\listofslides{%
6620 \section*{%
6621 \listslidenam
6622 \@mkboth{%
6623 \expandafter\MakeUppercase\listslidenam
6624 }{%
6625 \expandafter\MakeUppercase\listslidenam
6626 }%
6627 }%
6628 \def\l@slide##1##2##3##4{%
6629 \slide@undottedcline{%
6630 \slidenumberline{##3}{\hyperlink{##4}{##2}}%
6631 }{}}%
6632 }%
6633 \let\l@subslide\l@slide
6634 \@startlos
6635 }%
6636 \def\slide@contents{%
6637 \def\l@slide##1##2##3##4{%
6638 \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
6639 }%
6640 \let\l@subslide\@gobblefour
6641 \@startlos
6642 }%
6643 \def\Slide@contents{%
6644 \def\l@slide##1##2##3##4{%
6645 \ifcase\lslide@flag
6646 \message{##1 ** \the\c@slidesection}%
6647 \ifnum##1>\c@slidesection
6648 \def\lslide@flag{1}%
6649 {%
6650 \large
6651 \slide@ccline{%
6652 \slidenumberline{$\rightarrow\bullet$}%
6653 {\hyperlink{##4}{##2}}%
6654 }{##3}%
6655 }%
6656 \else
6657 {%
6658 \large
6659 \slide@ccline{%
6660 \slidenumberline{$\surd\;\bullet$}%
6661 {\hyperlink{##4}{##2}}%
6662 }{##3}%
6663 }%

```

```

6664     \fi
6665     \or
6666     \def\lslide@flag{2}%
6667     {%
6668         \large
6669         \slide@cline{%
6670             \slidenumberline{$\bullet$}%
6671             {\hyperlink{##4}{##2}}%
6672         }{##3}%
6673     }%
6674     \or
6675     {%
6676         \large
6677         \slide@cline{%
6678             \slidenumberline{$\bullet$}%
6679             {\hyperlink{##4}{##2}}%
6680         }{##3}%
6681     }%
6682     \fi
6683 }%
6684 \def\l@subslide##1##2##3##4{%
6685     \ifnum\lslide@flag=1 %
6686         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
6687     \fi
6688 }%
6689 \def\lslide@flag{0}%
6690 \@startlos
6691 }%
6692 }{}

```

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.)

```

6693 \ifHy@texht
6694     \expandafter\endinput
6695 \fi
6696 \let\real@setref\@setref
6697 \def\@setref#1#2#3{% csname, extract group, refname
6698     \ifx#1\relax
6699         \protect\G@refundefinedtrue
6700         \nfss@text{\reset@font\bfseries ??}%
6701         \@latex@warning{%
6702             Reference ‘#3’ on page \thepage \space undefined%
6703         }%
6704     \else
6705         \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
6706     \fi
6707 }

```

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

```

6708 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%
6709     \begingroup
6710     \toks0={\hyper@@link{#5}{#4}}%
6711     \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
6712     \edef\x{\endgroup
6713         \the\toks0 {\the\toks1 }%
6714     }%

```

```

6715 \x
6716 }
6717 \def\@pagesetref#1#2#3{% csname, extract macro, ref
6718 \ifx#1\relax
6719 \protect\G@refundefinedtrue
6720 \nfss@text{\reset@font\bfseries ??}%
6721 \@latex@warning{%
6722 Reference ‘#3’ on page \thepage \space undefined%
6723 }%
6724 \else
6725 \protect\hyper@@link
6726 {\expandafter\@fifthoffive#1}%
6727 {page.\expandafter\@secondoffive#1}%
6728 {\expandafter\@secondoffive#1}%
6729 \fi
6730 }

6731 \</package>
6732 \<*check>
6733 \checklatex
6734 \checkcommand\def\@setref#1#2#3{%
6735 \ifx#1\relax
6736 \protect\G@refundefinedtrue
6737 \nfss@text{\reset@font\bfseries ??}%
6738 \@latex@warning{%
6739 Reference ‘#3’ on page \thepage \space undefined%
6740 }%
6741 \else
6742 \expandafter#2#1\null
6743 \fi
6744 }
6745 \</check>
6746 \<*package>

```

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

```

6747 \def\HyRef@StarSetRef#1{%
6748 \begingroup
6749 \Hy@safe@activetrue
6750 \edef\x{#1}%
6751 \@onelevel@sanitize\x
6752 \edef\x{\endgroup
6753 \noexpand\HyRef@@StarSetRef
6754 \expandafter\noexpand\csname r@\x\endcsname{\x}%
6755 }%
6756 \x
6757 }
6758 \def\HyRef@@StarSetRef#1#2#3{%
6759 \ifx#1\@undefined
6760 \let#1\relax
6761 \fi
6762 \real@setref#1#3{#2}%
6763 }
6764 \def\@refstar#1{%
6765 \HyRef@StarSetRef{#1}\@firstoffive
6766 }
6767 \def\@pagerefstar#1{%
6768 \HyRef@StarSetRef{#1}\@secondoffive

```

```

6769 }
6770 \AtBeginDocument{%
6771   \ifpackageloaded{varioref}{%
6772     \def\@Refstar#1{%
6773       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
6774     }%
6775     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
6776       \MakeUppercase#1%
6777     }%
6778     \DeclareRobustCommand*\Ref}{%
6779       \@ifstar\@Refstar\HyRef@Ref
6780     }%
6781     \def\HyRef@Ref#1{%
6782       \hyperref[#{1}]{\Ref*{#1}}%
6783     }%
6784     \def\Vr@f#1{%
6785       \leavevmode\unskip\vref@space
6786       \hyperref[#{1}]{%
6787         \Ref*{#1}%
6788         \let\vref@space\nobreakspace
6789         \@vpageref[\unskip]{#1}%
6790       }%
6791     }%
6792     \def\vr@f#1{%
6793       \leavevmode\unskip\vref@space
6794       \begingroup
6795         \let\T@pageref\@pagerefstar
6796         \hyperref[#{1}]{%
6797           \ref*{#1}%
6798           \vpageref[\unskip]{#1}%
6799         }%
6800       \endgroup
6801     }%
6802   }{%
6803 }
6804 \DeclareRobustCommand*\autopageref}{%
6805   \@ifstar{%
6806     \HyRef@autopagerefname\pageref*%
6807   }\HyRef@autopageref
6808 }
6809 \def\HyRef@autopageref#1{%
6810   \hyperref[#{1}]{\HyRef@autopagerefname\pageref*{#1}}%
6811 }
6812 \def\HyRef@autopagerefname{%
6813   \@ifundefined{pageautorefname}{%
6814     \@ifundefined{pagename}{%
6815       \Hy@Warning{No autoref name for 'page'}%
6816     }{%
6817       \pagename\nobreakspace
6818     }%
6819   }{%
6820     \pageautorefname\nobreakspace
6821   }%
6822 }
6823 \DeclareRobustCommand*\autoref}{%
6824   \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@{link}}%
6825 }

```

```

6826 \def\HyRef@autoref#1#2{%
6827   \begingroup
6828     \Hy@safe@activetrue
6829     \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
6830   \endgroup
6831 }
6832 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
6833   \HyRef@ShowKeysRef{#2}%
6834   \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
6835     \edef\HyRef@thisref{%
6836       \expandafter\@fourthoffive#1\@empty\@empty\@empty
6837     }%
6838     \expandafter\HyRef@testreftype\HyRef@thisref.\.%
6839     \Hy@safe@activesfalse
6840     #3{%
6841       \expandafter\@fifthoffive#1\@empty\@empty\@empty
6842     }{%
6843       \expandafter\@fourthoffive#1\@empty\@empty\@empty
6844     }{%
6845       \HyRef@currentHtag
6846       \expandafter\@firstoffive#1\@empty\@empty\@empty
6847       \null
6848     }%
6849   \else
6850     \protect\G@refundefinedtrue
6851     \nfss@text{\reset@font\bfseries ??}%
6852     \@latex@warning{%
6853       Reference ‘#2’ on page \thepage\space undefined%
6854     }%
6855   \fi
6856 }
6857 \def\HyRef@testreftype#1.#2\.%
6858   \@ifundefined{#1autorefname}{%
6859     \@ifundefined{#1name}{%
6860       \HyRef@StripStar#1\*\@nil{#1}%
6861       \@ifundefined{\HyRef@name autorefname}{%
6862         \@ifundefined{\HyRef@name name}{%
6863           \def\HyRef@currentHtag{%
6864             \Hy@Warning{No autoref name for ‘#1’}%
6865           }{%
6866             \edef\HyRef@currentHtag{%
6867               \expandafter\noexpand\csname\HyRef@name name\endcsname
6868               \noexpand~%
6869             }%
6870           }%
6871         }{%
6872           \edef\HyRef@currentHtag{%
6873             \expandafter\noexpand\csname\HyRef@name autorefname\endcsname
6874             \noexpand~%
6875           }%
6876         }%
6877       }{%
6878         \edef\HyRef@currentHtag{%
6879           \expandafter\noexpand\csname#1name\endcsname
6880           \noexpand~%
6881         }%
6882       }%

```



```

6883 }{%
6884   \edef\HyRef@currentHtag{%
6885     \expandafter\noexpand\csname#1autorefname\endcsname
6886     \noexpand~%
6887   }%
6888 }%
6889 }
6890 \def\HyRef@StripStar#1*\#2\@nil#3{%
6891   \def\HyRef@name{#2}%
6892   \ifx\HyRef@name\HyRef@CaseStar
6893     \def\HyRef@name{#1}%
6894   \else
6895     \def\HyRef@name{#3}%
6896   \fi
6897 }
6898 \def\HyRef@CaseStar{*\\}
6899 \def\HyRef@currentHtag{}

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

6900 \let\HyRef@ShowKeysRef\@gobble
6901 \def\HyRef@ShowKeysInit{%
6902   \begingroup\expandafter\expandafter\expandafter\endgroup
6903   \expandafter\ifx\csname SK@@label\endcsname\relax
6904   \else
6905     \ifx\SK@ref\@empty
6906     \else
6907       \def\HyRef@ShowKeysRef{%
6908         \SK@\SK@ref
6909       }%
6910     \fi
6911   \fi
6912 }
6913 \@ifpackageloaded{showkeys}{%
6914   \HyRef@ShowKeysInit
6915 }{%
6916   \AtBeginDocument{%
6917     \@ifpackageloaded{showkeys}{%
6918       \HyRef@ShowKeysInit
6919     }{}%
6920   }%
6921 }

```

Defaults for the names that \autoref uses.

```

6922 \providecommand*\AMSautorefname{\equationautorefname}
6923 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
6924 \providecommand*\Itemautorefname{\itemautorefname}
6925 \providecommand*\itemautorefname{item}
6926 \providecommand*\equationautorefname{Equation}
6927 \providecommand*\footnoteautorefname{footnote}
6928 \providecommand*\itemautorefname{item}
6929 \providecommand*\figureautorefname{Figure}
6930 \providecommand*\tableautorefname{Table}
6931 \providecommand*\partautorefname{Part}
6932 \providecommand*\appendixautorefname{Appendix}
6933 \providecommand*\chapterautorefname{chapter}
6934 \providecommand*\sectionautorefname{section}

```

```

6935 \providecommand*\subsectionautorefname{subsection}
6936 \providecommand*\subsubsectionautorefname{subsubsection}
6937 \providecommand*\paragraphautorefname{paragraph}
6938 \providecommand*\subparagraphautorefname{subparagraph}
6939 \providecommand*\FancyVerbLineautorefname{line}
6940 \providecommand*\theoremautorefname{Theorem}
6941 \providecommand*\pageautorefname{page}
6942 \end{package}

```

46 Configuration files

46.1 PS/PDF strings

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

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

```

6943 \*pdfTEX | dvipdfm | vTEX | pdfmarkbase | dviwindo)
6944 \RequirePackage{pdfTEXcmds}[2009/04/10]
6945 \begin{group}\expandafter\expandafter\expandafter\end{group}
6946 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
6947 \begin{group}
6948 \catcode'\| = 0 %
6949 \@makeother\| %
6950 |@firstofone{| \end{group}
6951 |def|Hy@pstringdef#1#2{%
6952 |begin{group}
6953 |edef~{|string~}%
6954 |xdef|Hy@gtemp{#2}%
6955 |end{group}
6956 |let#1|Hy@gtemp
6957 |@onelevel@sanitize#1%
6958 |edef#1{|expandafter|Hy@ExchangeBackslash#1|@nil}%
6959 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
6960 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1|@nil}%
6961 }%
6962 |def|Hy@ExchangeBackslash#1#2|@nil{%
6963 #1%
6964 |ifx|\#2|\%
6965 |else
6966 \| %
6967 |Hy@ReturnAfterFi{%
6968 |Hy@ExchangeBackslash#2|@nil
6969 }%
6970 |fi
6971 }%
6972 }%
6973 \def|Hy@ExchangeLeftParenthesis#1(#2|@nil{%
6974 #1%
6975 \ifx\#2\%
6976 \else
6977 \@backslashchar(%
6978 \Hy@ReturnAfterFi{%

```

```

6979      \Hy@ExchangeLeftParenthesis#2\@nil
6980    }%
6981    \fi
6982  }%
6983  \def\Hy@ExchangeRightParenthesis#1#2\@nil{%
6984    #1%
6985    \ifx\#2\%
6986    \else
6987      \@backslashchar)%
6988      \Hy@ReturnAfterFi{%
6989        \Hy@ExchangeRightParenthesis#2\@nil
6990      }%
6991    \fi
6992  }%
6993 \else
6994 \def\Hy@pstringdef#1#2{%
6995   \begingroup
6996   \edef~{\string~}%
6997   \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
6998   \endgroup
6999   \let#1\Hy@gtemp
7000 }%
7001 \fi
7002 </pdfTeX | dvipdfm | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

7003 < *pdfTeX>
7004 \providecommand*\XR@ext}{pdf}
7005 \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`

```

7006 \let\Hy@pdfminorversion\relax
7007 \begingroup\expandafter\expandafter\expandafter\endgroup
7008 \expandafter\ifx\cname pdfminorversion\endcsname\relax
7009 \begingroup\expandafter\expandafter\expandafter\endgroup
7010 \expandafter\ifx\cname pdfoptionpdfminorversion\endcsname\relax
7011 \else
7012   \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
7013   \fi
7014 \else
7015   \def\Hy@pdfminorversion{\pdfminorversion}%
7016   \fi
7017 \@ifundefined{Hy@pdfminorversion}{%
7018   \PackageInfo{hyperref}{%
7019     PDF version is not set, because pdfTeX is too old (<1.10a)%
7020   }%
7021 }{%
7022   \ifHy@ocgcolorlinks
7023     \ifnum\Hy@pdfminorversion<5 %
7024       \setkeys{Hyp}{pdfversion=1.5}%

```

```

7025     \fi
7026 \fi
7027 \ifHy@setpdfversion
7028     \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
7029     \else
7030         \Hy@pdfminorversion=\Hy@pdfversion\relax
7031     \fi
7032     \PackageInfo{hyperref}{%
7033         \expandafter\string\Hy@pdfminorversion
7034         :=\number\Hy@pdfversion\space
7035     }%
7036 \fi
7037 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
7038 }
7039 \Hy@DisableOption{pdfversion}%

7040 \ifHy@ocgcolorlinks
7041     \immediate\pdfobj{%
7042         <<%
7043             /Type/OCG%
7044             /Name(View)%
7045             /Usage<<%
7046                 /Print<<%
7047                     /PrintState/OFF%
7048                 >>%
7049             /View<<%
7050                 /ViewState/ON%
7051             >>%
7052         >>%
7053     }%
7054 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
7055 \immediate\pdfobj{%
7056     <<%
7057         /Type/OCG%
7058         /Name(Print)%
7059         /Usage<<%
7060             /Print<<%
7061                 /PrintState/ON%
7062             >>%
7063         /View<<%
7064             /ViewState/OFF%
7065         >>%
7066     >>%
7067 }%
7068 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
7069 \immediate\pdfobj{%
7070     [%
7071         \OBJ@OCG@view\space\OBJ@OCG@print
7072     ]%
7073 }%
7074 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
7075 \pdfcatalog{%
7076     /OCProperties<<%
7077         /OCGs \OBJ@OCGs
7078     /D<<%
7079         /OFF[\OBJ@OCG@print]%

```

```

7082         /AS[%
7083         <<%
7084             /Event/View%
7085             /OCGs \OBJ@OCGs
7086             /Category[/View]%
7087         >>%
7088         <<%
7089             /Event/Print%
7090             /OCGs \OBJ@OCGs
7091             /Category[/Print]%
7092         >>%
7093         <<%
7094             /Event/Export%
7095             /OCGs \OBJ@OCGs
7096             /Category[/Print]%
7097         >>%
7098     ]%
7099 >>%
7100 >>%
7101 }%
7102 \begingroup
7103     \edef\x{\endgroup
7104         \pdfpageresources{%
7105             /Properties<<%
7106                 /OCView \OBJ@OCG@view
7107                 /OCPrint \OBJ@OCG@print
7108             >>%
7109         }%
7110     }%
7111 \x
7112 \AtBeginDocument{%
7113     \def\Hy@colorlink#1{%
7114         \begingroup
7115             \ifHy@ocgcolorlinks
7116                 \def\Hy@ocgcolor{#1}%
7117                 \setbox0=\color@hbox
7118             \else
7119                 \HyColor@UseColor#1%
7120             \fi
7121         }%
7122     \def\Hy@endcolorlink{%
7123         \ifHy@ocgcolorlinks
7124             \color@endbox
7125             \mbox{%
7126                 \pdfliteral page{/OC/OCPrint BDC}%
7127                 \rlap{\copy0}%
7128                 \pdfliteral page{EMC/OC/OCView BDC}%
7129                 \begingroup
7130                     \expandafter\HyColor@UseColor\Hy@ocgcolor
7131                     \box0 %
7132                 \endgroup
7133                 \pdfliteral page{EMC}%
7134             }%
7135         \fi
7136     \endgroup
7137 }%
7138 }%

```

```

7139 \else
7140   \Hy@DisableOption{ocgcolorlinks}%
7141 \fi

```

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

```

7142 \def\setpdflinkmargin#1{\pdflinkmargin#1}
7143 \ifx\pdfstartlink\@undefined% less than version 14
7144   \let\pdfstartlink\pdfannotlink
7145   \let\pdflinkmargin\@tempdima
7146   \let\pdfxform\pdfform
7147   \let\pdflastxform\pdflastform
7148   \let\pdfrefxform\pdfrefform
7149 \else
7150   \pdflinkmargin1pt %
7151 \fi

```

First set up the default linking

```

7152 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

7153 \def\new@pdflink#1{%
7154   \ifHy@verbose
7155     \typeout{pdftex: define anchor at line \the\inputlineno: #1}%
7156   \fi
7157   \Hy@SaveLastskip
7158   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7159   \Hy@DestName\Hy@pstringDest\@pdfview
7160   \Hy@RestoreLastskip
7161 }
7162 \let\pdf@endanchor\@empty

```

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

```

7163 \def\Hy@DestName#1#2{%
7164   \pdfdest name{#1}#2\relax
7165 }

```

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.

```

7166 \providecommand*\@pdfborder{0 0 1}
7167 \providecommand*\@pdfborderstyle{}
7168 \def\Hy@undefinedname{UNDEFINED}
7169 \def\find@pdflink#1#2{%
7170   \leavevmode
7171   \protected@edef\Hy@testname{#2}%
7172   \ifx\Hy@testname\@empty
7173     \Hy@Warning{%
7174       Empty destination name,\MessageBreak
7175       using ‘\Hy@undefinedname’%
7176     }%
7177     \let\Hy@testname\Hy@undefinedname
7178   \else
7179     \Hy@pstringdef\Hy@testname{%
7180       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
7181     }%
7182   \fi

```

```

7183 \Hy@StartlinkName{%
7184   \ifHy@pdfa /F 4\fi
7185   \Hy@setpdfborder
7186   \ifx\@pdfhighlight\@empty
7187   \else
7188     /H\@pdfhighlight
7189   \fi
7190   \ifx\CurrentBorderColor\relax
7191   \else
7192     /C[\CurrentBorderColor]%
7193   \fi
7194 } \Hy@testname
7195 \expandafter\Hy@colorlink\csname @#1color\endcsname
7196 }
7197 \def\Hy@StartlinkName#1#2{%
7198   \pdfstartlink attr{#1}goto name{#2}\relax
7199 }
7200 \def\close@pdflink{\Hy@endcolorlink\pdfendlink}
7201 \def\hyper@anchor#1{\new@pdflink{#1}\anchor@spot\pdf@endanchor}
7202 \def\hyper@anchorstart#1{\new@pdflink{#1}\Hy@activeanchortrue}
7203 \def\hyper@anchorend{\pdf@endanchor\Hy@activeanchorfalse}
7204 \def\hyper@linkstart#1#2{%
7205   \@ifundefined{#1bordercolor}{%
7206     \let\CurrentBorderColor\relax
7207   }{%
7208     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7209   }%
7210   \find@pdflink{#1}{#2}%
7211 }
7212 \def\hyper@linkend{\close@pdflink}
7213 \def\hyper@link#1#2#3{%
7214   \@ifundefined{#1bordercolor}{%
7215     \let\CurrentBorderColor\relax
7216   }{%
7217     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
7218   }%
7219   \find@pdflink{#1}{#2}#3%
7220   \close@pdflink
7221 }
7222 \let\CurrentBorderColor\@linkbordercolor
7223 \def\hyper@linkurl#1#2{%
7224   \begingroup
7225     \Hy@pstringdef\Hy@pstringURI{#2}%
7226     \hyper@chars
7227     \leavevmode
7228     \pdfstartlink
7229       attr{%
7230         \Hy@setpdfborder
7231         \ifx\@pdfhighlight\@empty
7232         \else
7233           /H\@pdfhighlight
7234         \fi
7235         \ifx\@urlbordercolor\relax
7236         \else
7237           /C[\@urlbordercolor]%
7238         \fi
7239       }%

```

```

7240     user{%
7241         /Subtype/Link%
7242         \ifHy@pdfa /F 4\fi
7243         /A<<%
7244         /Type/Action%
7245         /S/URI%
7246         /URI(\Hy@pstringURI)%
7247         >>%
7248     }%
7249     \relax
7250     \Hy@colorlink\@urlcolor#1%
7251     \close@pdflink
7252 \endgroup
7253 }
7254 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
7255     \begingroup
7256     \Hy@pstringdef\Hy@pstringF{#2}%
7257     \Hy@pstringdef\Hy@pstringD{#3}%
7258     \leavevmode
7259     \pdfstartlink
7260     attr{%
7261         \Hy@setpdfborder
7262         \ifx\@pdfhighlight\@empty
7263         \else
7264             /H\@pdfhighlight
7265         \fi
7266         \ifx\@filebordercolor\relax
7267         \else
7268             /C[\@filebordercolor]%
7269         \fi
7270     }%
7271     user {%
7272         /Subtype/Link%
7273         \ifHy@pdfa /F 4\fi
7274         /A<<%
7275         /F(\Hy@pstringF)%
7276         /S/GoToR%
7277         \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}

```

```

7278         \ifx\#3\%
7279         /D[0 \@pdfstartview]%
7280         \else
7281         /D(\Hy@pstringD)%
7282         \fi
7283         >>%
7284     }%
7285     \relax

```



```

7286 \Hy@colorlink\@filecolor#1%
7287 \close@pdflink
7288 \endgroup
7289 }
7290 \def\@hyper@launch run:#1\#2#3{% filename, anchor text linkname
7291 \begingroup
7292 \Hy@pstringdef\Hy@pstringF{#1}%
7293 \Hy@pstringdef\Hy@pstringP{#3}%
7294 \leavevmode
7295 \pdfstartlink
7296 attr{%
7297 \Hy@setpdfborder
7298 \ifx\@pdfhighlight\@empty
7299 \else
7300 /H\@pdfhighlight
7301 \fi
7302 \ifx\@runbordercolor\relax
7303 \else
7304 /C[\@runbordercolor]%
7305 \fi
7306 }%
7307 user {%
7308 /Subtype/Link%
7309 \ifHy@pdfa /F 4\fi
7310 /A<<%
7311 /F(\Hy@pstringF)%
7312 /S/Launch%
7313 \Hy@SetNewWindow
7314 \ifx\#3\%
7315 \else
7316 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
7317 \fi
7318 >>%
7319 }%
7320 \relax
7321 \Hy@colorlink\@runcolor#2%
7322 \close@pdflink
7323 \endgroup
7324 }

```

\@pdfproducer

```

7325 \ifx\@pdfproducer\relax
7326 \begingroup\expandafter\expandafter\expandafter\endgroup
7327 \expandafter\ifx\csname luatexversion\endcsname\relax
7328 \def\@pdfproducer{pdfTeX}%
7329 \ifx\@eTeXversion\@undefined
7330 \else
7331 \ifx\@eTeXversion\relax
7332 \else
7333 \ifnum\@eTeXversion>0 %
7334 \def\@pdfproducer{pdfTeX}%
7335 \fi
7336 \fi
7337 \fi
7338 \ifx\@pdftexversion\@undefined
7339 \else
7340 \ifnum\@pdftexversion<100 %

```

```

7341     \edef\@pdfproducer{%
7342         \@pdfproducer
7343         \the\pdfTeXversion.\pdfTeXrevision
7344     }%
7345 \else
7346     \ifnum\pdfTeXversion<130 %
7347         \edef\@pdfproducer{%
7348             \@pdfproducer-
7349             \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7350             \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
7351             \pdfTeXrevision
7352         }%
7353     \else
7354         \ifnum\pdfTeXversion<140 %
7355             \else
7356                 \def\@pdfproducer{pdfTeX}%
7357             \fi
7358             \edef\@pdfproducer{%
7359                 \@pdfproducer-
7360                 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
7361                 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
7362                 \pdfTeXrevision
7363             }%
7364         \fi
7365     \fi
7366 \fi
7367 \else
7368     \begingroup
7369         \count@=\luatexversion
7370         \divide\count@ by 100 %
7371         \edef\x{\the\count@}%
7372         \count@=-\x\relax
7373         \multiply\count@ by 100 %
7374         \advance\count@ by \luatexversion
7375         \edef\x{\endgroup
7376             \def\noexpand\@pdfproducer{%
7377                 LuaTeX-\x.\the\count@.\luatexrevision
7378             }%
7379         }%
7380     \x
7381 \fi
7382 \fi

```

\PDF@SetupDox

```

7383 \def\PDF@SetupDoc{%
7384     \ifx\@pdfpagescrop\@empty
7385     \else
7386         \edef\process@me{%
7387             \pdfpagesattr={%
7388                 /CropBox[\@pdfpagescrop]%
7389                 \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
7390                 \else
7391                     ^^J\the\pdfpagesattr
7392                 \fi
7393             }%
7394         }%
7395         \process@me

```

```

7396 \fi
7397 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
7398 \pdfcatalog{%
7399   /PageMode/\@pdfpagemode
7400   \ifx\@baseurl\@empty
7401   \else
7402     /URI<</Base(\Hy@pstringB)>>%
7403   \fi
7404 }%
7405 \ifx\@pdfstartpage\@empty
7406 \else
7407   \ifx\@pdfstartview\@empty
7408   \else
7409     openaction goto page\@pdfstartpage{\@pdfstartview}%
7410   \fi
7411 \fi
7412 \edef\Hy@temp{%
7413   \ifHy@toolbar\else /HideToolbar true\fi
7414   \ifHy@menubar\else /HideMenubar true\fi
7415   \ifHy>windowui\else /HideWindowUI true\fi
7416   \ifHy@fitwindow /FitWindow true\fi
7417   \ifHy@centerwindow /CenterWindow true\fi
7418   \ifHy@displaydoctitle /DisplayDocTitle true\fi
7419   \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
7420   \Hy@UseNameKey{Direction}\@pdfdirection
7421   \Hy@UseNameKey{ViewArea}\@pdfviewarea
7422   \Hy@UseNameKey{ViewClip}\@pdfviewclip
7423   \Hy@UseNameKey{PrintArea}\@pdfprintarea
7424   \Hy@UseNameKey{PrintClip}\@pdfprintclip
7425   \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7426   \Hy@UseNameKey{Duplex}\@pdfduplex
7427   \ifx\@pdfpicktraybypdfsize\@empty
7428   \else
7429     /PickTrayByPDFSize \@pdfpicktraybypdfsize
7430   \fi
7431   \ifx\@pdfprintpagerange\@empty
7432   \else
7433     /PrintPageRange[\@pdfprintpagerange]%
7434   \fi
7435   \ifx\@pdfnumcopies\@empty
7436   \else
7437     /NumCopies \@pdfnumcopies
7438   \fi
7439 }%
7440 \pdfcatalog{%
7441   \ifx\Hy@temp\@empty
7442   \else
7443     /ViewerPreferences<<\Hy@temp>>%
7444   \fi
7445   \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7446   \ifx\@pdflang\@empty
7447   \else
7448     /Lang(\@pdflang)%
7449   \fi
7450 }%
7451 }

```

\PDF@FinishDoc

```
7452 \def\PDF@FinishDoc{%
7453   \Hy@UseMaketitleInfos
7454   \pdfinfo{%
7455     /Author(\@pdfauthor)%
7456     /Title(\@pdftitle)%
7457     /Subject(\@pdfsubject)%
7458     /Creator(\@pdfcreator)%
7459     \ifx\@pdfcreationdate\@empty
7460     \else
7461       /CreationDate(\@pdfcreationdate)%
7462     \fi
7463     \ifx\@pdfmoddate\@empty
7464     \else
7465       /ModDate(\@pdfmoddate)%
7466     \fi
7467     \ifx\@pdfproducer\relax
7468     \else
7469       /Producer(\@pdfproducer)%
7470     \fi
7471     /Keywords(\@pdfkeywords)%
7472   }%
7473   \Hy@DisableOption{pdfauthor}%
7474   \Hy@DisableOption{pdftitle}%
7475   \Hy@DisableOption{pdfsubject}%
7476   \Hy@DisableOption{pdfcreator}%
7477   \Hy@DisableOption{pdfcreationdate}%
7478   \Hy@DisableOption{pdfmoddate}%
7479   \Hy@DisableOption{pdfproducer}%
7480   \Hy@DisableOption{pdfkeywords}%
7481 }
```

\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.

```
7482 \def\hyper@pagetransition{%
7483   \ifx\@pdfpagetransition\relax
7484   \else
7485     \expandafter\Hy@RemoveTransPageAttr
7486     \the\pdfpageattr^^J/Trans{>>\END
7487     \ifx\@pdfpagetransition\@empty
7488     \else
7489       \edef\@processme{%
7490         \global\pdfpageattr{%
7491           \the\pdfpageattr
7492           ^^J/Trans << /S /\@pdfpagetransition\space >>%
7493         }%
7494       }%
7495       \@processme
7496     \fi
7497   \fi
7498 }
```

\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.

```

7499 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
7500   \ifx\#2\%
7501     \global\pdfpageattr{#1}%
7502   \else
7503     \Hy@RemoveTransPageAttr#1#4\END
7504   \fi
7505 }

```

`\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`.

```

7506 \def\hyper@pageduration{%
7507   \ifx\@pdfpageduration\relax
7508   \else
7509     \expandafter\Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
7510     \ifx\@pdfpageduration\empty
7511     \else
7512       \edef\@processme{%
7513         \global\pdfpageattr{%
7514           \the\pdfpageattr
7515             ^^J/Dur \@pdfpageduration\space
7516         }%
7517       }%
7518       \@processme
7519     \fi
7520   \fi
7521 }

```

`\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.

```

7522 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
7523   \ifx\#2\%
7524     \global\pdfpageattr{#1}%
7525   \else
7526     \Hy@RemoveDurPageAttr#1#4\END
7527   \fi
7528 }

```

`\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).

```

7529 \def\hyper@pagehidden{%
7530   \ifHy@useHidKey
7531     \expandafter\Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
7532     \ifHy@pdfpagehidden
7533     \edef\@processme{%
7534       \global\pdfpageattr{%
7535         \the\pdfpageattr
7536           ^^J/Hid true % SPACE
7537       }%
7538     }%
7539     \@processme
7540   \fi
7541 \fi
7542 }

```

`\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.

```

7543 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%
7544   \ifx\#2\%
7545     \global\pdfpageattr{#1}%
7546   \else
7547     \Hy@RemoveHidPageAttr#1#4\END
7548   \fi
7549 }

7550 \g@addto@macro\Hy@EveryPageHook{%
7551   \hyper@pagetransition
7552   \hyper@pageduration
7553   \hyper@pagehidden
7554 }

7555 \AtBeginDocument{%
7556   \ifHy@setpagesize
7557     \expandafter\@firstofone
7558   \else
7559     \expandafter\@gobble
7560   \fi
7561   {%
7562     \@ifclassloaded{seminar}{%
7563       \setlength{\pdfhorigin}{1truein}%
7564       \setlength{\pdfvorigin}{1truein}%
7565       \ifportrait
7566         \ifdim\paperwidth=\z@
7567         \else
7568           \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
7569         \fi
7570         \ifdim\paperheight=\z@
7571         \else
7572           \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
7573         \fi
7574       \else
7575         \ifdim\paperheight=\z@
7576         \else
7577           \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
7578         \fi
7579         \ifdim\paperwidth=\z@
7580         \else
7581           \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
7582         \fi
7583       \fi
7584     }{%
7585       \@ifundefined{stockwidth}{%
7586         \ifdim\paperwidth=\z@
7587         \else
7588           \setlength{\pdfpagewidth}{\paperwidth}%
7589         \fi
7590         \ifdim\paperheight=\z@
7591         \else
7592           \setlength{\pdfpageheight}{\paperheight}%
7593         \fi
7594       }{%

```

```

7595         \ifdim\stockwidth=\z@
7596         \else
7597             \setlength{\pdfpagewidth}{\stockwidth}%
7598         \fi
7599         \ifdim\stockheight=\z@
7600         \else
7601             \setlength{\pdfpageheight}{\stockheight}%
7602         \fi
7603     }%
7604 }%
7605 }%
7606 \Hy@DisableOption{setpagesize}%
7607 }
7608 \def\Acrobatmenu#1#2{%
7609 \Hy@Acrobatmenu{#1}{#2}{%
7610 \pdfstartlink
7611 attr{%
7612 \Hy@setpdfborder
7613 \ifx\@pdfhighlight\@empty
7614 \else
7615 /H\@pdfhighlight
7616 \fi
7617 \ifx\@menubordercolor\relax
7618 \else
7619 /C[\@menubordercolor]%
7620 \fi
7621 }%
7622 user{%
7623 /Subtype/Link%
7624 \ifHy@pdfa /F 4\fi
7625 /A<<%
7626 /S/Named/N/#1%
7627 >>%
7628 }%
7629 \relax
7630 \Hy@colorlink\@menucolor#2%
7631 \close@pdflink
7632 }%
7633 }

```

46.2.1 Fix for problem with different nesting levels

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

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

```

7634 \def\Hy@FixNotFirstPage{%
7635 \gdef\Hy@FixNotFirstPage{%
7636 \setbox\AtBeginShipoutBox=\hbox{%
7637 \copy\AtBeginShipoutBox
7638 }%
7639 }%
7640 }
7641 \AtBeginShipout{\Hy@FixNotFirstPage}

```

46.3 hypertext

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

href: `html:`

name: `html:`

end: `html:`

image: `html:`

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

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

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

```

7643  $\langle$ *hypertext $\rangle$ 
7644 \providecommand*{\XR@ext}{dvi}
7645 \def\PDF@FinishDoc{}
7646 \def\PDF@SetupDoc{%
7647   \ifx\@baseurl\@empty
7648   \else
7649     \special{html:<base href="\@baseurl">}%
7650   \fi
7651 }
7652 \def\hyper@anchor#1{%
7653   \Hy@SaveLastskip
7654   \begingroup
7655     \let\protect=\string
7656     \hyper@chars
7657     \special{html:<a name=%
7658       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7659   \endgroup
7660   \Hy@activeanchortrue
7661   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7662   \special{html:</a>}%
7663   \Hy@activeanchorfalse

```



```

7664 \Hy@RestoreLastskip
7665 }
7666 \def\hyper@anchorstart#1{%
7667   \Hy@SaveLastskip
7668   \begingroup
7669     \hyper@chars
7670     \special{html:<a name=%
7671       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
7672   \endgroup
7673   \Hy@activeanchortrue
7674 }
7675 \def\hyper@anchorend{%
7676   \special{html:</a>}%
7677   \Hy@activeanchorfalse
7678   \Hy@RestoreLastskip
7679 }
7680 \def\@urltype{url}
7681 \def\hyper@linkstart#1#2{%
7682   \expandafter\Hy@colorlink\csname @#1color\endcsname
7683   \def\Hy@tempa{#1}%
7684   \ifx\Hy@tempa\@urltype
7685     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7686   \else
7687     \begingroup
7688       \hyper@chars
7689       \special{html:<a href=%
7690         \hyper@quote\#HyperDestNameFilter{#2}\hyper@quote>}%
7691     \endgroup
7692   \fi
7693 }
7694 \def\hyper@linkend{%
7695   \special{html:</a>}%
7696   \Hy@endcolorlink
7697 }
7698 \def\hyper@linkfile#1#2#3{%
7699   \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\##3\fi}%
7700 }
7701 \def\hyper@linkurl#1#2{%

```

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

```

7702 \leavevmode
7703 \ifHy@raiselinks
7704   \setbox\@tempboxa=\color@hbox #1\color@endbox
7705   \@linkdim\dp\@tempboxa
7706   \lower\@linkdim\hbox{%
7707     \hyper@chars
7708     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
7709   }%
7710   \Hy@colorlink\@urlcolor#1%
7711   \@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).

```

7712   \advance\@linkdim by -6.5\p@
7713   \raise\@linkdim\hbox{\special{html:</a>}}%

```

```

7714 \Hy@endcolorlink
7715 \else
7716 \begingroup
7717 \hyper@chars
7718 \special{html:<a href=\hyper@quote#2\hyper@quote>}}%
7719 \Hy@colorlink\@urlcolor#1%
7720 \special{html:</a>}}%
7721 \Hy@endcolorlink
7722 \endgroup
7723 \fi
7724 }

```

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

```

7725 \def\hyper@link#1#2#3{%
7726 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}}%
7727 }

7728 \def\hyper@image#1#2{%
7729 \begingroup
7730 \hyper@chars
7731 \special{html:<img src=\hyper@quote#1\hyper@quote>}}%
7732 \endgroup
7733 }
7734 </hypertex>
7735 <*dviwindo>

```

46.4 dviwindo

[This was developed by David Carlisle]. Within a file dviwindo hyperlinking is used, for external URL's a call to \wwwbrowser is made. (You can define this command before or after loading the hyperref package if the default `c:/netscape/netscape` is not suitable) Dviwindo could in fact handle external links to dvi files on the same machine without calling a web browser, but that would mean parsing the URL to recognise such, and this is currently not done.

This was more or less blindly copied from the hypertex cfg. For dviwindo, \LaTeX must specify the size of the active area for links. For some hooks this information is available but for some, the start and end of the link are specified separately in which case a fixed size area of 10000000sp wide by \baselineskip high is used.

```

7736 \providecommand*\XR@ext{dvi}
7737 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
7738 \def\hyper@anchor#1{%
7739 \Hy@SaveLastskip
7740 \begingroup
7741 \let\protect=\string
7742 \special{mark: #1}%
7743 \endgroup
7744 \Hy@activeanchortrue
7745 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
7746 \Hy@activeanchorfalse
7747 \Hy@RestoreLastskip
7748 }
7749 \def\hyper@anchorstart#1{%
7750 \Hy@SaveLastskip
7751 \special{mark: #1}%
7752 \Hy@activeanchortrue
7753 }
7754 \def\hyper@anchorend{%

```

```

7755 \Hy@activeanchorfalse
7756 \Hy@RestoreLastskip
7757 }
7758 \def\hyper@linkstart#1#2{%
7759 \expandafter\Hy@colorlink\csname @#1color\endcsname
7760 \special{button: %
7761 10000000 %
7762 \number\baselineskip\space
7763 #2%
7764 }%
7765 }
7766 \def\hyper@linkend{%
7767 \Hy@endcolorlink
7768 }
7769 \def\hyper@link#1#2#3{%
7770 \setbox\@tempboxa=\color@hbox #3\color@endbox
7771 \leavevmode
7772 \ifHy@raiselinks
7773 \@linkdim\dp\@tempboxa
7774 \lower\@linkdim\hbox{%
7775 \special{button: %
7776 \number\wd\@tempboxa\space
7777 \number\ht\@tempboxa\space
7778 #2%
7779 }%
7780 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7781 \Hy@endcolorlink
7782 }%
7783 \@linkdim\ht\@tempboxa
7784 \advance\@linkdim by -6.5\p@
7785 \raise\@linkdim\hbox{}%
7786 \else
7787 \special{button: %
7788 \number\wd\@tempboxa\space
7789 \number\ht\@tempboxa\space
7790 #2%
7791 }%
7792 \expandafter\Hy@colorlink\csname @#1color\endcsname#3%
7793 \Hy@endcolorlink
7794 \fi
7795 }
7796 \def\hyper@linkurl#1#2{%
7797 \begingroup
7798 \hyper@chars
7799 \leavevmode
7800 \setbox\@tempboxa=\color@hbox #1\color@endbox
7801 \ifHy@raiselinks
7802 \@linkdim\dp\@tempboxa
7803 \lower\@linkdim\hbox{%
7804 \special{button: %
7805 \number\wd\@tempboxa\space
7806 \number\ht\@tempboxa\space
7807 launch: \wwwbrowser\space
7808 #2%
7809 }%
7810 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7811 }%

```

```

7812      \@linkdim\ht\@tempboxa
7813      \advance\@linkdim by -6.5\p@
7814      \raise\@linkdim\hbox{}}%
7815  \else
7816      \special{button: %
7817          \number\wd\@tempboxa\space
7818          \number\ht\@tempboxa\space
7819          launch: \wwwbrowser\space
7820          #2%
7821      }%
7822      \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
7823  \fi
7824 \endgroup
7825 }
7826 \def\hyper@linkfile#1#2#3{%
7827 \begingroup
7828   \hyper@chars
7829   \leavevmode
7830   \setbox\@tempboxa=\color@hbox #1\color@endbox
7831   \ifHy@raiselinks
7832     \@linkdim\dp\@tempboxa
7833     \lower\@linkdim\hbox{%
7834       \special{button: %
7835         \number\wd\@tempboxa\space
7836         \number\ht\@tempboxa\space
7837         #3,%
7838         file: #2%
7839       }%
7840       \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7841     }%
7842     \@linkdim\ht\@tempboxa
7843     \advance\@linkdim by -6.5\p@
7844     \raise\@linkdim\hbox{}}%
7845   \else
7846     \special{button: %
7847       \number\wd\@tempboxa\space
7848       \number\ht\@tempboxa\space
7849       #3,%
7850       file: #2%
7851     }%
7852     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
7853   \fi
7854 \endgroup
7855 }
7856 \ifx\@pdfproducer\relax
7857   \def\@pdfproducer{dviwindo + Distiller}%
7858 \fi
7859 \def\PDF@FinishDoc{%
7860   \Hy@UseMaketitleInfos
7861   \special{PDF: Keywords \@pdfkeywords}%
7862   \special{PDF: Title \@pdftitle}%
7863   \special{PDF: Creator \@pdfcreator}%
7864   \ifx\@pdfcreationdate\@empty
7865   \else
7866     \special{PDF: CreationDate \@pdfcreationdate}%
7867   \fi
7868   \ifx\@pdfmoddate\@empty

```

```

7869 \else
7870   \special{PDF: ModDate \@pdfmoddate}%
7871 \fi
7872 \special{PDF: Author \@pdfauthor}%
7873 \ifx\@pdfproducer\relax
7874 \else
7875   \special{PDF: Producer \@pdfproducer}%
7876 \fi
7877 \special{PDF: Subject \@pdfsubject}%
7878 \Hy@DisableOption{pdfauthor}%
7879 \Hy@DisableOption{pdftitle}%
7880 \Hy@DisableOption{pdfsubject}%
7881 \Hy@DisableOption{pdfcreator}%
7882 \Hy@DisableOption{pdfcreationdate}%
7883 \Hy@DisableOption{pdfmoddate}%
7884 \Hy@DisableOption{pdfproducer}%
7885 \Hy@DisableOption{pdfkeywords}%
7886 }
7887 \def\PDF@SetupDoc{%
7888   \ifx\@baseurl\@empty
7889   \else
7890     \special{PDF: Base \@baseurl}%
7891   \fi
7892   \ifx\@pdfpagescrop\@empty\else
7893     \special{PDF: BBox \@pdfpagescrop}%
7894   \fi
7895   \def\Hy@temp{%
7896     \ifx\@pdfstartpage\@empty
7897     \else
7898       \ifx\@pdfstartview\@empty
7899       \else
7900         \edef\Hy@temp{%
7901           ,Page=\@pdfstartpage
7902           ,View=\@pdfstartview
7903         }%
7904       \fi
7905     \fi
7906     \edef\Hy@temp{%
7907       \noexpand\pdfmark{%
7908         pdfmark=/DOCVIEW,%
7909         PageMode=/\@pdfpagemode
7910       }\Hy@temp
7911     }%
7912   }%
7913   \Hy@temp
7914   \ifx\@pdfpagescrop\@empty
7915   \else
7916     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
7917   \fi
7918   \edef\Hy@temp{%
7919     \ifHy@toolbar\else /HideToolbar true\fi
7920     \ifHy@menubar\else /HideMenubar true\fi
7921     \ifHy@windowui\else /HideWindowUI true\fi
7922     \ifHy@fitwindow /FitWindow true\fi
7923     \ifHy@centerwindow /CenterWindow true\fi
7924     \ifHy@displaydoctitle /DisplayDocTitle true\fi
7925     \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode

```

```

7926 \Hy@UseNameKey{Direction}\@pdfdirection
7927 \Hy@UseNameKey{ViewArea}\@pdfviewarea
7928 \Hy@UseNameKey{ViewClip}\@pdfviewclip
7929 \Hy@UseNameKey{PrintArea}\@pdfprintarea
7930 \Hy@UseNameKey{PrintClip}\@pdfprintclip
7931 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
7932 \Hy@UseNameKey{Duplex}\@pdfduplex
7933 \ifx\@pdfpicktraybypdfsize\@empty
7934 \else
7935 /PickTrayByPDFSize \@pdfpicktraybypdfsize
7936 \fi
7937 \ifx\@pdfprintpagerange\@empty
7938 \else
7939 /PrintPageRange[\@pdfprintpagerange]%
7940 \fi
7941 \ifx\@pdfnumcopies\@empty
7942 \else
7943 /NumCopies \@pdfnumcopies
7944 \fi
7945 }%
7946 \pdfmark{pdfmark=/PUT,%
7947 Raw={%
7948 \string{Catalog\string}<<%
7949 \ifx\Hy@temp\@empty
7950 \else
7951 /ViewerPreferences<<\Hy@temp>>%
7952 \fi
7953 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
7954 \ifx\@pdflang\@empty
7955 \else
7956 /Lang(\@pdflang)%
7957 \fi
7958 >>%
7959 }%
7960 }%
7961 }
7962 </dviwindo>
7963 <*dvipdfm>

```

46.5 dvipdfm dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

7964 \providecommand*{\XR@ext}{pdf}
7965 \Hy@setbreaklinks{true}
7966 \newsavebox{\pdfm@box}
7967 \def\@pdfm@mark#1{\special{pdf:#1}}
7968 \def\@pdfm@dest#1{%
7969 \Hy@SaveLastskip
7970 \beginingroup
7971 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
7972 \def\x{XYZ}%
7973 \ifx\x\@pdfview
7974 \def\x{XYZ @xpos @ypos null}%
7975 \else
7976 \def\x{FitH}%
7977 \ifx\x\@pdfview
7978 \def\x{FitH @ypos}%

```

```

7979 \else
7980 \def\x{FitBH}%
7981 \ifx\x\@pdfview
7982 \def\x{FitBH @ypos}%
7983 \else
7984 \def\x{FitV}%
7985 \ifx\x\@pdfview
7986 \def\x{FitV @xpos}%
7987 \else
7988 \def\x{FitBV}%
7989 \ifx\x\@pdfview
7990 \def\x{FitBV @xpos}%
7991 \else
7992 \def\x{Fit}%
7993 \ifx\x\@pdfview
7994 \let\x\@pdfview
7995 \else
7996 \def\x{FitB}%
7997 \ifx\x\@pdfview
7998 \let\x\@pdfview
7999 \else
8000 \def\x{FitR}%
8001 \ifx\x\@pdfview
8002 \Hy@Warning{'pdfview=FitR' is not supported}%
8003 \def\x{XYZ @xpos @ypos null}%
8004 \else
8005 \@onelevel@sanitize\@pdfview
8006 \Hy@Warning{Unknown value '\@pdfview' for pdfview}%
8007 \def\x{XYZ @xpos @ypos null}%
8008 \fi
8009 \fi
8010 \fi
8011 \fi
8012 \fi
8013 \fi
8014 \fi
8015 \fi
8016 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /x]}%
8017 \endgroup
8018 \Hy@RestoreLastskip
8019 }
8020 \providecommand*\@pdfview{XYZ}
8021 \providecommand*\@pdfborder{0 0 1}
8022 \providecommand*\@pdfborderstyle{}
8023 \def\hyper@anchor#1{%
8024 \@pdfm@dest{#1}%
8025 }
8026 \def\hyper@anchorstart#1{%
8027 \Hy@activeanchortrue
8028 \@pdfm@dest{#1}%
8029 }
8030 \def\hyper@anchorend{%
8031 \Hy@activeanchorfalse
8032 }
8033 \newcounter{Hy@AnnotLevel}
8034 \ifHy@ocgcolorlinks
8035 \def\OBJ@OCG@view{@OCG@view}%

```

```

8036 \pdfmarkmark{%
8037   obj \OBJ@OCG@view <<%
8038     /Type/OCG%
8039     /Name(View)%
8040     /Usage<<%
8041       /Print<<%
8042         /PrintState/OFF%
8043       >>%
8044     /View<<%
8045       /ViewState/ON%
8046     >>%
8047   >>%
8048 >>%
8049 }%
8050 \pdfmarkmark{close \OBJ@OCG@view}%
8051 \def\OBJ@OCG@print{@OCG@print}%
8052 \pdfmarkmark{%
8053   obj \OBJ@OCG@print <<%
8054     /Type/OCG%
8055     /Name(Print)%
8056     /Usage<<%
8057       /Print<<%
8058         /PrintState/ON%
8059       >>%
8060     /View<<%
8061       /ViewState/OFF%
8062     >>%
8063   >>%
8064 >>%
8065 }%
8066 \pdfmarkmark{close \OBJ@OCG@print}%
8067 \def\OBJ@OCGs{@OCGs}%
8068 \pdfmarkmark{%
8069   obj \OBJ@OCGs [%
8070     \OBJ@OCG@view\space\OBJ@OCG@print
8071   ]%
8072 }%
8073 \pdfmarkmark{close \OBJ@OCGs}%
8074 \pdfmarkmark{%
8075   put @catalog <<%
8076     /OCProperties<<%
8077       /OCGs \OBJ@OCGs
8078     /D<<%
8079       /OFF[\OBJ@OCG@print]%
8080     /AS[%
8081       <<%
8082         /Event/View%
8083         /OCGs \OBJ@OCGs
8084         /Category[/View]%
8085       >>%
8086     <<%
8087       /Event/Print%
8088       /OCGs \OBJ@OCGs
8089       /Category[/Print]%
8090     >>%
8091   <<%
8092     /Event/Export%

```



```

8093         /OCGs \OBJ@OCGs
8094         /Category[/Print]%
8095     >>%
8096 ]%
8097 >>%
8098 >>%
8099 >>%
8100 }%
8101 \AtBeginShipout{%
8102     \setbox\AtBeginShipoutBox=\hbox{%
8103         \copy\AtBeginShipoutBox
8104         \@pdfm@mark{%
8105             put @resources <<%
8106                 /Properties<<%
8107                 /OCView \OBJ@OCG@view
8108                 /OCPrint \OBJ@OCG@print
8109             >>%
8110             >>%
8111         }%
8112     }%
8113 }%
8114 \AtBeginDocument{%
8115     \def\Hy@colorlink#1{%
8116         \begingroup
8117             \ifHy@ocgcolorlinks
8118                 \def\Hy@ocgcolor{#1}%
8119                 \setbox0=\color@hbox
8120             \else
8121                 \HyColor@UseColor#1%
8122             \fi
8123     }%
8124     \def\Hy@endcolorlink{%
8125         \ifHy@ocgcolorlinks
8126             \color@endbox
8127             \mbox{%
8128                 \@pdfm@mark{content /OC/OCPrint BDC}%
8129                 \rlap{\copy0}%
8130                 \@pdfm@mark{content EMC/OC/OCView BDC}%
8131                 \begingroup
8132                     \expandafter\HyColor@UseColor\Hy@ocgcolor
8133                     \box0 %
8134                 \endgroup
8135                 \@pdfm@mark{content EMC}%
8136             }%
8137             \fi
8138         \endgroup
8139     }%
8140 }%
8141 \else
8142     \Hy@DisableOption{ocgcolorlinks}%
8143 \fi
8144 \def\Hy@BeginAnnot#1{%
8145     \stepcounter{Hy@AnnotLevel}%
8146     \ifnum\value{Hy@AnnotLevel}=\@ne
8147         #1%
8148     \fi
8149 }

```

```

8150 \def\Hy@endAnnot{%
8151   \ifnum\value{Hy@AnnotLevel}=\@ne
8152     \Hy@endcolorlink
8153     \@pdfm@mark{eann}%
8154   \fi
8155   \addtocounter{Hy@AnnotLevel}\m@ne
8156 }

8157 \def\Hy@undefinedname{UNDEFINED}
8158 \def\hyper@linkstart#1#2{%
8159   \Hy@BeginAnnot{%
8160     \protected@edef\Hy@testname{#2}%
8161     \ifx\Hy@testname\@empty
8162       \Hy@Warning{%
8163         Empty destination name,\MessageBreak
8164         using '\Hy@undefinedname'%
8165       }%
8166       \let\Hy@testname\Hy@undefinedname
8167     \else
8168       \Hy@pstringdef\Hy@testname{%
8169         \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8170       }%
8171     \fi
8172     \@pdfm@mark{%
8173       bann<<%
8174       /Type/Annot%
8175       /Subtype/Link%
8176       \ifHy@pdfa /F 4\fi
8177       \Hy@setpdfborder
8178       \expandafter\ifx\csname @#1bordercolor\endcsname\relax
8179       \else
8180         /C[\csname @#1bordercolor\endcsname]%
8181       \fi
8182       /A<<%
8183       /S/GoTo%
8184       /D(\Hy@testname)%
8185       >>%
8186     >>%
8187   }%
8188   \expandafter\Hy@colorlink\csname @#1color\endcsname
8189 }%
8190 }

8191 \def\hyper@linkend{\Hy@endAnnot}%
8192 \def\hyper@link#1#2#3{%
8193   \hyper@linkstart{#1}{#2}#3\hyper@linkend
8194 }

8195 \def\hyper@linkfile#1#2#3{%
8196   \leavevmode
8197   \Hy@BeginAnnot{%
8198     \Hy@pstringdef\Hy@pstringF{#2}%
8199     \Hy@pstringdef\Hy@pstringD{#3}%
8200     \@pdfm@mark{%
8201       bann<<%
8202       /Type/Annot%
8203       /Subtype/Link%
8204       \ifHy@pdfa /F 4\fi
8205       \Hy@setpdfborder
8206       \ifx\@filebordercolor\relax

```

```

8207         \else
8208             /C[\@filebordercolor]%
8209         \fi
8210         /A<<%
8211             /S/GoToR%
8212             /F(\Hy@pstringF)%
8213             /D\ifx\#3\[\[O \@pdfstartview]\else(\Hy@pstringD)\fi
8214             \Hy@SetNewWindow
8215         >>%
8216     >>%
8217     }%
8218     \Hy@colorlink\@filecolor
8219 }%
8220 #1%
8221 \Hy@EndAnnot
8222 }
8223 \def\hyper@linkurl#1#2{%
8224     \leavevmode
8225     \Hy@BeginAnnot{%
8226         \Hy@pstringdef\Hy@pstringURI{#2}%
8227         \@pdfm@mark{%
8228             bann<<%
8229                 /Type/Annot%
8230                 /Subtype/Link%
8231                 \ifHy@pdfa /F 4\fi
8232                 \Hy@setpdfborder
8233                 \ifx\@urlbordercolor\relax
8234                 \else
8235                     /C[\@urlbordercolor]%
8236                 \fi
8237                 /A<<%
8238                 /S/URI%
8239                 /URI(\Hy@pstringURI)%
8240             >>%
8241         >>%
8242     }%
8243     \Hy@colorlink\@urlcolor
8244 }%
8245 #1%
8246 \Hy@EndAnnot
8247 }
8248 \def\Acrobatmenu#1#2{%
8249     \Hy@Acrobatmenu{#1}{#2}%
8250     \Hy@BeginAnnot{%
8251         \@pdfm@mark{%
8252             bann<<%
8253                 /Type/Annot%
8254                 /Subtype/Link%
8255                 \ifHy@pdfa /F 4\fi
8256                 /A<<%
8257                 /S/Named%
8258                 /N/#1%
8259             >>%
8260             \Hy@setpdfborder
8261             \ifx\@menubordercolor\relax
8262             \relax
8263             /C[\@menubordercolor]%

```

```

8264         \fi
8265         >>%
8266     }%
8267     \Hy@colorlink\@menucolor
8268 }%
8269 #2%
8270 \Hy@EndAnnot
8271 }%
8272 }
8273 \ifx\@pdfproducer\relax
8274 \def\@pdfproducer{dvipdfm}%

```

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

```

8275 \begingroup\expandafter\expandafter\expandafter\endgroup
8276 \expandafter\ifx\csname XeTeXversion\endcsname\relax
8277 \else
8278 \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
8279 \fi
8280 \fi
8281 \def\PDF@FinishDoc{%
8282 \Hy@UseMaketitleInfos
8283 \@pdfm@mark{%
8284     docinfo<<%
8285         /Title(\@pdftitle)%
8286         /Subject(\@pdfsubject)%
8287         /Creator(\@pdfcreator)%
8288         \ifx\@pdfcreationdate\@empty
8289         \else
8290             /CreationDate(\@pdfcreationdate)%
8291         \fi
8292         \ifx\@pdfmoddate\@empty
8293         \else
8294             /ModDate(\@pdfmoddate)%
8295         \fi
8296         /Author(\@pdfauthor)%
8297         \ifx\@pdfproducer\relax
8298         \else
8299             /Producer(\@pdfproducer)%
8300         \fi
8301         /Keywords(\@pdfkeywords)%
8302     >>%
8303 }%
8304 \Hy@DisableOption{pdfauthor}%
8305 \Hy@DisableOption{pdftitle}%
8306 \Hy@DisableOption{pdfsubject}%
8307 \Hy@DisableOption{pdfcreator}%
8308 \Hy@DisableOption{pdfcreationdate}%
8309 \Hy@DisableOption{pdfmoddate}%
8310 \Hy@DisableOption{pdfproducer}%
8311 \Hy@DisableOption{pdfkeywords}%
8312 }
8313 \def\PDF@SetupDoc{%
8314 \edef\Hy@temp{%
8315     \ifHy@toolbar\else /HideToolbar true\fi
8316     \ifHy@menubar\else /HideMenubar true\fi
8317     \ifHy>windowui\else /HideWindowUI true\fi
8318     \ifHy@fitwindow /FitWindow true\fi

```

```

8319 \ifHy@centerwindow /CenterWindow true\fi
8320 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8321 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8322 \Hy@UseNameKey{Direction}\@pdfdirection
8323 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8324 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8325 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8326 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8327 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8328 \Hy@UseNameKey{Duplex}\@pdfduplex
8329 \ifx\@pdfpicktraybypdfsize\@empty
8330 \else
8331 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8332 \fi
8333 \ifx\@pdfprintpagerange\@empty
8334 \else
8335 /PrintPageRange[\@pdfprintpagerange]%
8336 \fi
8337 \ifx\@pdfnumcopies\@empty
8338 \else
8339 /NumCopies \@pdfnumcopies
8340 \fi
8341 }%
8342 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8343 \@pdfm@mark{%
8344 docview<<%
8345 \ifx\@pdfstartpage\@empty
8346 \else
8347 \ifx\@pdfstartview\@empty
8348 \else
8349 /OpenAction[@page\@pdfstartpage\@pdfstartview]%
8350 \fi
8351 \fi
8352 \ifx\@baseurl\@empty
8353 \else
8354 /URI<</Base(\Hy@pstringB)>>%
8355 \fi
8356 /PageMode/\@pdfpagemode
8357 \ifx\Hy@temp\@empty
8358 \else
8359 /ViewerPreferences<<\Hy@temp>>%
8360 \fi
8361 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8362 \ifx\@pdflang\@empty
8363 \else
8364 /Lang(\@pdflang)%
8365 \fi
8366 >>%
8367 }%
8368 \ifx\@pdfpagescrop\@empty
8369 \else
8370 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
8371 \fi
8372 }

8373 \AtBeginShipoutFirst{%
8374 \ifHy@setpagesize
8375 \begingroup

```

```

8376 \ifundefined{stockwidth}{%
8377 \ifx\special@paper\@empty
8378 \special{papersize=\the\paperwidth,\the\paperheight}%
8379 \else
8380 \special{papersize=\special@paper}%
8381 \fi
8382 }{%
8383 \ifdim\stockwidth=\z@
8384 \else
8385 \special{papersize=\the\stockwidth,\the\stockheight}%
8386 \fi
8387 }%
8388 \endgroup
8389 \fi
8390 \Hy@DisableOption{setpagesize}%
8391 }
8392 \end{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.

```

8393 \providecommand*{\XR@ext}{htm}
8394 \RequirePackage{vtxhtml}
8395 \newif\if@Localurl
8396 \def\PDF@FinishDoc{}
8397 \def\PDF@SetupDoc{%
8398 \ifx\@baseurl\@empty
8399 \else
8400 \special{!direct <base href="\@baseurl">}%
8401 \fi
8402 }
8403 }
8404 \def\@urltype{url}
8405 \def\hyper@link#1#2#3{%
8406 \leavevmode
8407 \special{!direct <a href=%
8408 \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
8409 #3%
8410 \special{!direct </a>}%
8411 }
8412 \def\hyper@linkurl#1#2{%
8413 \begingroup
8414 \hyper@chars
8415 \leavevmode
8416 \MathBSuppress=1\relax
8417 \special{!direct <a href=%
8418 \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
8419 #1%
8420 \MathBSuppress=0\relax
8421 \special{!direct </a>}%
8422 \endgroup
8423 }
8424 \def\hyper@linkfile#1#2#3{%
8425 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
8426 }
8427 \def\hyper@linkstart#1#2{%

```

```

8428 \def\Hy@tempa{#1}\ifx\Hy@tempa\@urltype
8429 \@Localurltrue
8430 \special{!direct <a href=\hyper@quote#2\hyper@quote>}%
8431 \else
8432 \@Localurlfalse
8433 \begingroup
8434 \hyper@chars
8435 \special{!aref \HyperDestNameFilter{#2}}%
8436 \endgroup
8437 \fi
8438 }
8439 \def\hyper@linkend{%
8440 \if@Localurl
8441 \special{!endaref}%
8442 \else
8443 \special{!direct </a>}%
8444 \fi
8445 }
8446 \def\hyper@anchorstart#1{%
8447 \Hy@SaveLastskip
8448 \begingroup
8449 \hyper@chars
8450 \special{!aname #1}%
8451 \special{!direct <a name=%
8452 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8453 \endgroup
8454 \Hy@activeanchortrue
8455 }
8456 \def\hyper@anchorend{%
8457 \special{!direct </a>}%
8458 \Hy@activeanchorfalse
8459 \Hy@RestoreLastskip
8460 }
8461 \def\hyper@anchor#1{%
8462 \Hy@SaveLastskip
8463 \begingroup
8464 \let\protect=\string
8465 \hyper@chars
8466 \leavevmode
8467 \special{!aname #1}%
8468 \special{!direct <a name=%
8469 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
8470 \endgroup
8471 \Hy@activeanchortrue
8472 \bgroup\anchor@spot\egroup
8473 \special{!direct </a>}%
8474 \Hy@activeanchorfalse
8475 \Hy@RestoreLastskip
8476 }
8477 \def\@Form[#1]{\typeout{Sorry, TeXpider does not yet support FORMs}}
8478 \def\@endForm{}
8479 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
8480 \typeout{Sorry, TeXpider does not yet support FORM gauges}%
8481 }
8482 \def\@TextField[#1]#2{% parameters, label
8483 \typeout{Sorry, TeXpider does not yet support FORM text fields}%
8484 }

```

```

8485 \def\@CheckBox[#1]#2{% parameters, label
8486 \typeout{Sorry, TeXpider does not yet support FORM checkboxes}%
8487 }
8488 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
8489 \typeout{Sorry, TeXpider does not yet support FORM choice menus}%
8490 }
8491 \def\@PushButton[#1]#2{% parameters, label
8492 \typeout{Sorry, TeXpider does not yet support FORM pushbuttons}%
8493 }
8494 \def\@Reset[#1]#2{%
8495 \typeout{Sorry, TeXpider does not yet support FORMs}%
8496 }
8497 \def\@Submit[#1]#2{%
8498 \typeout{Sorry, TeXpider does not yet support FORMs}%
8499 }
8500 \</vtexhtml>
8501 \<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.

```

8502 \ifx\mediaheight\@undefined
8503 \else
8504 \ifx\mediaheight\relax
8505 \else
8506 \ifHy@setpagesize
8507 \providecommand*\VTeXInitMediaSize{%
8508 \@ifundefined{stockwidth}{%
8509 \ifdim\paperheight>0pt %
8510 \setlength\mediaheight\paperheight
8511 \fi
8512 \ifdim\paperheight>0pt %
8513 \setlength\mediawidth\paperwidth
8514 \fi
8515 }{%
8516 \ifdim\stockheight>0pt %
8517 \setlength\mediaheight\stockheight
8518 \fi
8519 \ifdim\stockwidth>0pt %
8520 \setlength\mediawidth\stockwidth
8521 \fi
8522 }%
8523 }%
8524 \AtBeginDocument{\VTeXInitMediaSize}%
8525 \fi
8526 \Hy@DisableOption{setpagesize}%
8527 \fi
8528 \fi

```

Older versions of VTeX require xyz in lower case.

```

8529 \providecommand*\@pdfview{xyz}
8530 \providecommand*\@pdfborder{0 0 1}
8531 \providecommand*\@pdfborderstyle{}
8532 \let\CurrentBorderColor\@linkbordercolor
8533 \def\hyper@anchor#1{%
8534 \Hy@SaveLastskip
8535 \begingroup
8536 \let\protect=\string

```



```

8537 \hyper@chars
8538 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8539 \endgroup
8540 \Hy@activeanchortrue
8541 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
8542 \Hy@activeanchorfalse
8543 \Hy@RestoreLastskip
8544 }
8545 \def\hyper@anchorstart#1{%
8546 \Hy@SaveLastskip
8547 \begingroup
8548 \hyper@chars
8549 \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
8550 \endgroup
8551 \Hy@activeanchortrue
8552 }
8553 \def\hyper@anchorend{%
8554 \Hy@activeanchorfalse
8555 \Hy@RestoreLastskip
8556 }
8557 \def\@urltype{url}
8558 \def\Hy@undefinedname{UNDEFINED}
8559 \def\hyper@linkstart#1#2{%
8560 \Hy@pstringdef\Hy@pstringURI{#2}%
8561 \expandafter\Hy@colorlink\csname @#1color\endcsname
8562 \@ifundefined{#@1bordercolor}{%
8563 \let\CurrentBorderColor\relax
8564 }{%
8565 \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8566 }%
8567 \def\Hy@tempa{#1}%
8568 \ifx\Hy@tempa\@urltype
8569 \special{!%
8570 aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8571 a=<%
8572 \ifHy@pdfa /F 4\fi
8573 \Hy@setpdfborder
8574 \ifx\CurrentBorderColor\relax
8575 \else
8576 /C [\CurrentBorderColor]%
8577 \fi
8578 >%
8579 }%
8580 \else
8581 \protected@edef\Hy@testname{#2}%
8582 \ifx\Hy@testname\@empty
8583 \Hy@Warning{%
8584 Empty destination name,\MessageBreak
8585 using '\Hy@undefinedname'%
8586 }%
8587 \let\Hy@testname\Hy@undefinedname
8588 \fi
8589 \special{!%
8590 aref \expandafter\HyperDestNameFilter
8591 \expandafter{\Hy@testname};%
8592 a=<%
8593 \ifHy@pdfa /F 4\fi

```

```

8594         \Hy@setpdfborder
8595         \ifx\CurrentBorderColor\relax
8596         \else
8597             /C [\CurrentBorderColor]%
8598         \fi
8599     >%
8600 }%
8601 \fi
8602 }
8603 \def\hyper@linkend{%
8604     \special{!endaref}%
8605     \Hy@endcolorlink
8606 }
8607 \def\hyper@linkfile#1#2#3{%
8608     \leavevmode
8609     \special{!%
8610         aref <%
8611         \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
8612         f=#2>#3;%
8613         a=<%
8614             \ifHy@pdfa /F 4\fi
8615             \Hy@setpdfborder
8616             \ifx\@filebordercolor\relax
8617             \else
8618                 /C [\@filebordercolor]%
8619             \fi
8620         >%
8621     }%
8622     \Hy@colorlink\@filecolor#1\Hy@endcolorlink
8623     \special{!endaref}%
8624 }
8625 \def\hyper@linkurl#1#2{%
8626     \begingroup
8627         \Hy@pstringdef\Hy@pstringURI{#2}%
8628         \hyper@chars
8629         \leavevmode
8630         \special{!%
8631             aref <u=/Type /Action /S /URI /URI (\Hy@pstringURI)>;%
8632             a=<%
8633                 \ifHy@pdfa /F 4\fi
8634                 \Hy@setpdfborder
8635                 \ifx\@urlbordercolor\relax
8636                 \else
8637                     /C [\@urlbordercolor]%
8638                 \fi
8639             >%
8640         }%
8641         \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
8642         \special{!endaref}%
8643     \endgroup
8644 }
8645 \def\hyper@link#1#2#3{%
8646     \ifundefined{@#1bordercolor}{%
8647         \let\CurrentBorderColor\relax
8648     }{%
8649         \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8650     }%

```

```

8651 \leavevmode
8652 \protected@edef\Hy@testname{#2}%
8653 \ifx\Hy@testname\@empty
8654   \Hy@Warning{%
8655     Empty destination name,\MessageBreak
8656     using '\Hy@undefinedname'%
8657   }%
8658   \let\Hy@testname\Hy@undefinedname
8659 \fi
8660 \special{!%
8661   aref \expandafter\HyperDestNameFilter
8662   \expandafter{\Hy@testname};%
8663   a=<%
8664   \ifHy@pdfa /F 4\fi
8665   \Hy@setpdfborder
8666   \ifx\CurrentBorderColor\relax
8667   \else
8668     /C [\CurrentBorderColor]%
8669   \fi
8670   >%
8671 }%
8672 \expandafter\Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
8673 \special{!endaref}%
8674 }
8675 \def\hyper@image#1#2{%
8676   \hyper@linkurl{#2}{#1}%
8677 }
8678 \def\hyper@launch run:#1\#2#3{%
8679   \Hy@pstringdef\Hy@pstringF{#1}%
8680   \Hy@pstringdef\Hy@pstringP{#3}%
8681   \leavevmode
8682   \special{!aref %
8683     <u=%
8684       /Type/Action%
8685       /S/Launch%
8686       /F(\Hy@pstringF)%
8687       \Hy@SetNewWindow
8688       \ifx\#3\else /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>\fi%
8689     >;%
8690     a=<%
8691     \ifHy@pdfa /F 4\fi
8692     \Hy@setpdfborder
8693     \ifx\@runbordercolor\relax
8694     \else
8695       /C[\@runbordercolor]%
8696     \fi
8697     >%
8698   }%
8699   \Hy@colorlink\@runcolor#2\Hy@endcolorlink
8700   \special{!endaref}%
8701 }
8702 \def\Acrobatmenu#1#2{%
8703   \Hy@Acrobatmenu{#1}{#2}{%
8704     \special{!%
8705       aref <u=/S /Named /N /#1>;%
8706       a=<%
8707       \ifHy@pdfa /F 4\fi

```

```

8708      \Hy@setpdfborder
8709      \ifx\@menubordercolor\relax
8710      \else
8711      /C[\@menubordercolor]%
8712      \fi
8713      >%
8714      }%
8715      \Hy@colorlink\@menucolor#2\Hy@endcolorlink
8716      \special{!endaref}%
8717      }%
8718      }

```

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

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

Please never use $\text{\ifundefined\TeXversion}\{..\}\{..\}$ globally.

```

8719 \ifnum\Hy@TeXversion<702 %
8720 \else
8721   \def\hyper@pagetransition{%
8722     \ifx\@pdfpagetransition\relax
8723     \else
8724     \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

8725     \else
8726     \hvtex@parse@trans\@pdfpagetransition
8727     \fi
8728     \fi
8729   }%

```

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

Syntax of \TeX $\text{\special}\{!trans <transition_effect>\}$:

```

<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:

```

8730 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
8731 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
8732 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
8733 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
8734 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
8735 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
8736 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```
8737 \def\hvtex@par@dimension{/Dm}%
8738 \def\hvtex@par@direction{/Di}%
8739 \def\hvtex@par@duration{/D}%
8740 \def\hvtex@par@motion{/M}%
```

Tokenizer:

```
8741 \def\hvtex@gettoken{\expandafter\hvtex@gettoken@\hvtex@buffer\@nil}%
```

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

```
8742 \def\hvtex@gettoken@#1 #2\@nil{%
8743   \edef\hvtex@token{#1}%
8744   \edef\hvtex@buffer{#2}%
8745 }%
8746 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
8747 \let\hvtex@trans@code\@empty
8748 \let\hvtex@param@dimension\@empty
8749 \let\hvtex@param@direction\@empty
8750 \let\hvtex@param@duration\@empty
8751 \let\hvtex@param@motion\@empty
8752 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
8753 \hvtex@gettoken
8754 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
8755 \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
8756 \else
8757   \hvtex@gettoken
8758 \fi
8759 \fi
8760 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
8761 \hvtex@trans@params
8762 }%
```

Reentrant macro to parse optional parameters.

```
8763 \def\hvtex@trans@params{%
8764   \ifx\hvtex@buffer\@empty
8765   \else
8766     \hvtex@gettoken
8767     \let\hvtex@trans@par\hvtex@token
8768     \ifx\hvtex@buffer\@empty
8769     \else
8770       \hvtex@gettoken
8771       \ifx\hvtex@trans@par\hvtex@par@duration
```

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

```
8772 \let\hvtex@param@duration\hvtex@token
8773 \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
8774 \expandafter\edef\expandafter\hvtex@param@motion
8775 \expandafter{\expandafter\@gobble\hvtex@token}%
8776 \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
8777      \expandafter\edef\expandafter\hvtex@param@dimension
8778      \expandafter{\expandafter\@gobble\hvtex@token}%
8779      \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).

```
8780      \let\hvtex@param@direction\hvtex@token
8781      \fi\fi\fi\fi
8782      \fi
8783      \fi
8784      \ifx\hvtex@buffer\@empty
8785      \let\next\hvtex@produce@trans
8786      \else
8787      \let\next\hvtex@trans@params
8788      \fi
8789      \next
8790 }%
```

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

```
8791  \def\hvtex@produce@trans{%
8792    \let\vtex@trans@special\@empty
8793    \if S\hvtex@trans@code
8794      \edef\vtex@trans@special{\hvtex@trans@code
8795        \hvtex@param@dimension\hvtex@param@motion}%
8796    \else\if B\hvtex@trans@code
8797      \edef\vtex@trans@special{%
8798        \hvtex@trans@code\hvtex@param@dimension
8799      }%
8800    \else\if X\hvtex@trans@code
8801      \edef\vtex@trans@special{%
8802        \hvtex@trans@code\hvtex@param@motion
8803      }%
8804    \else\if W\hvtex@trans@code
8805      \edef\vtex@trans@special{%
8806        \hvtex@trans@code\hvtex@param@direction
8807      }%
8808    \else\if D\hvtex@trans@code
8809      \let\vtex@trans@special\hvtex@trans@code
8810    \else\if R\hvtex@trans@code
8811      \let\vtex@trans@special\hvtex@trans@code
8812    \else\if G\hvtex@trans@code
8813      \edef\vtex@trans@special{%
8814        \hvtex@trans@code\hvtex@param@direction
8815      }%
8816    \fi\fi\fi\fi\fi\fi\fi
8817    \ifx\vtex@trans@special\@empty
8818    \else
8819      \ifx\hvtex@param@duration\@empty
8820      \else
8821        \setlength{\dimen@}{\hvtex@param@duration\p@}%
```

I'm not guilty of possible overflow.

```
8822      \multiply\dimen@\@m
8823      \edef\vtex@trans@special{%
8824        \vtex@trans@special,\strip@pt\dimen@
8825      }%
```

```

8826      \fi
      And all the mess is just for this.
8827      \special{!trans \vtx@trans@special}%
8828      \fi
8829    }%
8830    \def\hyper@pageduration{%
8831      \ifx\@pdfpageduration\relax
8832      \else
8833        \ifx\@pdfpageduration\@empty
8834          \special{!duration-}%
8835        \else
8836          \special{!duration \@pdfpageduration}%
8837        \fi
8838      \fi
8839    }%
8840    \def\hyper@pagehidden{%
8841      \ifHy@useHidKey
8842        \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
8843      \fi
8844    }%
8845    \g@addto@macro\Hy@EveryPageBoxHook{%
8846      \hyper@pagetransition
8847      \hyper@pageduration
8848      \hyper@pagehidden
8849    }%
8850  \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

```

8851 \ifx\@pdfproducer\relax
8852   \def\@pdfproducer{VTeX}%
8853   \ifnum\Hy@VTeXversion>\z@
8854     \count@\VTeXversion
8855     \divide\count@ 100 %
8856     \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
8857     \multiply\count@ -100 %
8858     \advance\count@\VTeXversion
8859     \edef\@pdfproducer{%
8860       \@pdfproducer
8861       .\ifnum\count@<10 0\fi\the\count@
8862     \ifx\VTeXOS\@undefined\else
8863       \ifnum\VTeXOS>0 %
8864         \ifnum\VTeXOS<6 %
8865           \space(
8866           \ifcase\VTeXOS
8867             \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
8868           \fi
8869         )%

```

```

8870         \fi
8871     \fi
8872 \fi
8873 ,\space
8874 \ifnum\OpMode=\@ne PDF\else PS\fi
8875 \space backend%
8876 \ifx\gexmode\@undefined\else
8877     \ifnum\gexmode>\z@\space with GeX\fi
8878 \fi
8879 }%
8880 \fi
8881 \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).

```

8882 \def\PDF@SetupDoc{%
8883     \ifx\@pdfpagescrop\@empty
8884     \else
8885         \special{!pdfinfo b=<\@pdfpagescrop>}%
8886     \fi
8887     \ifx\@pdfstartpage\@empty
8888     \else
8889         \ifx\@pdfstartview\@empty
8890         \else
8891             \special{!onopen Page\@pdfstartpage}%
8892         \fi
8893     \fi
8894     \special{!pdfinfo p=<\/\@pdfpagemode>}%
8895     \ifx\@baseurl\@empty
8896     \else
8897         \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
8898     \fi
8899     \special{!pdfinfo v=<<<%
8900         \ifHy@toolbar\else /HideToolbar true\fi
8901         \ifHy@menubar\else /HideMenubar true\fi
8902         \ifHy>windowui\else /HideWindowUI true\fi
8903         \ifHy@fitwindow /FitWindow true\fi
8904         \ifHy@centerwindow /CenterWindow true\fi
8905         \ifHy@displaydoctitle /DisplayDocTitle true\fi
8906         \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8907         \Hy@UseNameKey{Direction}\@pdfdirection
8908         \Hy@UseNameKey{ViewArea}\@pdfviewarea
8909         \Hy@UseNameKey{ViewClip}\@pdfviewclip
8910         \Hy@UseNameKey{PrintArea}\@pdfprintarea
8911         \Hy@UseNameKey{PrintClip}\@pdfprintclip

```



```

8912 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8913 \Hy@UseNameKey{Duplex}\@pdfduplex
8914 \ifx\@pdfpicktraybypdfsize\@empty
8915 \else
8916 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8917 \fi
8918 \ifx\@pdfprintpagerange\@empty
8919 \else
8920 /PrintPageRange[\@pdfprintpagerange]%
8921 \fi
8922 \ifx\@pdfnumcopies\@empty
8923 \else
8924 /NumCopies \@pdfnumcopies
8925 \fi
8926 >>>}%
8927 \ifx\@pdfpagelayout\@empty
8928 \else
8929 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
8930 \fi
8931 }%
8932 \def\PDF@FinishDoc{%
8933 \Hy@UseMaketitleInfos
8934 \special{!pdfinfo a=<\@pdfauthor>}%
8935 \special{!pdfinfo t=<\@pdftitle>}%
8936 \special{!pdfinfo s=<\@pdfsubject>}%
8937 \special{!pdfinfo c=<\@pdfcreator>}%
8938 \ifx\@pdfproducer\relax
8939 \else
8940 \special{!pdfinfo r=<\@pdfproducer>}%
8941 \fi
8942 \special{!pdfinfo k=<\@pdfkeywords>}%
8943 \Hy@DisableOption{pdfauthor}%
8944 \Hy@DisableOption{pdftitle}%
8945 \Hy@DisableOption{pdfsubject}%
8946 \Hy@DisableOption{pdfcreator}%
8947 \Hy@DisableOption{pdfcreationdate}%
8948 \Hy@DisableOption{pdfmoddate}%
8949 \Hy@DisableOption{pdfproducer}%
8950 \Hy@DisableOption{pdfkeywords}%
8951 }
8952 </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.

```

8953 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
8954 <package>\providecommand*\Hy@DistillerDestFix{}
8955 <*pdfmark | dviwindo>

```

```

8956 \def\Hy@DistillerDestFix{%
8957   \begingroup
8958     \let\x\literalps@out

```

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

```

8959   \ifnum \@ifundefined{OpMode}{0}{%
8960     \@ifundefined{gexmode}{0}{%
8961       \ifnum\gexmode>0 \OpMode\else 0\fi
8962     }>1 %
8963   \def\x##1{%
8964     \immediate\special{!=##1}%
8965   }%
8966 \fi
8967 \x{%
8968   /product where{%
8969     pop %
8970     product(Distiller)search{%
8971       pop pop pop %
8972       version(.)search{%
8973         exch pop exch pop%
8974         (3011)eq{%
8975           gsave %
8976           newpath 0 0 moveto closepath clip%
8977           /Courier findfont 10 scalefont setfont %
8978           72 72 moveto(.)show %
8979           grestore%
8980         }if%
8981       }{pop}ifelse%
8982     }{pop}ifelse%
8983   }if%
8984   }%
8985 \endgroup
8986 }
8987 </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

```

8988 <*pdfmark>
8989 \Hy@breaklinks@unsupported
8990 \def\hyper@anchor#1{%
8991   \Hy@SaveLastskip
8992   \begingroup
8993     \pdfmark[\anchor@spot]{%

```

```

8994     pdfmark=/DEST,%
8995     linktype=anchor,%
8996     View=/\@pdfview \@pdfviewparams,%
8997     DestAnchor={#1}%
8998 }%
8999 \endgroup
9000 \Hy@RestoreLastskip
9001 }
9002 \@ifundefined{hyper@anchorstart}{\endinput}
9003 \def\hyper@anchorstart#1{%
9004   \Hy@SaveLastskip
9005   \literalps@out{H.S}%
9006   \xdef\hyper@currentanchor{#1}%
9007   \Hy@activeanchortrue
9008 }
9009 \def\hyper@anchorend{%
9010   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
9011   \pdfmark{%
9012     pdfmark=/DEST,%
9013     linktype=anchor,%
9014     View=/\@pdfview \@pdfviewparams,%
9015     DestAnchor=\hyper@currentanchor,%
9016   }%
9017   \Hy@activeanchorfalse
9018   \Hy@RestoreLastskip
9019 }
9020 \def\hyper@linkstart#1#2{%
9021   \ifHy@breaklinks
9022   \else
9023     \leavevmode\hbox\bgroup
9024     \fi
9025     \expandafter\Hy@colorlink\csname @#1color\endcsname
9026     \literalps@out{H.S}%
9027     \xdef\hyper@currentanchor{#2}%
9028     \gdef\hyper@currentlinktype{#1}%
9029 }
9030 \def\hyper@linkend{%
9031   \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
9032   \@ifundefined{@\hyper@currentlinktype bordercolor}{%
9033     \let\Hy@tempcolor\relax
9034   }{%
9035     \edef\Hy@tempcolor{%
9036       \csname @\hyper@currentlinktype bordercolor\endcsname
9037     }%
9038   }%
9039   \pdfmark{%
9040     pdfmark=/ANN,%
9041     linktype=link,%
9042     Subtype=/Link,%
9043     PDFAFlags=4,%
9044     Dest=\hyper@currentanchor,%
9045     AcroHighlight=\@pdfhighlight,%
9046     Border=\@pdfborder,%
9047     BorderStyle=\@pdfborderstyle,%
9048     Color=\Hy@tempcolor,%
9049     Raw=H.B%
9050   }%

```

```

9051 \Hy@endcolorlink
9052 \ifHy@breaklinks
9053 \else
9054 \egroup
9055 \fi
9056 }

```

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.

```

9057 \beginngroup
9058 \catcode'P=12 %
9059 \catcode'T=12 %
9060 \lowercase{\endgroup
9061 \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
9062 }
9063 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

9064 \def\hyper@pagetransition{%
9065 \ifx\@pdfpagetransition\relax
9066 \else
9067 \ifx\@pdfpagetransition\@empty
9068 % 1. Does an old entry have to be deleted?
9069 % 2. If 1=yes, how to delete?
9070 \else
9071 \pdfmark{%
9072 pdfmark=/PUT,%
9073 Raw={%
9074 \string{ThisPage\string}%
9075 <</Trans << /S /\@pdfpagetransition\space >> >>%
9076 }%
9077 }%
9078 \fi
9079 \fi
9080 }

```

\hyper@pageduration

```

9081 \def\hyper@pageduration{%
9082 \ifx\@pdfpageduration\relax
9083 \else
9084 \ifx\@pdfpageduration\@empty
9085 % 1. Does an old entry have to be deleted?
9086 % 2. If 1=yes, how to delete?
9087 \else
9088 \pdfmark{%
9089 pdfmark=/PUT,%
9090 Raw={%
9091 \string{ThisPage\string}%
9092 <</Dur \@pdfpageduration>>%
9093 }%
9094 }%
9095 \fi
9096 \fi
9097 }

```

\hyper@pagehidden

```

9098 \def\hyper@pagehidden{%
9099   \ifHy@useHidKey
9100     \pdfmark{%
9101       pdfmark=/PUT,%
9102       Raw={%
9103         \string{ThisPage\string}%
9104         <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
9105       }%
9106     }%
9107   \fi
9108 }

9109 \g@addto@macro\Hy@EveryPageBoxHook{%
9110   \hyper@pagetransition
9111   \hyper@pageduration
9112   \hyper@pagehidden
9113 }

9114 \def\hyper@image#1#2{%
9115   \hyper@linkurl{#2}{#1}%
9116 }

9117 \def\Hy@undefinedname{UNDEFINED}
9118 \def\hyper@link#1#2#3{%
9119   \ifundefined{@#1bordercolor}{%
9120     \let\Hy@tempcolor\relax
9121   }{%
9122     \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
9123   }%
9124   \begingroup
9125     \protected@edef\Hy@testname{#2}%
9126     \ifx\Hy@testname\@empty
9127       \Hy@Warning{%
9128         Empty destination name,\MessageBreak
9129         using '\Hy@undefinedname'%
9130       }%
9131       \let\Hy@testname\Hy@undefinedname
9132     \fi
9133     \pdfmark[{#3}]{%
9134       Color=\Hy@tempcolor,%
9135       linktype={#1},%
9136       AcroHighlight=\@pdfhighlight,%
9137       Border=\@pdfborder,%
9138       BorderStyle=\@pdfborderstyle,%
9139       pdfmark=/ANN,%
9140       Subtype=/Link,%
9141       PDFAFlags=4,%
9142       Dest=\Hy@testname
9143     }%
9144   \endgroup
9145 }

9146 \newtoks\pdf@docset
9147 \def\PDF@FinishDoc{%
9148   \Hy@UseMaketitleInfos
9149   \let\Hy@temp\@empty
9150   \ifx\@pdfcreationdate\@empty
9151   \else
9152     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
9153   \fi
9154   \ifx\@pdfmoddate\@empty

```

```

9155 \else
9156   \expandafter\def\expandafter\Hy@temp\expandafter{%
9157     \Hy@temp
9158     ModDate=\@pdfmoddate,%
9159   }%
9160 \fi
9161 \ifx\@pdfproducer\relax
9162 \else
9163   \expandafter\def\expandafter\Hy@temp\expandafter{%
9164     \Hy@temp
9165     Producer=\@pdfproducer,%
9166   }%
9167 \fi
9168 \expandafter
9169 \pdfmark\expandafter{%
9170   \Hy@temp
9171   pdfmark=/DOCINFO,%
9172   Title=\@pdftitle,%
9173   Subject=\@pdfsubject,%
9174   Creator=\@pdfcreator,%
9175   Author=\@pdfauthor,%
9176   Keywords=\@pdfkeywords
9177 }%
9178 \Hy@DisableOption{pdfauthor}%
9179 \Hy@DisableOption{pdftitle}%
9180 \Hy@DisableOption{pdfsubject}%
9181 \Hy@DisableOption{pdfcreator}%
9182 \Hy@DisableOption{pdfcreationdate}%
9183 \Hy@DisableOption{pdfmoddate}%
9184 \Hy@DisableOption{pdfproducer}%
9185 \Hy@DisableOption{pdfkeywords}%
9186 }
9187 \def\PDF@SetupDoc{%
9188   \def\Hy@temp{%
9189     \ifx\@pdfstartpage\@empty
9190     \else
9191       \ifx\@pdfstartview\@empty
9192       \else
9193         \edef\Hy@temp{%
9194           ,Page=\@pdfstartpage
9195           ,View=\@pdfstartview
9196         }%
9197       \fi
9198     \fi
9199     \edef\Hy@temp{%
9200       \noexpand\pdfmark{%
9201         pdfmark=/DOCVIEW,%
9202         PageMode=/\@pdfpagemode
9203       }\Hy@temp
9204     }%
9205   }%
9206   \Hy@temp
9207   \ifx\@pdfpagescrop\@empty
9208   \else
9209     \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9210   \fi
9211   \edef\Hy@temp{%

```

```

9212 \ifHy@toolbar\else /HideToolbar true\fi
9213 \ifHy@menubar\else /HideMenubar true\fi
9214 \ifHy@windowui\else /HideWindowUI true\fi
9215 \ifHy@fitwindow /FitWindow true\fi
9216 \ifHy@centerwindow /CenterWindow true\fi
9217 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9218 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9219 \Hy@UseNameKey{Direction}\@pdfdirection
9220 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9221 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9222 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9223 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9224 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9225 \Hy@UseNameKey{Duplex}\@pdfduplex
9226 \ifx\@pdfpicktraybypdfsize\@empty
9227 \else
9228 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9229 \fi
9230 \ifx\@pdfprintpagerange\@empty
9231 \else
9232 /PrintPageRange[\@pdfprintpagerange]%
9233 \fi
9234 \ifx\@pdfnumcopies\@empty
9235 \else
9236 /NumCopies \@pdfnumcopies
9237 \fi
9238 }%
9239 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9240 \pdfmark{%
9241 pdfmark=/PUT,%
9242 Raw={%
9243 \string{Catalog\string}<<%
9244 \ifx\Hy@temp\@empty
9245 \else
9246 /ViewerPreferences<<\Hy@temp>>%
9247 \fi
9248 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9249 \ifx\@pdflang\@empty
9250 \else
9251 /Lang(\@pdflang)%
9252 \fi
9253 \ifx\@baseurl\@empty
9254 \else
9255 /URI<</Base(\Hy@pstringB)>>%
9256 \fi
9257 >>%
9258 }%
9259 }%
9260 }
9261 </pdfmark>
9262 <*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.

```

9263 \newif\ifHy@pdfmarkerror
9264 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
9265 \def\pdfmark@[#1]#2{%
9266   \Hy@pdfmarkerrorfalse
9267   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
9268   \@processme
9269   \let\pdf@type\relax
9270   \setkeys{PDF}{#2}%
9271   \ifHy@pdfmarkerror
9272   \else
9273     \ifx\pdf@type\relax
9274       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
9275       \ifx\#1\%
9276       \else
9277         \pdf@rect{#1}%
9278       \fi
9279     \else
9280       \ifx\#1\%
9281         \literalps@out{%
9282           [\the\pdf@toks\space\pdf@type\space pdfmark%
9283           ]%
9284         \else
9285           \@ifundefined{@\pdf@linktype color}{%
9286             \Hy@colorlink@\linkcolor
9287           }{%
9288             \expandafter\Hy@colorlink
9289               \csname @\pdf@linktype color\endcsname
9290           }%
9291           \pdf@rect{#1}%
9292           \literalps@out{%
9293             [\the\pdf@toks\space\pdf@type\space pdfmark%
9294             ]%
9295           \Hy@endcolorlink
9296         \fi
9297       \fi
9298     \fi
9299 }

```

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}

```

```

9300 \newsavebox{\pdf@box}
9301 \providecommand*{\Hy@setouterhbox}{\sbox}
9302 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
9303 \def\Hy@DEST{/DEST}
9304 \def\pdf@rect#1{%
9305   \leavevmode
9306   \ifHy@breaklinks
9307     \Hy@setouterhbox\pdf@box{#1}%
9308   \else

```



```

9309 \sbox\pdf@box{#1}%
9310 \fi
9311 \dimen@ \ht\pdf@box
9312 \ifdim\dp\pdf@box=\z@
9313 \literalps@out{H.S}%
9314 \else
9315 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}%
9316 \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...).

```

9317 \ifHy@breaklinks
9318 \expandafter\Hy@breaklinksunhbox
9319 \else
9320 \expandafter\box
9321 \fi
9322 \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

9323 \ifdim\dimen@=\z@
9324 \literalps@out{H.R}%
9325 \else
9326 \raise\dimen@\hbox{\literalps@out{H.R}}%
9327 \fi
9328 \ifx\pdf@type\Hy@DEST
9329 \else
9330 \pdf@addtoksx{H.B}%
9331 \fi
9332 }

```

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.

```

9333 \newtoks\pdf@toks
9334 \newtoks\pdf@defaulttoks
9335 \pdf@defaulttoks={}
9336 \def\pdf@addtoks#1#2{%
9337 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
9338 \@processme
9339 }
9340 \def\pdf@addtoksx#1{%
9341 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
9342 \@processme
9343 }
9344 \def\PDFdefaults#1{%
9345 \pdf@defaulttoks={#1}%
9346 }

```

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

```

9347 % what is the type of pdfmark?
9348 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
9349 % what is the link type?
9350 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
9351 \def\pdf@linktype{link}
9352 % parameter is a stream of PDF

```

```

9353 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
9354 % parameter is a name
9355 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
9356 % parameter is a array
9357 \define@key{PDF}{Border}{%
9358   \edef\Hy@temp{#1}%
9359   \ifx\Hy@temp\@empty
9360   \else
9361     \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
9362   \fi
9363 }
9364 \let\Hy@BorderArrayPatch\@empty
9365 % parameter is a dictionary
9366 \define@key{PDF}{BorderStyle}{%
9367   \edef\Hy@temp{#1}%
9368   \ifx\Hy@temp\@empty
9369   \else
9370     \pdf@addtoks{<<#1>>}{BS}%
9371   \fi
9372 }
9373 % parameter is a array
9374 \define@key{PDF}{Color}{%
9375   \ifx\relax#1\relax
9376   \else
9377     \pdf@addtoks{[#1]}{Color}% hash-ok
9378   \fi
9379 }
9380 % parameter is a string
9381 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
9382 % parameter is a integer
9383 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
9384 % parameter is a array
9385 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
9386 % parameter is a string
9387 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
9388 % parameter is a string or file
9389 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
9390 % parameter is a destination
9391 \define@key{PDF}{Dest}{%
9392   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9393   \ifx\Hy@pstringDest\@empty
9394     \Hy@pdfmarkerrortrue
9395     \Hy@Warning{Destination with empty name ignored}%
9396   \else
9397     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9398   \fi
9399 }
9400 \define@key{PDF}{DestAnchor}{%
9401   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9402   \ifx\Hy@pstringDest\@empty
9403     \Hy@pdfmarkerrortrue
9404     \Hy@Warning{Destination with empty name ignored}%
9405   \else
9406     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
9407   \fi
9408 }
9409 % parameter is a string

```

```

9410 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
9411 % parameter is a string
9412 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
9413 % parameter is a int
9414 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
9415 \define@key{PDF}{PDFAFlags}{%
9416   \ifHy@pdfa
9417     \pdf@addtoks{#1}{F}%
9418   \fi
9419 }
9420 % parameter is a name
9421 \define@key{PDF}{AcroHighlight}{%
9422   \begingroup
9423     \edef\x{#1}%
9424     \expandafter\endgroup\ifx\x\@empty
9425   \else
9426     \pdf@addtoks{#1}{H}%
9427   \fi
9428 }
9429 % parameter is a string
9430 \define@key{PDF}{ID}{\pdf@addtoks{[#1]}{ID}}% hash-ok
9431 % parameter is a string
9432 \define@key{PDF}{MacFile}{\pdf@addtoks{(#1)}{MacFile}}
9433 % parameter is a string
9434 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9435 % parameter is a string
9436 \define@key{PDF}{Op}{\pdf@addtoks{(#1)}{Op}}
9437 % parameter is a Boolean
9438 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
9439 % parameter is a integer or name
9440 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
9441 % parameter is a name
9442 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
9443 % parameter is a string
9444 \define@key{PDF}{Params}{\pdf@addtoks{(#1)}{Params}}
9445 % parameter is a array
9446 \define@key{PDF}{Rect}{\pdf@addtoks{[#1]}{Rect}}% hash-ok
9447 % parameter is a integer
9448 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
9449 % parameter is a name
9450 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
9451 % parameter is a string
9452 \define@key{PDF}{Title}{\pdf@addtoks{(#1)}{Title}}
9453 % parameter is a string
9454 \define@key{PDF}{Unix}{\pdf@addtoks{(#1)}{Unix}}
9455 % parameter is a string
9456 \define@key{PDF}{UnixFile}{\pdf@addtoks{(#1)}{UnixFile}}
9457 % parameter is an array
9458 \define@key{PDF}{View}{\pdf@addtoks{[#1]}{View}}% hash-ok
9459 % parameter is a string
9460 \define@key{PDF}{WinFile}{\pdf@addtoks{(#1)}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

9461 \define@key{PDF}{Author}{\pdf@addtoks{(#1)}{Author}}
9462 \define@key{PDF}{Creator}{\pdf@addtoks{(#1)}{Creator}}
9463 \define@key{PDF}{CreationDate}{\pdf@addtoks{(#1)}{CreationDate}}
9464 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9465 \define@key{PDF}{Producer}{\pdf@addtoks{(#1)}{Producer}}

```

```

9466 \define@key{PDF}{Subject}{\pdf@addtoks{(#1)}{Subject}}
9467 \define@key{PDF}{Keywords}{\pdf@addtoks{(#1)}{Keywords}}
9468 \define@key{PDF}{ModDate}{\pdf@addtoks{(#1)}{ModDate}}
9469 \define@key{PDF}{Base}{\pdf@addtoks{(#1)}{Base}}
9470 \define@key{PDF}{URI}{\pdf@addtoks{(#1)}{URI}}
9471 \pdfmarkbase>
9472 \pdfmark>
9473 \def\Acrobatmenu#1#2{%
9474   \Hy@Acrobatmenu{#1}{#2}{%
9475     \pdfmark[{#2}]{%
9476       linktype=menu,%
9477       pdfmark=/ANN,%
9478       AcroHighlight=@pdfhighlight,%
9479       Border=@pdfborder,%
9480       BorderStyle=@pdfborderstyle,%
9481       Action={<< /Subtype /Named /N /#1 >>},%
9482       Subtype=/Link,%
9483       PDFAFlags=4%
9484     }%
9485   }%
9486 }

```

And now for some useful examples:

```

9487 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
9488 \def\PDFNextPage@[#1]#2{%
9489   \pdfmark[{#2}]{%
9490     #1,%
9491     Border=@pdfborder,%
9492     BorderStyle=@pdfborderstyle,%
9493     Color=.2 .1 .5,%
9494     pdfmark=/ANN,%
9495     Subtype=/Link,%
9496     PDFAFlags=4,%
9497     Page=/Next%
9498   }%
9499 }
9500 \def\PDFPreviousPage{%
9501   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
9502 }
9503 \def\PDFPreviousPage@[#1]#2{%
9504   \pdfmark[{#2}]{%
9505     #1,%
9506     Border=@pdfborder,%
9507     BorderStyle=@pdfborderstyle,%
9508     Color=.4 .4 .1,%
9509     pdfmark=/ANN,%
9510     Subtype=/Link,%
9511     PDFAFlags=4,%
9512     Page=/Prev%
9513   }%
9514 }
9515 \def\PDFOpen#1{%
9516   \pdfmark{#1,pdfmark=/DOCVIEW}%
9517 }

```

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

```

9518 \def\hyper@linkurl#1#2{%
9519   \begingroup

```

```

9520 \Hy@pstringdef\Hy@pstringURI{#2}%
9521 \hyper@chars
9522 \leavevmode
9523 \pdfmark[{#1}]{%
9524 pdfmark=/ANN,%
9525 linktype=url,%
9526 AcroHighlight=\@pdfhighlight,%
9527 Border=\@pdfborder,%
9528 BorderStyle=\@pdfborderstyle,%
9529 Color=\@urlbordercolor,%
9530 Action={<< /Subtype /URI /URI (\Hy@pstringURI) >>},%
9531 Subtype=/Link,%
9532 PDFAFlags=4%
9533 }%
9534 \endgroup
9535 }
9536 \def\hyper@linkfile#1#2#3{%
9537 \begingroup
9538 \Hy@pstringdef\Hy@pstringF{#2}%
9539 \Hy@pstringdef\Hy@pstringD{#3}%
9540 \leavevmode
9541 \pdfmark[{#1}]{%
9542 pdfmark=/ANN,%
9543 Subtype=/Link,%
9544 PDFAFlags=4,%
9545 AcroHighlight=\@pdfhighlight,%
9546 Border=\@pdfborder,%
9547 BorderStyle=\@pdfborderstyle,%
9548 linktype=file,%
9549 Color=\@filebordercolor,%
9550 Action={%
9551 <<%
9552 /S/GoToR%
9553 \Hy@SetNewWindow
9554 /F(\Hy@pstringF)%
9555 /D\ifx\#3\@pdfstartview\else(\Hy@pstringD)cvn\fi
9556 >>%
9557 }%
9558 }%
9559 \endgroup
9560 }
9561 \def\@hyper@launch run:#1\#2#3{%
9562 \begingroup
9563 \Hy@pstringdef\Hy@pstringF{#1}%
9564 \Hy@pstringdef\Hy@pstringP{#3}%
9565 \leavevmode
9566 \pdfmark[{#2}]{%
9567 pdfmark=/ANN,%
9568 Subtype=/Link,%
9569 PDFAFlags=4,%
9570 AcroHighlight=\@pdfhighlight,%
9571 Border=\@pdfborder,%
9572 BorderStyle=\@pdfborderstyle,%
9573 linktype=run,%
9574 Color=\@runbordercolor,%
9575 Action={%
9576 <<%

```

```

9577      /S/Launch%
9578      \Hy@SetNewWindow
9579      /F(\Hy@pstringF)%
9580      \ifx\#3\%
9581      \else
9582      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
9583      \fi
9584      >>%
9585      }%
9586      }%
9587      \endgroup
9588      }
9589      \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.

```

9590 <*dvips>
9591 \providecommand*\XR@ext>{pdf}
9592 \def\Hy@raisedlink{}
9593 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
9594 \def\headerps@out#1{\special{! #1}}%
9595 \input{pdfmark.def}%
9596 \ifx\@pdfproducer\relax
9597   \def\@pdfproducer{dvips + Distiller}%
9598 \fi
9599 \providecommand*\@pdfborder{0 0 1}
9600 \providecommand*\@pdfborderstyle{}
9601 \providecommand*\@pdfview{XYZ}
9602 \providecommand*\@pdfviewparams{ H.V}
9603 \def\Hy@BorderArrayPatch{BorderArrayPatch}
9604 \g@addto@macro\Hy@FirstPageHook{%
9605   \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.

```

9606 /DvipsToPDF{72.27 mul Resolution div} def%
9607 /PDFToDvips{72.27 div Resolution mul} def%
9608 /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.

```

9609    /BorderArrayPatch{%
9610      [exch{%
9611        dup dup type/integertype eq exch type/realtype eq or%
9612        {BPToDvips}if%
9613      }forall]%
9614    }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.

```

9615    /HyperBorder {1 PDFToDvips} def%
9616    /H.V {pdf@hoff pdf@voff null} def%
9617    /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

```

9618    /H.S {%
9619      currentpoint %
9620      HyperBorder add /pdf@lly exch def %
9621      dup DvipsToPDF 72 add /pdf@hoff exch def %
9622      HyperBorder sub /pdf@llx exch def%
9623    } 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`

```

9624    /H.L {%
9625      2 sub dup%
9626      /HyperBasePt exch def %
9627      PDFToDvips /HyperBaseDvips exch def %
9628      currentpoint %
9629      HyperBaseDvips sub /pdf@ury exch def%
9630      /pdf@urx exch def%
9631    } def%
9632    /H.A {%
9633      H.L %
9634      % |pdf@voff| = the distance from the top of the page to a point
9635      % |\baselineskip| above the current point in PDF coordinates
9636      currentpoint exch pop %
9637      vsize 72 sub exch DvipsToPDF %
9638      HyperBasePt sub % baseline skip
9639      sub /pdf@voff exch def%
9640    } def%
9641    /H.R {%
9642      currentpoint %
9643      HyperBorder sub /pdf@ury exch def %
9644      HyperBorder add /pdf@urx exch def %
9645      % |pdf@voff| = the distance from the top of the page to the current point, in
9646      % PDF coordinates
9647      currentpoint exch pop vsize 72 sub %
9648      exch DvipsToPDF sub /pdf@voff exch def%
9649    } def%

```

```

9650 }%
9651 }
9652 \AtBeginShipoutFirst{%
9653   \ifHy@setpagesize
9654     \begingroup
9655       \@ifundefined{stockwidth}{%
9656         \ifx\special@paper\@empty
9657           \special{papersize=\the\paperwidth,\the\paperheight}%
9658         \else
9659           \special{papersize=\special@paper}%
9660         \fi
9661       }{%
9662         \ifdim\stockwidth=\z@
9663           \else
9664             \special{papersize=\the\stockwidth,\the\stockheight}%
9665           \fi
9666       }%
9667     \endgroup
9668   \fi
9669   \Hy@DisableOption{setpagesize}%
9670 }
9671 \</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.

```

9672 \<vtexpdfmark>
9673 \providecommand*\XR@ext}{pdf}
9674 \def\Hy@raisedlink{}
9675 \def\literalps@out#1{\special{pS:#1}}%
9676 \def\headerps@out#1{\immediate\special{pS:#1}}%
9677 \input{pdfmark.def}%
9678 \ifx\@pdfproducer\relax
9679   \ifnum\OpMode=\@ne
9680     \def\@pdfproducer{VTeX}%
9681   \else
9682     \def\@pdfproducer{VTeX + Distiller}%
9683   \fi
9684 \fi
9685 \providecommand*\@pdfborder{0 0 1}
9686 \providecommand*\@pdfborderstyle{}
9687 \providecommand*\@pdfview{XYZ}
9688 \providecommand*\@pdfviewparams{ H.V}
9689 \g@addto@macro\Hy@FirstPageHook{%
9690   \headerps@out{%
9691     /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.

```

9692   /HyperBorder {1} def%
9693   /H.V {pdf@hoff pdf@voff null} def%
9694   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

9695    /H.S {%
9696        currentpoint %
9697        HyperBorder sub%
9698        /pdf@lly exch def %
9699        dup 72 add /pdf@hoff exch def %
9700        HyperBorder sub%
9701        /pdf@llx exch def%
9702    } def%

```

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

```

9703    /H.L {%
9704        2 sub%
9705        /HyperBasePt exch def %
9706        currentpoint %
9707        HyperBasePt add HyperBorder add%
9708        /pdf@ury exch def %
9709        HyperBorder add%
9710        /pdf@urx exch def%
9711    } def%
9712    /H.A {%
9713        H.L %
9714        currentpoint exch pop %
9715        vsize 72 sub exch %
9716        HyperBasePt add add%
9717        /pdf@voff exch def%
9718    } def%

```

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

```

9719    /H.R {%
9720        currentpoint %
9721        HyperBorder add%
9722        /pdf@ury exch def %
9723        HyperBorder add%
9724        /pdf@urx exch def %
9725        currentpoint exch pop vsize 72 sub add%
9726        /pdf@voff exch def%
9727    } def%
9728    }%
9729 }
9730 </vtxpdfmark>

```

46.11 Textures

```

9731 <*textures>
9732 \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.

```
9733 \begingroup
9734   \obeylines %
9735   \gdef\Hy@ps@CR{\noexpand
9736     }%
9737 \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`.

```
9738 \def\literalps@out#1{%
9739   \special{postscript 0 0 transform}%
9740   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
9741 }%
9742 %
```

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.

```
9743 \def\headerps@out#1{%
9744   \special{%
9745     prepostscript TeXdict begin\Hy@ps@CR
9746       #1\Hy@ps@CR
9747     end%
9748   }%
9749 }%
9750 %
```

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.

```
9751 \g@addto@macro\Hy@FirstPageHook{%
9752   \headerps@out{%
9753     /betterpdfmark {%
9754       systemdict begin %
9755         dup /BP eq%
9756         {cleartomark gsave nulldevice []}%
9757         {dup /EP eq%
9758           {cleartomark cleartomark grestore}%
9759           {cleartomark}}%
9760         ifelse%
9761       }ifelse %
9762     end%
9763   }def\Hy@ps@CR
9764   __pdfmark__ not{/pdfmark /betterpdfmark load def}if%
9765 }% end of \headerps@out
9766 }% end of \AtBeginShipoutFirst
9767 %
9768 \input{pdfmark.def}%
9769 %
9770 \ifx\@pdfproducer\relax
```

```

9771 \def\@pdfproducer{Textures + Distiller}%
9772 \fi
9773 \providecommand*\@pdfborder{0 0 1}
9774 \providecommand*\@pdfborderstyle{}
9775 \providecommand*\@pdfview{XYZ}
9776 \providecommand*\@pdfviewparams{ H.V}
9777 %

```

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 .

```

9778 \headerps@out{%

```

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

```

9779 /vsize {\Hy@pageheight} def%
9780 /DvipsToPDF {} def%
9781 /PDFToDvips {} def%
9782 /BPToDvips {} def%
9783 /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
9784 /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
9785 /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
9786 /H.S {%
9787     currentpoint %
9788     HyperBorder add /pdf@lly exch def %
9789     dup DvipsToPDF 72 add /pdf@hoff exch def %
9790     HyperBorder sub /pdf@llx exch def%
9791 } def\Hy@ps@CR
9792 /H.L {%
9793     2 sub %
9794     PDFToDvips /HyperBase exch def %
9795     currentpoint %
9796     HyperBase sub /pdf@ury exch def%
9797     /pdf@urx exch def%
9798 } def\Hy@ps@CR
9799 /H.A {%
9800     H.L %
9801     currentpoint exch pop %
9802     vsize 72 sub exch DvipsToPDF %
9803     HyperBase sub % baseline skip
9804     sub /pdf@voff exch def%
9805 } def\Hy@ps@CR
9806 /H.R {%
9807     currentpoint %
9808     HyperBorder sub /pdf@ury exch def %
9809     HyperBorder add /pdf@urx exch def %
9810     currentpoint exch pop vsize 72 sub %
9811     exch DvipsToPDF sub /pdf@voff exch def%
9812 } def\Hy@ps@CR
9813 }

9814 \AfterBeginDocument{%
9815     \ifHy@colorlinks
9816         \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
9817     \fi
9818 }

```

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.

```

9819 \expandafter\let\expandafter\keepPDF@SetupDoc
9820 \csname PDF@SetupDoc\endcsname
9821 \def\PDF@SetupDoc{%
9822   \ifx\@baseurl\@empty
9823   \else
9824     \special{html:<base href="\@baseurl">}%
9825   \fi
9826   \keepPDF@SetupDoc
9827 }
9828 \def\hyper@anchor#1{%
9829   \Hy@SaveLastskip
9830   \begingroup
9831     \let\protect=\string
9832     \special{html:<a name=%
9833       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9834   \endgroup
9835   \Hy@activeanchortrue
9836   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9837   \special{html:</a>}%
9838   \Hy@activeanchorfalse
9839   \Hy@RestoreLastskip
9840 }
9841 \def\hyper@anchorstart#1{%
9842   \Hy@SaveLastskip
9843   \begingroup
9844     \hyper@chars
9845     \special{html:<a name=%
9846       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9847   \endgroup
9848   \Hy@activeanchortrue
9849 }
9850 \def\hyper@anchorend{%
9851   \special{html:</a>}%
9852   \Hy@activeanchorfalse
9853   \Hy@RestoreLastskip
9854 }
9855 \def\@urltype{url}
9856 \def\hyper@linkstart#1#2{%
9857   \expandafter\Hy@colorlink\csname @#1color\endcsname
9858   \def\Hy@tempa{#1}%
9859   \ifx\Hy@tempa\@urltype
9860     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9861   \else
9862     \begingroup
9863       \hyper@chars
9864       \special{html:<a href=%
9865         \hyper@quote\#HyperDestNameFilter{#2}\hyper@quote>}%
9866     \endgroup
9867   \fi
9868 }
9869 \def\hyper@linkend{%
9870   \special{html:</a>}%
9871   \Hy@endcolorlink
9872 }
9873 \def\hyper@linkfile#1#2#3{%

```

```

9874 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9875 }
9876 \def\hyper@linkurl#1#2{%
9877   \leavevmode
9878   \ifHy@raiselinks
9879     \setbox\@tempboxa=\color@hbox #1\color@endbox
9880     \@linkdim\dp\@tempboxa
9881     \lower\@linkdim\hbox{%
9882       \hyper@chars
9883       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9884     }%
9885     \Hy@colorlink\@urlcolor#1%
9886     \@linkdim\ht\@tempboxa
9887     \advance\@linkdim by -6.5\p@
9888     \raise\@linkdim\hbox{\special{html:</a>}}%
9889     \Hy@endcolorlink
9890   \else
9891     \begingroup
9892     \hyper@chars
9893     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9894     \Hy@colorlink\@urlcolor#1%
9895     \special{html:</a>}%
9896     \Hy@endcolorlink
9897   \endgroup
9898   \fi
9899 }

```

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

```

9900 \def\hyper@link#1#2#3{%
9901   \hyper@linkurl{#3}{\#HyperDestNameFilter{#2}}%
9902 }
9903 \def\hyper@image#1#2{%
9904   \begingroup
9905     \hyper@chars
9906     \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9907   \endgroup
9908 }
9909 </textures>

```

46.12 dvipsone

```

9910 % \subsection{dvipsone driver}
9911 % Over-ride the default setup macro in pdfmark driver to use Y\&Y
9912 % |\special| commands.
9913 < *dvipsone>
9914 \providecommand*\XR@ext{pdf}
9915 \def\Hy@raisedlink{}
9916 \providecommand*\pdfborder{0 0 1}
9917 \providecommand*\pdfborderstyle{}
9918 \def\literalps@out#1{\special{ps:#1}}%
9919 \def\headerps@out#1{\special{headertext=#1}}%
9920 \input{pdfmark.def}%
9921 \ifx\@pdfproducer\relax
9922   \def\@pdfproducer{dvipsone + Distiller}%
9923 \fi
9924 \def\PDF@FinishDoc{%
9925   \Hy@UseMaketitleInfos
9926   \special{PDF: Keywords \@pdfkeywords}%

```

```

9927 \special{PDF: Title \@pdftitle}%
9928 \special{PDF: Creator \@pdfcreator}%
9929 \ifx\@pdfcreationdate\@empty
9930 \else
9931 \special{PDF: CreationDate \@pdfcreationdate}%
9932 \fi
9933 \ifx\@pdfmoddate\@empty
9934 \else
9935 \special{PDF: ModDate \@pdfmoddate}%
9936 \fi
9937 \special{PDF: Author \@pdfauthor}%
9938 \ifx\@pdfproducer\relax
9939 \else
9940 \special{PDF: Producer \@pdfproducer}%
9941 \fi
9942 \special{PDF: Subject \@pdfsubject}%
9943 \Hy@DisableOption{pdfauthor}%
9944 \Hy@DisableOption{pdftitle}%
9945 \Hy@DisableOption{pdfsubject}%
9946 \Hy@DisableOption{pdfcreator}%
9947 \Hy@DisableOption{pdfcreationdate}%
9948 \Hy@DisableOption{pdfmoddate}%
9949 \Hy@DisableOption{pdfproducer}%
9950 \Hy@DisableOption{pdfkeywords}%
9951 }
9952 \def\PDF@SetupDoc{%
9953 \def\Hy@temp{%
9954 \ifx\@pdfstartpage\@empty
9955 \else
9956 \ifx\@pdfstartview\@empty
9957 \else
9958 \edef\Hy@temp{%
9959 ,Page=\@pdfstartpage
9960 ,View=\@pdfstartview
9961 }%
9962 \fi
9963 \fi
9964 \edef\Hy@temp{%
9965 \noexpand\pdfmark{%
9966 pdfmark=/DOCVIEW,%
9967 PageMode=/\@pdfpagemode
9968 \Hy@temp
9969 }%
9970 }%
9971 \Hy@temp
9972 \ifx\@pdfpagescrop\@empty
9973 \else
9974 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9975 \fi
9976 \edef\Hy@temp{%
9977 \ifHy@toolbar\else /HideToolbar true\fi
9978 \ifHy@menubar\else /HideMenubar true\fi
9979 \ifHy@windowui\else /HideWindowUI true\fi
9980 \ifHy@fitwindow /FitWindow true\fi
9981 \ifHy@centerwindow /CenterWindow true\fi
9982 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9983 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode

```

```

9984 \Hy@UseNameKey{Direction}\@pdfdirection
9985 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9986 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9987 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9988 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9989 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9990 \Hy@UseNameKey{Duplex}\@pdfduplex
9991 \ifx\@pdfpicktraybypdfsize\@empty
9992 \else
9993 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9994 \fi
9995 \ifx\@pdfprintpagerange\@empty
9996 \else
9997 /PrintPageRange[\@pdfprintpagerange]%
9998 \fi
9999 \ifx\@pdfnumcopies\@empty
10000 \else
10001 /NumCopies \@pdfnumcopies
10002 \fi
10003 }%
10004 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10005 \pdfmark{%
10006 pdfmark=/PUT,%
10007 Raw={%
10008 \string{Catalog\string}<<%
10009 \ifx\Hy@temp\@empty
10010 \else
10011 /ViewerPreferences<<\Hy@temp>>%
10012 \fi
10013 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10014 \ifx\@pdflang\@empty
10015 \else
10016 /Lang(\@pdflang)%
10017 \fi
10018 \ifx\@baseurl\@empty
10019 \else
10020 /URI<</Base(\Hy@pstringB)>>%
10021 \fi
10022 >>%
10023 }%
10024 }%
10025 }
10026 \providecommand*\@pdfview{XYZ}
10027 \providecommand*\@pdfviewparams{ %
10028 gsave revscl currentpoint grestore %
10029 72 add exch pop null exch null%
10030 }
10031 \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 .

```

10032 \g@addto@macro\Hy@FirstPageHook{%
10033 \headerps@out{%

```

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

```

10034 /DvipsToPDF { 65781 div } def%
10035 /PDFToDvips { 65781 mul } def%
10036 /BPToDvips{65781 mul}def%
10037 /HyperBorder { 1 PDFToDvips } def%
10038 /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.

```

10039 /BorderArrayPatch{%
10040   [exch{%
10041     dup dup type/integertype eq exch type/realtype eq or%
10042     {BPToDvips}if%
10043   }forall]%
10044 }def%
10045 /H.S {%
10046   currentpoint %
10047   HyperBorder add /pdf@lly exch def %
10048   dup DvipsToPDF 72 add /pdf@hoff exch def %
10049   HyperBorder sub /pdf@llx exch def%
10050 } def%
10051 /H.L {%
10052   2 sub %
10053   PDFToDvips /HyperBase exch def %
10054   currentpoint %
10055   HyperBase sub /pdf@ury exch def%
10056   /pdf@urx exch def%
10057 } def%
10058 /H.A {%
10059   H.L %
10060   currentpoint exch pop %
10061   HyperBase sub % baseline skip
10062   DvipsToPDF /pdf@voff exch def%
10063 } def%
10064 /H.R {%
10065   currentpoint %
10066   HyperBorder sub /pdf@ury exch def %
10067   HyperBorder add /pdf@urx exch def %
10068   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
10069 } def%
10070 }%
10071 }
10072 </dvipsone>

```

46.13 TeX4ht

```

10073 <*tex4ht>
10074 \providecommand*{\XR@ext}{html}
10075 \def\Hy@raisedlink{}
10076 \@ifpackageloaded{tex4ht}{%
10077   \typeout{hyperref tex4ht: tex4ht already loaded}%
10078 }{%
10079   \RequirePackage[hx4ht]{tex4ht}%
10080 }
10081 \hyperlinkfileprefix{}
10082 \def\PDF@FinishDoc{}
10083 \def\PDF@SetupDoc{%
10084   \ifx\@baseurl\@empty

```



```

10085 \else
10086 \special{t4ht=<base href="\@baseurl">}%
10087 \fi
10088 }
10089 \def\hyper@anchor#1{%
10090 \Hy@SaveLastskip
10091 \begingroup
10092 \let\protect=\string
10093 \special{t4ht=<a name=%
10094 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10095 \endgroup
10096 \Hy@activeanchortrue
10097 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10098 \special{t4ht=</a>}%
10099 \Hy@activeanchorfalse
10100 \Hy@RestoreLastskip
10101 }
10102 \def\hyper@anchorstart#1{%
10103 \Hy@SaveLastskip
10104 \begingroup
10105 \hyper@chars\special{t4ht=<a name=%
10106 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
10107 \endgroup
10108 \Hy@activeanchortrue
10109 }
10110 \def\hyper@anchorend{%
10111 \special{t4ht=</a>}%
10112 \Hy@activeanchorfalse
10113 \Hy@RestoreLastskip
10114 }
10115 \def\@urltype{url}
10116 \def\hyper@linkstart#1#2{%
10117 \expandafter\Hy@colorlink\csname @#1color\endcsname
10118 \def\Hy@tempa{#1}%
10119 \ifx\Hy@tempa\@urltype
10120 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
10121 \else
10122 \begingroup
10123 \hyper@chars
10124 \special{t4ht=<a href=%
10125 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
10126 \endgroup
10127 \fi
10128 }
10129 \def\hyper@linkend{%
10130 \special{t4ht=</a>}%
10131 \Hy@endcolorlink
10132 }
10133 \def\hyper@linkfile#1#2#3{%
10134 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\else\##3\fi}%
10135 }
10136 \def\hyper@linkurl#1#2{%
10137 \leavevmode
10138 \ifHy@raiselinks
10139 \setbox\@tempboxa=\color@hbox #1\color@endbox
10140 \@linkdim\dp\@tempboxa
10141 \lower\@linkdim\hbox{%

```

```

10142     \begingroup
10143     \hyper@chars\special{t4ht=<a href=\hyper@quote#2\hyper@quote>}}%
10144     \endgroup
10145 }%
10146 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10147 \@linkdim\ht\@tempboxa
10148 \advance\@linkdim by -6.5\p@
10149 \raise\@linkdim\hbox{\special{t4ht=</a>}}%
10150 \else
10151   \begingroup
10152   \hyper@chars
10153   \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}}%
10154   \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10155   \special{t4ht=</a>}}%
10156   \endgroup
10157 \fi
10158 }

```

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

```

10159 \def\hyper@link#1#2#3{%
10160   \hyper@linkurl{#3}{\#\HyperDestNameFilter{#2}}}%
10161 }
10162 \def\hyper@image#1#2{%
10163   \begingroup
10164   \hyper@chars
10165   \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}}%
10166   \endgroup
10167 }
10168 \let\autoref\ref
10169 \ifx \rEfLiNK \UnDef
10170   \def\rEfLiNK #1#2{#2}%
10171 \fi
10172 \def\backref#1{}
10173 </tex4ht>
10174 <*tex4htcfg>
10175 \IfFileExists{\jobname.cfg}{\endinput}{}
10176 \Preamble{html}
10177   \begin{document}%
10178 \EndPreamble
10179 \def\TeX{TeX}
10180 \def\OMEGA{\Omega}
10181 \def\LaTeX{LaTeX}
10182 \def\LaTeXe{\LaTeX2e}
10183 \def\eTeX{e-TeX}
10184 \def\MF{Metafont}
10185 \def\MP{MetaPost}
10186 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```

10187 <*pdfmark>
10188 \long\def\@Form[#1]{%
10189 \g@addto@macro\Hy@FirstPageHook{%
10190   \headerps@out{%
10191 [%
10192   /_objdef{pdfDocEncoding}%

```

```

10193 /type/dict%
10194 /OBJ pdfmark%
10195 [%
10196 {pdfDocEncoding}%
10197 <<%
10198 /Type/Encoding%
10199 /Differences[%
10200 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
10201 /tilde %
10202 39/quotesingle %
10203 96/grave %
10204 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
10205 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
10206 /quotedblbase/quotedblleft/quotedblright/quoteleft%
10207 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron%
10208 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
10209 164/currency %
10210 166/brokenbar %
10211 168/dieresis/copyright/ordfeminine %
10212 172/logicalnot/.notdef/registered/macron/degree/plusminus%
10213 /twosuperior/threesuperior/acute/mu %
10214 183/periodcentered/cedilla/onesuperior/ordmasculine %
10215 188/onequarter/onehalf/threequarters %
10216 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
10217 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
10218 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
10219 /Ocircumflex/Otilde/Odieresis/multiply/Slash/Ugrave%
10220 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
10221 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
10222 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
10223 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
10224 /ocircumflex/otilde/odieresis/divide/oshlash/ugrave/uacute%
10225 /ucircumflex/udieresis/yacute/thorn/ydieresis%
10226 ]%
10227 >>%
10228 /PUT pdfmark%
10229 [%
10230 /_objdef{ZaDb}%
10231 /type/dict%
10232 /OBJ pdfmark%
10233 [%
10234 {ZaDb}%
10235 <<%
10236 /Type/Font%
10237 /Subtype/Type1%
10238 /Name/ZaDb%
10239 /BaseFont/ZapfDingbats%
10240 >>%
10241 /PUT pdfmark%
10242 [%
10243 /_objdef{Helv}%
10244 /type/dict%
10245 /OBJ pdfmark%
10246 [%
10247 {Helv}%
10248 <<%
10249 /Type/Font%

```

```

10250     /Subtype/Type1%
10251     /Name/Helv%
10252     /BaseFont/Helvetica%
10253     /Encoding{pdfDocEncoding}%
10254   >>%
10255 /PUT pdfmark%
10256 [%
10257   /_objdef{aform}%
10258   /type/dict%
10259 /OBJ pdfmark%
10260 [%
10261   /_objdef{afields}%
10262   /type/array%
10263 /OBJ pdfmark%
10264 {%
10265   [%
10266     /BBox[0 0 100 100]%
10267     /_objdef{Check}%
10268   /BP pdfmark %
10269   1 0 0 setrgbcolor%
10270   /ZapfDingbats 80 selectfont %
10271   20 20 moveto%
10272   (4)show%
10273   [/EP pdfmark%
10274   [%
10275     /BBox[0 0 100 100]%
10276     /_objdef{Cross}%
10277   /BP pdfmark %
10278   1 0 0 setrgbcolor%
10279   /ZapfDingbats 80 selectfont %
10280   20 20 moveto%
10281   (8)show%
10282   [/EP pdfmark%
10283   [%
10284     /BBox[0 0 250 100]%
10285     /_objdef{Submit}%
10286   /BP pdfmark %
10287   0.6 setgray %
10288   0 0 250 100 rectfill %
10289   1 setgray %
10290   2 2 moveto %
10291   2 98 lineto %
10292   248 98 lineto %
10293   246 96 lineto %
10294   4 96 lineto %
10295   4 4 lineto %
10296   fill %
10297   0.34 setgray %
10298   248 98 moveto %
10299   248 2 lineto %
10300   2 2 lineto %
10301   4 4 lineto %
10302   246 4 lineto %
10303   246 96 lineto %
10304   fill%
10305   /Helvetica 76 selectfont %
10306   0 setgray %

```

```

10307 8 22.5 moveto%
10308 (Submit)show%
10309 [/EP pdfmark%
10310 [%
10311 /BBox[0 0 250 100]%
10312 /_objdef{SubmitP}%
10313 /BP pdfmark %
10314 0.6 setgray %
10315 0 0 250 100 rectfill %
10316 0.34 setgray %
10317 2 2 moveto %
10318 2 98 lineto %
10319 248 98 lineto %
10320 246 96 lineto %
10321 4 96 lineto %
10322 4 4 lineto %
10323 fill %
10324 1 setgray %
10325 248 98 moveto %
10326 248 2 lineto %
10327 2 2 lineto %
10328 4 4 lineto %
10329 246 4 lineto %
10330 246 96 lineto %
10331 fill%
10332 /Helvetica 76 selectfont %
10333 0 setgray %
10334 10 20.5 moveto%
10335 (Submit)show%
10336 [/EP pdfmark%
10337 } ?pdfmark%
10338 [%
10339 {aform}%
10340 <<%
10341 /Fields{afields}%
10342 /DR<<%
10343 /Font<<%
10344 /ZaDb{ZaDb}%
10345 /Helv{Helv}%
10346 >>%
10347 >>%
10348 /DA(/Helv 10 Tf 0 g)%
10349 /CO{corder}%
10350 \ifHy@pdfa
10351 \else
10352 /NeedAppearances true%
10353 \fi
10354 >>%
10355 /PUT pdfmark%
10356 [%
10357 {Catalog}%
10358 <<%
10359 /AcroForm{aform}%
10360 >>%
10361 /PUT pdfmark%
10362 [%
10363 /_objdef{corder}%

```

```

10364 /type/array%
10365 /OBJ pdfmark% dps
10366 }}%
10367 \setkeys{Form}{#1}%
10368 }
10369 \def\@endForm{}
10370 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10371 \typeout{Sorry, pdfmark drivers do not support FORM gauges}%
10372 }
10373 \def\@TextField[#1]#2{% parameters, label
10374 \def\Fld@name{#2}%
10375 \def\Fld@default{}%
10376 \let\Fld@value\@empty
10377 \def\Fld@width{\DefaultWidthofText}%
10378 \def\Fld@height{%
10379 \ifFld@multiline
10380 \DefaultHeightofTextMultiline
10381 \else
10382 \DefaultHeightofText
10383 \fi
10384 }%
10385 \begingroup
10386 \Field@toks={ }%
10387 \expandafter\HyField@SetKeys\expandafter{%
10388 \DefaultOptionsofText,#1%
10389 }%
10390 \HyField@FlagsText
10391 \ifFld@hidden\def\Fld@width{1sp}\fi
10392 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10393 \LayoutTextField{#2}{%
10394 \Hy@escapeform\PDFForm@Text
10395 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
10396 pdfmark=/ANN,Raw={\PDFForm@Text}%
10397 }%
10398 }%
10399 \endgroup
10400 }
10401 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10402 \def\Fld@name{#2}%
10403 \let\Fld@default\relax
10404 \let\Fld@value\relax
10405 \def\Fld@width{\DefaultWidthofChoiceMenu}%
10406 \def\Fld@height{\DefaultHeightofChoiceMenu}%
10407 \begingroup
10408 \Fld@menulength=0 %
10409 \@tempdima\z@
10410 \@for\@curropt:=#3\do{%
10411 \expandafter\Fld@checkequals\@curropt==\\%
10412 \Hy@StepCount\Fld@menulength
10413 \settowidth{\@tempdimb}{\@currDisplay}%
10414 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
10415 }%
10416 \advance\@tempdima by 15\p@
10417 \Field@toks={ }%
10418 \begingroup
10419 \HyField@SetKeys{#1}%
10420 \edef\x{\endgroup

```

```

10421 \noexpand\expandafter
10422 \noexpand\HyField@SetKeys
10423 \noexpand\expandafter{%
10424 \expandafter\noexpand\csname DefaultOptionsof%
10425 \ifFld@radio
10426 Radio%
10427 \else
10428 \ifFld@combo
10429 \ifFld@popdown
10430 PopdownBox%
10431 \else
10432 ComboBox%
10433 \fi
10434 \else
10435 ListBox%
10436 \fi
10437 \fi
10438 \endcsname
10439 }%
10440 }\x
10441 \HyField@SetKeys{#1}%
10442 \ifFld@hidden\def\Fld@width{1sp}\fi
10443 \ifx\Fld@value\relax
10444 \let\Fld@value\Fld@default
10445 \fi
10446 \LayoutChoiceField{#2}{%
10447 \ifFld@radio
10448 \HyField@FlagsRadioButton
10449 \@@Radio{#3}%
10450 \else
10451 \beginngroup
10452 \HyField@FlagsChoice
10453 \ifdim\Fld@width<\@tempdima
10454 \ifdim\@tempdima<1cm\@tempdima1cm\fi
10455 \edef\Fld@width{\the\@tempdima}%
10456 \fi
10457 \ifFld@combo
10458 \else
10459 \@tempdima=\the\Fld@menulength\Fld@charsize
10460 \advance\@tempdima by \Fld@borderwidth bp %
10461 \advance\@tempdima by \Fld@borderwidth bp %
10462 \edef\Fld@height{\the\@tempdima}%
10463 \fi
10464 \@@ListBox{#3}%
10465 \endgroup
10466 \fi
10467 }%
10468 \endgroup
10469 }
10470 \def\@@Radio#1{%
10471 \Fld@listcount=0 %
10472 \@for\@curropt:=#1\do{%
10473 \expandafter\Fld@checkequals\@curropt==\%
10474 \Hy@StepCount\Fld@listcount
10475 \@currDisplay\space
10476 \Hy@escapeform\PDFForm@Radio
10477 \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%

```

```

10478 pdfmark=/ANN,%
10479 Raw={\PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>}%
10480 } % deliberate space between radio buttons
10481 }%
10482 }
10483 \newcount\Fld@listcount
10484 \def\@@ListBox#1{%
10485 \HyField@PDFChoices{#1}%
10486 \Hy@escapeform\PDFForm@List
10487 \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
10488 pdfmark=/ANN,Raw={\PDFForm@List}%
10489 }%
10490 }
10491 \def\@PushButton[#1]#2{% parameters, label
10492 \def\Fld@name{#2}%
10493 \beginngroup
10494 \Field@toks={ }%
10495 \expandafter\HyField@SetKeys\expandafter{%
10496 \DefaultOptionsofPushButton,#1%
10497 }%
10498 \ifHy@pdfa
10499 \PackageError{hyperref}{%
10500 PDF/A: Push button with JavaScript is prohibited%
10501 }{@ehc
10502 \LayoutPushButtonField{%
10503 \leavevmode
10504 \MakeButtonField{#2}%
10505 }%
10506 \else
10507 \HyField@FlagsPushButton
10508 \ifFld@hidden\def\Fld@width{1sp}\fi
10509 \LayoutPushButtonField{%
10510 \leavevmode
10511 \Hy@escapeform\PDFForm@Push
10512 \pdfmark[\MakeButtonField{#2}]{%
10513 pdfmark=/ANN,Raw={\PDFForm@Push}%
10514 }%
10515 }%
10516 \fi
10517 \endgroup
10518 }
10519 \def\@Submit[#1]#2{%
10520 \Field@toks={ }%
10521 \def\Fld@width{\DefaultWidthofSubmit}%
10522 \def\Fld@height{\DefaultHeightofSubmit}%
10523 \beginngroup
10524 \expandafter\HyField@SetKeys\expandafter{%
10525 \DefaultOptionsofSubmit,#1%
10526 }%
10527 \HyField@FlagsPushButton
10528 \HyField@FlagsSubmit
10529 \ifFld@hidden\def\Fld@width{1sp}\fi
10530 \Hy@escapeform\PDFForm@Submit
10531 \pdfmark[\MakeButtonField{#2}]{%
10532 pdfmark=/ANN,%
10533 Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
10534 }%

```



```

10535 \endgroup
10536 }
10537 \def\@Reset[#1]#2{%
10538   \Field@toks={ }%
10539   \def\Fld@width{\DefaultWidthofReset}%
10540   \def\Fld@height{\DefaultHeightofReset}%
10541   \begingroup
10542     \expandafter\HyField@SetKeys\expandafter{%
10543       \DefaultOptionsofReset,#1%
10544     }%
10545     \leavevmode
10546     \ifHy@pdfa
10547       \PackageError{hyperref}{%
10548         PDF/A: Reset action is prohibited%
10549       }\@ehc
10550       \MakeButtonField{#2}%
10551     \else
10552       \HyField@FlagsPushButton
10553       \ifFld@hidden\def\Fld@width{1sp}\fi
10554       \Hy@escapeform\PDFForm@Reset
10555       \pdfmark[\MakeButtonField{#2}]{%
10556         pdfmark=/ANN,Raw={\PDFForm@Reset}%
10557       }%
10558     \fi
10559   \endgroup
10560 }%
10561 \def\@CheckBox[#1]#2{% parameters, label
10562   \def\Fld@name{#2}%
10563   \def\Fld@default{0}%
10564   \begingroup
10565     \def\Fld@width{\DefaultWidthofCheckBox}%
10566     \def\Fld@height{\DefaultHeightofCheckBox}%
10567     \Field@toks={ }%
10568     \expandafter\HyField@SetKeys\expandafter{%
10569       \DefaultOptionsofCheckBox,#1%
10570     }%
10571     \HyField@FlagsCheckBox
10572     \ifFld@hidden\def\Fld@width{1sp}\fi
10573     \LayoutCheckField{#2}{%
10574       \Hy@escapeform\PDFForm@Check
10575       \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
10576         pdfmark=/ANN,Raw={\PDFForm@Check}%
10577       }%
10578     }%
10579   \endgroup
10580 }
10581 \pdfmark

```

47.2 HyperTeX

```

10582 \hypertex
10583 \def\@Form[#1]{\typeout{Sorry, HyperTeX does not support FORMs}}
10584 \def\@endForm{}
10585 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10586   \typeout{Sorry, HyperTeX does not support FORM gauges}%
10587 }
10588 \def\@TextField[#1]#2{% parameters, label
10589   \typeout{Sorry, HyperTeX does not support FORM text fields}%

```

```

10590 }
10591 \def\@CheckBox[#1]#2{% parameters, label
10592   \typeout{Sorry, HyperTeX does not support FORM checkboxes}%
10593 }
10594 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10595   \typeout{Sorry, HyperTeX does not support FORM choice menus}%
10596 }
10597 \def\@PushButton[#1]#2{% parameters, label
10598   \typeout{Sorry, HyperTeX does not support FORM pushbuttons}%
10599 }
10600 \def\@Reset[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10601 \def\@Submit[#1]#2{\typeout{Sorry, HyperTeX does not support FORMs}}
10602 \end{hypertext}

```

47.3 TeX4ht

```

10603 \def\@Form[#1]{%
10604   \setkeys{Form}{#1}%
10605   \HCode{<form action="\Form@action" method="\Form@method">}%
10606 }
10607 \def\@endForm{\HCode{</form>}}
10608 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10609   \typeout{Sorry, TeX4ht does not support gauges}%
10610 }
10611 \def\@TextField[#1]#2{% parameters, label
10612   \let\Hy@reserved@a\@empty
10613   \def\Fld@name{#2}%
10614   \def\Fld@default{}%
10615   \bgroup
10616     \Field@toks={ }%
10617     \setkeys{Field}{#1}%
10618     \HCode{<label for="\Fld@name">#2</label>}%
10619     \ifFld@password
10620       \@@PasswordField
10621     \else
10622       \@@TextField
10623     \fi
10624   \egroup
10625 }
10626 \def\@@PasswordField{%
10627   \HCode{%
10628     <input type="password" %
10629       id="\Fld@name" %
10630       name="\Fld@name" %
10631       \ifFld@hidden type="hidden" \fi
10632       value="\Fld@default" %
10633       \the\Fld@toks
10634     >%
10635   }%
10636 }
10637 \def\@@TextField{%
10638   \ifFld@multiline
10639     \HCode{<textarea %
10640       \ifFld@readonly readonly \fi
10641       id="\Fld@name" %
10642       name="\Fld@name" %
10643       \ifFld@hidden type="hidden" \fi

```

```

10645     \the\Field@toks>%
10646   }%
10647   \Fld@default
10648   \HCode{</textarea>}%
10649 \else
10650   \HCode{<input type="text" %
10651     \ifFld@readonly readonly \fi
10652     id="\Fld@name" %
10653     name="\Fld@name" %
10654     \ifFld@hidden type="hidden" \fi
10655     value="\Fld@default" %
10656     \the\Field@toks>%
10657   }%
10658 \fi
10659 }
10660 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10661   \def\Fld@name{#2}%
10662   \def\Fld@default{}%
10663   \let\Hy@reserved@a\relax
10664   \begingroup
10665     \expandafter\Fld@findlength#3\\%
10666     \Field@toks={ }%
10667     \setkeys{Field}{#1}%
10668     #2%
10669     \ifFld@radio
10670       \expandafter\@@Radio#3\\%
10671     \else
10672       \expandafter\@@Menu#3\\%
10673     \fi
10674   \endgroup
10675 }
10676 \def\Fld@findlength#1\\{%
10677   \Fld@menulength=0 %
10678   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
10679 }
10680 \def\@@Menu#1\\{%
10681   \HCode{<select size="\the\Fld@menulength" %
10682     name="\Fld@name" %
10683     \the\Field@toks>%
10684   }%
10685   \@for\@curropt:=#1\do{%
10686     \expandafter\Fld@checkequals\@curropt==\\%
10687     \HCode{<option %
10688       \ifx\@curropt\Fld@default selected \fi
10689       value="\@currValue">\@currDisplay</option>%
10690     }%
10691   }%
10692   \HCode{</select>}%
10693 }
10694 \def\@@Radio#1\\{%
10695   \@for\@curropt:=#1\do{%
10696     \expandafter\Fld@checkequals\@curropt==\\%
10697     \HCode{<input type="radio" %
10698       \ifx\@curropt\Fld@default checked \fi
10699       name="\Fld@name" %
10700       value="\@currValue" %
10701       \the\Field@toks>%

```

```

10702     }%
10703     \@currDisplay
10704 }%
10705 }
10706 \def\@PushButton[#1]#2{% parameters, label
10707   \def\Fld@name{#2}%
10708   \bgroup
10709     \Field@toks={ }%
10710     \setkeys{Field}{#1}%
10711     \HCode{<input type="button" %
10712       name="\Fld@name" %
10713       value="#2" %
10714       \the\Field@toks>%
10715     }%
10716     \HCode{</button>}%
10717   \egroup
10718 }
10719 \def\@Submit[#1]#2{%
10720   \HCode{<button type="submit">#2</button>}%
10721 }
10722 \def\@Reset[#1]#2{%
10723   \HCode{<button type="reset">#2</button>}%
10724 }
10725 \def\@CheckBox[#1]#2{% parameters, label
10726   \let\Hy@reserved@a\@empty
10727   \def\Fld@name{#2}%
10728   \def\Fld@default{0}%
10729   \bgroup
10730     \Field@toks={ }%
10731     \setkeys{Field}{#1}%
10732     \HCode{<input type="checkbox" %
10733       \ifFld@checked checked \fi
10734       \ifFld@disabled disabled \fi
10735       \ifFld@readonly readonly \fi
10736       name="\Fld@name" %
10737       \ifFld@hidden type="hidden" \fi
10738       value="\Fld@default" %
10739       \the\Field@toks>%
10740     #2%
10741   }%
10742   \egroup
10743 }
10744 </tex4ht>

```

47.4 pdfTeX

```

10745 <*pdfTeX>
10746 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
10747   \typeout{Sorry, pdfTeX does not support FORM gauges}%
10748 }
10749 \def\MakeFieldObject#1#2{\sbox0{#1}%
10750   \immediate\pdfxform0 %
10751   \expandafter\edef\csname #2Object\endcsname{%
10752     \the\pdflastxform\space 0 R%
10753   }%
10754   \hbox to Opt{\hskip-\maxdimen{\pdfrefxform \the\pdflastxform}}%
10755 }%
10756 \def\HyField@afields{}

```

```

10757 \begingroup\expandafter\expandafter\expandafter\endgroup
10758 \expandafter\ifx\csname pdflastlink\endcsname\relax
10759   \let\HyField@AddToFields\relax
10760   \PackageInfo{hyperref}{%
10761     You need pdfTeX 1.40.0 for setting the /Fields entry.\MessageBreak
10762     Adobe Reader/Acrobat accepts an empty /Field array,\MessageBreak
10763     but other PDF viewers might complain%
10764   }%
10765 \else
10766   \def\HyField@AddToFields{%
10767     \xdef\HyField@afields{%
10768       \ifx\HyField@afields\@empty
10769         \else
10770           \HyField@afields
10771           \space
10772         \fi
10773       \the\pdflastlink\space 0 R%
10774     }%
10775   }%
10776 \fi
10777 \def\@Form[#1]{%
10778   \ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
10779   \setkeys{Form}{#1}%
10780   \Hy@FormObjects
10781   \ifnum\pdfTeXversion>13 %
10782     \pdfrefobj\OBJ@pdfdocencoding
10783     \pdfrefobj\OBJ@ZaDb
10784     \pdfrefobj\OBJ@Helv
10785   \fi
10786   \AtEndDocument{%
10787     \immediate\pdfobj{%
10788       <<%
10789         /Fields[\HyField@afields]%
10790         /DR<<%
10791           /Font<<%
10792             /ZaDb \OBJ@ZaDb\space 0 R%
10793             /Helv \OBJ@Helv\space 0 R%
10794           >>%
10795         >>%
10796         /DA(/Helv 10 Tf 0 g)%
10797         \ifHy@pdfa
10798         \else
10799           /NeedAppearances true%
10800         \fi
10801       >>%
10802     }%
10803     \edef\OBJ@acroform{\the\pdflastobj}%
10804     \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
10805   }%
10806   \MakeFieldObject%

```

Same as \ding{123} of package pifont.

```

10807   \begingroup
10808     \fontfamily{pzd}%
10809     \fontencoding{U}%
10810     \fontseries{m}%
10811     \fontshape{n}%
10812     \selectfont

```

```

10813     \char123 %
10814     \endgroup
10815   }{Ding}%
10816   \MakeFieldObject{%
10817     \fbox{\textcolor{yellow}{\textsf{Submit}}}%
10818   }{Submit}%
10819   \MakeFieldObject{%
10820     \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
10821   }{SubmitP}%
10822 }
10823 \def\@endForm{}
10824 \def\@TextField[#1]#2{% parameters, label
10825   \def\Fld@name{#2}%
10826   \def\Fld@default{}%
10827   \let\Fld@value\@empty
10828   \def\Fld@width{\DefaultWidthofText}%
10829   \def\Fld@height{%
10830     \ifFld@multiline
10831       \DefaultHeightofTextMultiline
10832     \else
10833       \DefaultHeightofText
10834     \fi
10835   }%
10836   \begingroup
10837     \Field@toks={ }%
10838     \expandafter\HyField@SetKeys\expandafter{%
10839       \DefaultOptionsofText,#1%
10840     }%
10841     \PDFForm@Name
10842     \HyField@FlagsText
10843     \ifFld@hidden\def\Fld@width{1sp}\fi
10844     \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
10845     \LayoutTextField{#2}{%
10846       \Hy@escapeform\PDFForm@Text
10847       \pdfstartlink user {\PDFForm@Text}\relax
10848       \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
10849       \HyField@AddToFields
10850     }%
10851   \endgroup
10852 }
10853 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10854   \def\Fld@name{#2}%
10855   \let\Fld@default\relax
10856   \let\Fld@value\relax
10857   \def\Fld@width{\DefaultWidthofChoiceMenu}%
10858   \def\Fld@height{\DefaultHeightofChoiceMenu}%
10859   \begingroup
10860     \Fld@menulength=0 %
10861     \@tempdima\z@
10862     \@for\@curropt:=#3\do{%
10863       \expandafter\Fld@checkequals\@curropt==\%
10864       \Hy@StepCount\Fld@menulength
10865       \settowidth{\@tempdima}{\@currDisplay}%
10866       \ifdim\@tempdima>\@tempdima\@tempdima\@tempdima\fi
10867     }%
10868     \advance\@tempdima by 15\p@
10869     \Field@toks={ }%

```

```

10870 \beginngroup
10871 \HyField@SetKeys{#1}%
10872 \edef\x{\endgroup
10873 \noexpand\expandafter
10874 \noexpand\HyField@SetKeys
10875 \noexpand\expandafter{%
10876 \expandafter\noexpand\csname DefaultOptionsof%
10877 \ifFld@radio
10878 Radio%
10879 \else
10880 \ifFld@combo
10881 \ifFld@popdown
10882 PopdownBox%
10883 \else
10884 ComboBox%
10885 \fi
10886 \else
10887 ListBox%
10888 \fi
10889 \fi
10890 \endcsname
10891 }%
10892 }\x
10893 \HyField@SetKeys{#1}%
10894 \PDFForm@Name
10895 \ifFld@hidden\def\Fld@width{1sp}\fi
10896 \ifx\Fld@value\relax
10897 \let\Fld@value\Fld@default
10898 \fi
10899 \LayoutChoiceField{#2}{%
10900 \ifFld@radio
10901 \HyField@FlagsRadioButton
10902 \@@Radio{#3}%
10903 \else
10904 \beginngroup
10905 \HyField@FlagsChoice
10906 \ifdim\Fld@width<\@tempdima
10907 \ifdim\@tempdima<1cm\@tempdima1cm\fi
10908 \edef\Fld@width{\the\@tempdima}%
10909 \fi
10910 \ifFld@combo
10911 \else
10912 \@tempdima=\the\Fld@menulength\Fld@charsize
10913 \advance\@tempdima by \Fld@borderwidth bp %
10914 \advance\@tempdima by \Fld@borderwidth bp %
10915 \edef\Fld@height{\the\@tempdima}%
10916 \fi
10917 \@@Listbox{#3}%
10918 \endgroup
10919 \fi
10920 }%
10921 \endgroup
10922 }
10923 \def\@@Radio#1{%
10924 \Fld@listcount=0 %
10925 \@for\@curropt:=#1\do{%
10926 \expandafter\Fld@checkequals\@curropt==\%

```

```

10927 \Hy@StepCount\Fld@listcount
10928 \@currDisplay\space
10929 \leavevmode
10930 \Hy@escapeform\PDFForm@Radio
10931 \pdfstartlink user {%
10932 \PDFForm@Radio
10933 /AP<<%
10934 /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.

```

10935 \/\@currValue\space \DingObject
10936 >>%
10937 >>%
10938 }%
10939 \relax
10940 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
10941 \ifnum\Fld@listcount=1 %
10942 \HyField@AddToFields
10943 \fi
10944 \space % deliberate space between radio buttons
10945 }%
10946 }
10947 \newcount\Fld@listcount
10948 \def\@@ListBox#1{%
10949 \HyField@PDFChoices{#1}%
10950 \leavevmode
10951 \Hy@escapeform\PDFForm@List
10952 \pdfstartlink user {\PDFForm@List}\relax
10953 \MakeChoiceField{\Fld@width}{\Fld@height}%
10954 \pdfendlink
10955 \HyField@AddToFields
10956 }
10957 \def\@PushButton[#1]#2{% parameters, label
10958 \def\Fld@name{#2}%
10959 \begingroup
10960 \Field@toks={ }%
10961 \expandafter\HyField@SetKeys\expandafter{%
10962 \DefaultOptionsofPushButton,#1%
10963 }%
10964 \PDFForm@Name
10965 \ifHy@pdfa
10966 \PackageError{hyperref}{%
10967 PDF/A: Push button with JavaScript is prohibited%
10968 }\@ehc
10969 \LayoutPushButtonField{%
10970 \leavevmode
10971 \MakeButtonField{#2}%
10972 }%
10973 \else
10974 \HyField@FlagsPushButton
10975 \ifFld@hidden\def\Fld@width{1sp}\fi
10976 \LayoutPushButtonField{%
10977 \leavevmode
10978 \Hy@escapeform\PDFForm@Push
10979 \pdfstartlink user {\PDFForm@Push}\relax
10980 \MakeButtonField{#2}%

```



```

10981         \pdfendlink
10982         \HyField@AddToFields
10983     }%
10984     \fi
10985 \endgroup
10986 }
10987 \def\@Submit[#1]#2{%
10988     \Field@toks={ }%
10989     \def\Fld@width{\DefaultWidthofSubmit}%
10990     \def\Fld@height{\DefaultHeightofSubmit}%
10991     \begingroup
10992         \expandafter\HyField@SetKeys\expandafter{%
10993             \DefaultOptionsofSubmit,#1%
10994         }%
10995         \HyField@FlagsPushButton
10996         \HyField@FlagsSubmit
10997         \ifFld@hidden\def\Fld@width{1sp}\fi
10998         \leavevmode
10999         \Hy@escapeform\PDFForm@Submit
11000         \pdfstartlink user {%
11001             \PDFForm@Submit
11002             /AP<</N \SubmitObject/D \SubmitPObject>>%
11003         }%
11004         \relax
11005         \MakeButtonField{#2}%
11006         \pdfendlink
11007         \HyField@AddToFields
11008     \endgroup
11009 }
11010 \def\@Reset[#1]#2{%
11011     \Field@toks={ }%
11012     \def\Fld@width{\DefaultWidthofReset}%
11013     \def\Fld@height{\DefaultHeightofReset}%
11014     \begingroup
11015         \expandafter\HyField@SetKeys\expandafter{%
11016             \DefaultOptionsofReset,#1%
11017         }%
11018         \leavevmode
11019         \ifHy@pdfa
11020             \PackageError{hyperref}{%
11021                 PDF/A: Reset action is prohibited%
11022             }\@ehc
11023             \MakeButtonField{#2}%
11024         \else
11025             \HyField@FlagsPushButton
11026             \ifFld@hidden\def\Fld@width{1sp}\fi
11027             \Hy@escapeform\PDFForm@Reset
11028             \pdfstartlink user {\PDFForm@Reset}\relax
11029             \MakeButtonField{#2}%
11030             \pdfendlink
11031             \HyField@AddToFields
11032         \fi
11033     \endgroup
11034 }
11035 \def\@CheckBox[#1]#2{% parameters, label
11036     \def\Fld@name{#2}%
11037     \def\Fld@default{0}%

```

```

11038 \begingroup
11039   \def\Fld@width{\DefaultWidthofCheckBox}%
11040   \def\Fld@height{\DefaultHeightofCheckBox}%
11041   \Field@toks={ }%
11042   \expandafter\HyField@SetKeys\expandafter{%
11043     \DefaultOptionsofCheckBox,#1%
11044   }%
11045   \PDFForm@Name
11046   \HyField@FlagsCheckBox
11047   \ifFld@hidden\def\Fld@width{1sp}\fi
11048   \LayoutCheckField{#2}{%
11049     \Hy@escapeform\PDFForm@Check
11050     \pdfstartlink user {\PDFForm@Check}\relax
11051     \MakeCheckField{\Fld@width}{\Fld@height}%
11052     \pdfendlink
11053     \HyField@AddToFields
11054   }%
11055 \endgroup
11056 }
11057 \def\Hy@FormObjects{%
11058   \pdfobj {%
11059     <<%
11060       /Type/Encoding%
11061       /Differences[%
11062         24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
11063         /ring/tilde %
11064         39/quotesingle %
11065         96/grave %
11066         128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11067         /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11068         /quotedblbase/quotedblleft/quotedblright/quoteleft%
11069         /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
11070         /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11071         164/currency %
11072         166/brokenbar %
11073         168/dieresis/copyright/ordfeminine %
11074         172/logicalnot/.notdef/registered/macron/degree/plusminus%
11075         /twosuperior/threesuperior/acute/mu %
11076         183/periodcentered/cedilla/onesuperior/ordmasculine %
11077         188/onequarter/onehalf/threequarters %
11078         192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11079         /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11080         /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11081         /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11082         /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11083         /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11084         /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11085         /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11086         /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
11087         /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
11088       ]%
11089     >>%
11090   }%
11091   \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
11092   \pdfobj{%
11093     <<%
11094     /Type/Font%

```

```

11095      /Subtype/Type1%
11096      /Name/ZaDb%
11097      /BaseFont/ZapfDingbats%
11098    >>%
11099  }%
11100  \xdef\OBJ@ZaDb{\the\pdflastobj}%
11101  \pdfobj{%
11102    <<%
11103      /Type/Font%
11104      /Subtype/Type1%
11105      /Name/Helv%
11106      /BaseFont/Helvetica%
11107      /Encoding \OBJ@pdfdocencoding\space 0 R%
11108    >>%
11109  }%
11110  \xdef\OBJ@Helv{\the\pdflastobj}%
11111  \global\let\Hy@FormObjects\relax
11112 }
11113 \</pdfTeX>

```

47.5 dvipdfm

D. P. Story adapted the pdf_TE_X forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```

11114 \<*dvipdfm>

```

\@Gauge

```

11115 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
11116   \typeout{Sorry, dvipdfm does not support FORM gauges}%
11117 }

```

\@Form

```

11118 \def\@Form[#1]{%
11119   \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
11120   \setkeys{Form}{#1}%
11121   \Hy@FormObjects
11122   \@pdfm@mark{obj @afields []}%
11123   \@pdfm@mark{obj @corder []}%
11124   \@pdfm@mark{%
11125     obj @aform <<%
11126       /Fields @afields%
11127       /DR<<%
11128       /Font<<%
11129       /ZaDb @OBJZaDb%
11130       /Helv @OBJHelv%
11131     >>%
11132     >>%
11133     /DA(/Helv 10 Tf 0 g)%
11134     /CO @corder%
11135     \ifHy@pdfa
11136     \else
11137       /NeedAppearances true%
11138     \fi
11139   >>%
11140 }%
11141 \@pdfm@mark{put @catalog <</AcroForm @aform>>}%
11142 }

```

\@endForm

11143 \def \@endForm{}

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

11144 \def \dvipdfm@setdim{%
11145 height \the\ht\pdfm@box\space
11146 width \the\wd\pdfm@box\space
11147 depth \the\dp\pdfm@box\space
11148 }

\HyField@AnnotCount

11149 \newcount \HyField@AnnotCount
11150 \HyField@AnnotCount=\z@

\HyField@AdvanceAnnotCount

11151 \def \HyField@AdvanceAnnotCount{%
11152 \global\advance \HyField@AnnotCount\@ne
11153 }

\HyField@TheAnnotCount

11154 \def \HyField@TheAnnotCount{%
11155 \the \HyField@AnnotCount
11156 }

\@TextField

11157 \def \@TextField[#1]#2{% parameters, label
11158 \def \Fld@name{#2}%
11159 \def \Fld@default{}%
11160 \let \Fld@value \@empty
11161 \def \Fld@width{\DefaultWidthofText}%
11162 \def \Fld@height{%
11163 \if Fld@multiline
11164 \DefaultHeightofTextMultiline
11165 \else
11166 \DefaultHeightofText
11167 \fi
11168 }%
11169 \begingroup
11170 \Field@toks={ }%
11171 \expandafter \HyField@SetKeys \expandafter{%
11172 \DefaultOptionsofText,#1%
11173 }%
11174 \PDFForm@Name
11175 \HyField@FlagsText
11176 \if Fld@hidden \def \Fld@width{1sp} \fi
11177 \ifx \Fld@value \@empty \def \Fld@value{\Fld@default} \fi
11178 \setbox \pdfm@box=\hbox{%
11179 \MakeTextField{\Fld@width}{\Fld@height}%
11180 }%
11181 \HyField@AdvanceAnnotCount
11182 \LayoutTextField{#2}{%
11183 \Hy@escapeform \PDFForm@Text
11184 \@pdfm@mark{%
11185 ann @text \HyField@TheAnnotCount \space
11186 \dvipdfm@setdim << \PDFForm@Text >>%
11187 }%

```

11188 }%
11189 \unhbox\pdfm@box
11190 \@pdfm@mark{put \@fields \@text\HyField@TheAnnotCount}%
11191 % record in \@fields array
11192 \endgroup
11193 }

```

\@ChoiceMenu

```

11194 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
11195   \def\Fld@name{#2}%
11196   \let\Fld@default\relax
11197   \let\Fld@value\relax
11198   \def\Fld@width{\DefaultWidthofChoiceMenu}%
11199   \def\Fld@height{\DefaultHeightofChoiceMenu}%
11200   \begingroup
11201     \Fld@menulength=0 %
11202     \@tempdima\z@
11203     \@for\@curropt:=#3\do{%
11204       \expandafter\Fld@checkequals\@curropt==\%
11205       \Hy@StepCount\Fld@menulength
11206       \settowidth{\@tempdimb}{\@currDisplay}%
11207       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
11208     }%
11209     \advance\@tempdima by 15\p@
11210     \Field@toks={ }%
11211     \begingroup
11212       \HyField@SetKeys{#1}%
11213     \edef\x{\endgroup
11214       \noexpand\expandafter
11215       \noexpand\HyField@SetKeys
11216       \noexpand\expandafter{%
11217         \expandafter\noexpand\csname DefaultOptionsof%
11218           \ifFld@radio
11219             Radio%
11220           \else
11221             \ifFld@combo
11222               \ifFld@popdown
11223                 PopdownBox%
11224               \else
11225                 ComboBox%
11226               \fi
11227             \else
11228               ListBox%
11229             \fi
11230           \fi
11231         \endcsname
11232       }%
11233     }\x
11234     \HyField@SetKeys{#1}%
11235     \PDFForm@Name
11236     \ifFld@hidden\def\Fld@width{1sp}\fi
11237     \ifx\Fld@value\relax
11238       \let\Fld@value\Fld@default
11239     \fi
11240     \LayoutChoiceField{#2}{%
11241       \ifFld@radio
11242         \HyField@FlagsRadioButton

```

```

11243     \@@Radio{#3}%
11244   \else
11245     \beginingroup
11246       \HyField@FlagsChoice
11247       \ifdim\Fld@width<\@tempdima
11248         \ifdim\@tempdima<1cm\@tempdima1cm\fi
11249         \edef\Fld@width{\the\@tempdima}%
11250       \fi
11251       \ifFld@combo
11252       \else
11253         \@tempdima=\the\Fld@menulength\Fld@charsize
11254         \advance\@tempdima by \Fld@borderwidth bp %
11255         \advance\@tempdima by \Fld@borderwidth bp %
11256         \edef\Fld@height{\the\@tempdima}%
11257       \fi
11258       \@@Listbox{#3}%
11259     \endgroup
11260   \fi
11261 }%
11262 \endgroup
11263 }

```

\@@Radio

```

11264 \def\@@Radio#1{%
11265   \Fld@listcount=0 %
11266   \setbox\pdfm@box=\hbox{\MakeRadioField{\Fld@width}{\Fld@height}}%
11267   \@for\@curropt:=#1\do{%
11268     \expandafter\Fld@checkequals\@curropt==\%
11269     \Hy@StepCount\Fld@listcount
11270     \@currDisplay\space
11271     \leavevmode
11272     \Hy@escapeform\PDFForm@Radio
11273     \ifnum\Fld@listcount=1 %
11274       \HyField@AdvanceAnnotCount
11275     \fi
11276     \@pdfm@mark{%
11277       ann \ifnum\Fld@listcount=1 @radio\HyField@TheAnnotCount\space\fi
11278       \dvi pdfm@setdim
11279       <<%
11280         \PDFForm@Radio
11281         /AP<</N<</\@currValue /null>>>>%
11282       >>%
11283     }%
11284     \unhcopy\pdfm@box\space% deliberate space between radio buttons
11285     \ifnum\Fld@listcount=1 %
11286       \@pdfm@mark{put @afields @radio\HyField@TheAnnotCount}%
11287     \fi
11288   }%
11289 }

```

\Fld@listcount

```

11290 \newcount\Fld@listcount

```

\@@Listbox

```

11291 \def\@@Listbox#1{%
11292   \HyField@PDFChoices{#1}%
11293   \setbox\pdfm@box=\hbox{\MakeChoiceField{\Fld@width}{\Fld@height}}%

```

```

11294 \leavevmode
11295 \Hy@escapeform\PDFForm@List
11296 \HyField@AdvanceAnnotCount
11297 \@pdfm@mark{%
11298   ann @list\HyField@TheAnnotCount\space
11299   \dvipdfm@setdim
11300   <<\PDFForm@List>>%
11301 }%
11302 \unhbox\pdfm@box
11303 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
11304 }

```

\@PushButton

```

11305 \def\@PushButton[#1]#2{% parameters, label
11306   \def\Fld@name{#2}%
11307   \begingroup
11308     \Field@toks={ }%
11309     \expandafter\HyField@SetKeys\expandafter{%
11310       \DefaultOptionsofPushButton,#1%
11311     }%
11312     \PDFForm@Name
11313     \ifHy@pdfa
11314       \PackageError{hyperref}{%
11315         PDF/A: Push button with JavaScript is prohibited%
11316       }\@ehc
11317       \LayoutPushButtonField{%
11318         \leavevmode
11319         \MakeButtonField{#2}%
11320       }%
11321     \else
11322       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11323       \HyField@FlagsPushButton
11324       \ifFld@hidden\def\Fld@width{1sp}\fi
11325       \HyField@AdvanceAnnotCount
11326       \LayoutPushButtonField{%
11327         \leavevmode
11328         \Hy@escapeform\PDFForm@Push
11329         \@pdfm@mark{%
11330           ann @push\HyField@TheAnnotCount\space
11331           \dvipdfm@setdim
11332           <<\PDFForm@Push>>%
11333         }%
11334       }%
11335       \unhbox\pdfm@box
11336       \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
11337     \fi
11338   \endgroup
11339 }

```

\@Submit

```

11340 \def\@Submit[#1]#2{%
11341   \Field@toks={ }%
11342   \def\Fld@width{\DefaultWidthofSubmit}%
11343   \def\Fld@height{\DefaultHeightofSubmit}%
11344   \begingroup
11345     \expandafter\HyField@SetKeys\expandafter{%
11346       \DefaultOptionsofSubmit,#1%

```

```

11347 }%
11348 \HyField@FlagsPushButton
11349 \HyField@FlagsSubmit
11350 \ifFld@hidden\def\Fld@width{1sp}\fi
11351 \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11352 \leavevmode
11353 \Hy@escapeform\PDFForm@Submit
11354 \HyField@AdvanceAnnotCount
11355 \@pdfm@mark{%
11356   ann @submit\HyField@TheAnnotCount\space
11357   \dvi pdfm@setdim
11358   <<\PDFForm@Submit>>%
11359 }%
11360 \unhbox\pdfm@box%
11361 \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
11362 \endgroup
11363 }

```

\@Reset

```

11364 \def\@Reset[#1]#2{%
11365   \Field@toks={ }%
11366   \def\Fld@width{\DefaultWidthofReset}%
11367   \def\Fld@height{\DefaultHeightofReset}%
11368   \begingroup
11369     \expandafter\HyField@SetKeys\expandafter{%
11370       \DefaultOptionsofReset,#1%
11371     }%
11372     \leavevmode
11373     \ifHy@pdfa
11374       \PackageError{hyperref}{%
11375         PDF/A: Reset action is prohibited%
11376       }\@ehc
11377       \MakeButtonField{#2}%
11378     \else
11379       \HyField@FlagsPushButton
11380       \ifFld@hidden\def\Fld@width{1sp}\fi
11381       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
11382       \Hy@escapeform\PDFForm@Reset
11383       \HyField@AdvanceAnnotCount
11384       \@pdfm@mark{%
11385         ann @reset\HyField@TheAnnotCount\space
11386         \dvi pdfm@setdim
11387         <<\PDFForm@Reset>>%
11388       }%
11389       \unhbox\pdfm@box
11390       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
11391     \fi
11392   \endgroup
11393 }

```

\@CheckBox

```

11394 \def\@CheckBox[#1]#2{% parameters, label
11395   \def\Fld@name{#2}%
11396   \def\Fld@default{0}%
11397   \begingroup
11398     \def\Fld@width{\DefaultWidthofCheckBox}%
11399     \def\Fld@height{\DefaultHeightofCheckBox}%

```



```

11400 \Field@toks={ }%
11401 \expandafter\HyField@SetKeys\expandafter{%
11402 \DefaultOptionsofCheckBox,#1%
11403 }%
11404 \PDFForm@Name
11405 \HyField@FlagsCheckBox
11406 \ifFld@hidden\def\Fld@width{1sp}\fi
11407 \setbox\pdfm@box=\hbox{\MakeCheckField{\Fld@width}{\Fld@height}}%
11408 \HyField@AdvanceAnnotCount
11409 \LayoutCheckField{#2}{%
11410 \Hy@escapeform\PDFForm@Check
11411 \@pdfm@mark{%
11412 ann @check\HyField@TheAnnotCount\space
11413 \dvipdfm@setdim
11414 <<\PDFForm@Check>>%
11415 }%
11416 \unhbox\pdfm@box
11417 \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
11418 }%
11419 \endgroup
11420 }

11421 \def\Hy@FormObjects{%
11422 \@pdfm@mark{obj @OBJpdfdocencoding%
11423 <<%
11424 /Type/Encoding%
11425 /Differences[%
11426 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
11427 39/quotesingle %
11428 96/grave %
11429 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11430 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11431 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
11432 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
11433 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11434 164/currency %
11435 166/brokenbar %
11436 168/dieresis/copyright/ordfeminine %
11437 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11438 /twosuperior/threesuperior/acute/mu %
11439 183/periodcentered/cedilla/onesuperior/ordmasculine %
11440 188/onequarter/onehalf/threequarters %
11441 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11442 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
11443 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
11444 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
11445 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
11446 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
11447 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
11448 /eth/ntilde/ograde/oacute/ocircumflex/otilde/odieresis%
11449 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
11450 /thorn/ydieresis%
11451 ]%
11452 >>%
11453 }%
11454 \@pdfm@mark{obj @OBJZaDb%
11455 <<%
11456 /Type/Font%

```

```

11457      /Subtype/Type1%
11458      /Name/ZaDb%
11459      /BaseFont/ZapfDingbats%
11460    >>%
11461  }%
11462  \@pdfm@mark{obj @OBJHelv%
11463    <<%
11464      /Type/Font%
11465      /Subtype/Type1%
11466      /Name/Helv%
11467      /BaseFont/Helvetica%
11468      /Encoding @OBJpdfdocencoding%
11469    >>%
11470  }%
11471  \global\let\Hy@FormObjects\relax
11472 }
11473 </dvipdfm>

```

47.6 Common forms part

```

11474 <*pdfmform>

```

\Hy@escapestring

```

11475 \begingroup\expandafter\expandafter\expandafter\endgroup
11476 \expandafter\ifx\csname pdfescapestring\endcsname\relax
11477   \let\Hy@escapestring\@firstofone
11478   \def\Hy@escapeform#1{%
11479     \ifHy@escapeform
11480       \def\Hy@escapestring##1{%
11481         \noexpand\Hy@escapestring{\noexpand##1}%
11482       }%
11483       \edef\Hy@temp{#1}%
11484       \expandafter\Hy@@escapeform\Hy@temp\Hy@escapestring{ }\@nil
11485       \def\Hy@escapestring##1{%
11486         \@ifundefined{Hy@esc@\string##1}{%
11487           ##1%
11488           \ThisShouldNotHappen
11489         }{%
11490           \csname Hy@esc@\string##1\endcsname
11491         }%
11492       }%
11493     \else
11494       \let\Hy@escapestring\@firstofone
11495     \fi
11496   }%
11497   \def\Hy@@escapeform#1\Hy@escapestring#2#3\@nil{%
11498     \ifx\#3\%
11499     \else
11500       \expandafter\Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
11501       \Hy@ReturnAfterFi{%
11502         \Hy@@escapeform#3\@nil
11503       }%
11504     \fi
11505   }%
11506 \else
11507   \def\Hy@escapeform#1{%
11508     \ifHy@escapeform

```

```

11509     \let\Hy@escapestring\pdfescapestring
11510     \else
11511     \let\Hy@escapestring\@firstofone
11512     \fi
11513 }%
11514 \Hy@escapeform{}}%
11515 \fi

\PDFForm@Name

11516 \def\PDFForm@Name{%
11517   \begingroup
11518   \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
11519     \ifHy@unicode
11520       \Hy@unicodedefalse
11521     \fi
11522   \fi
11523   \pdfstringdef\Hy@gtemp\Fld@name
11524 \endgroup
11525 \let\Fld@name\Hy@gtemp
11526 }

\PDFForm@Check

11527 \def\PDFForm@Check{%
11528   /Subtype/Widget%
11529   \Fld@annotflags
11530   /T(\Fld@name)%
11531   /FT/Btn%
11532   \Fld@flags
11533   /Q \Fld@align
11534   /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
11535   /MK<<%
11536     \ifnum\Fld@rotation=\z@
11537     \else
11538       /R \Fld@rotation
11539     \fi
11540     \ifx\Fld@bordercolor\relax
11541     \else
11542       /BC[\Fld@bordercolor]%
11543     \fi
11544     \ifx\Fld@bcolor\relax
11545     \else
11546       /BG[\Fld@bcolor]%
11547     \fi
11548     /CA(\Hy@escapestring{\Fld@cbsymbol})%
11549   >>%
11550   /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11551     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11552   /H/P%
11553   \ifFld@checked /V/Yes\else /V/Off\fi
11554 }

\PDFForm@Push

11555 \ifHy@pdfa
11556 \else
11557   \def\PDFForm@Push{%
11558     /Subtype/Widget%
11559     \Fld@annotflags

```

```

11560 /T(\Fld@name)%
11561 /FT/Btn%
11562 \Fld@flags
11563 /H/P%
11564 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11565 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
11566 \ifx\Fld@bordercolor\relax\else 1\fi
11567 \space
11568 \else
11569 /MK<<%
11570 \ifnum\Fld@rotation=\z@
11571 \else
11572 /R \Fld@rotation
11573 \fi
11574 \ifx\Fld@bordercolor\relax
11575 \else
11576 /BC[\Fld@bordercolor]%
11577 \fi
11578 >>%
11579 \fi
11580 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
11581 }%
11582 \fi

```

\Fld@additionalactions

```

11583 \def\Fld@@additionalactions{%
K input (keystroke) format
11584 \ifx\Fld@keystroke@code\@empty
11585 \else
11586 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
11587 \fi
F display format
11588 \ifx\Fld@format@code\@empty
11589 \else
11590 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
11591 \fi
V validation
11592 \ifx\Fld@validate@code\@empty
11593 \else
11594 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
11595 \fi
C calculation
11596 \ifx\Fld@calculate@code\@empty
11597 \else
11598 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
11599 \fi
Fo receiving the input focus
11600 \ifx\Fld@onfocus@code\@empty
11601 \else
11602 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
11603 \fi
Bl loosing the input focus (blurred)
11604 \ifx\Fld@onblur@code\@empty
11605 \else

```

```

11606     /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
11607   \fi
D pressing the mouse button (down)
11608   \ifx\Fld@onmousedown@code\@empty
11609   \else
11610     /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
11611   \fi
U releasing the mouse button (up)
11612   \ifx\Fld@onmouseup@code\@empty
11613   \else
11614     /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
11615   \fi
E cursor enters the annotation's active area.
11616   \ifx\Fld@onenter@code\@empty
11617   \else
11618     /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
11619   \fi
X cursor exits the annotation's active area.
11620   \ifx\Fld@onexit@code\@empty
11621   \else
11622     /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
11623   \fi
11624 }
11625 \def\Fld@additionalactions{%
11626   \if-\Fld@@additionalactions-%
11627   \else
11628     \ifHy@pdfa
11629     \else
11630       /AA<<\Fld@@additionalactions>>%
11631     \fi
11632   \fi
11633 }

```

\PDFForm@List

```

11634 \def\PDFForm@List{%
11635   /Subtype/Widget%
11636   \Fld@annotflags
11637   /T(\Fld@name)%
11638   /FT/Ch%
11639   \Fld@flags
11640   /Q \Fld@align
11641   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11642   \ifcase0\ifnum\Fld@rotation=\z@   \else 1\fi
11643     \ifx\Fld@bordercolor\relax\else 1\fi
11644     \ifx\Fld@bcolor\relax   \else 1\fi
11645     \space
11646   \else
11647     /MK<<%
11648     \ifnum\Fld@rotation=\z@
11649     \else
11650       /R \Fld@rotation
11651     \fi
11652     \ifx\Fld@bordercolor\relax
11653     \else
11654       /BC[\Fld@bordercolor]%

```

```

11655     \fi
11656     \ifx\Fld@bcolor\relax
11657     \else
11658         /BG[\Fld@bcolor]%
11659     \fi
11660     >>%
11661 \fi
11662 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11663     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11664 \Fld@choices
11665 \Fld@additionalactions
11666 }

```

\PDFForm@Radio

```

11667 \def\PDFForm@Radio{%
11668 /Subtype/Widget%
11669 \Fld@annotflags
11670 /T(\Fld@name)%
11671 /FT/Btn%
11672 \Fld@flags
11673 /H/P%
11674 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11675 /MK<<%
11676     \ifnum\Fld@rotation=\z@
11677     \else
11678         /R \Fld@rotation
11679     \fi
11680     \ifx\Fld@bordercolor\relax
11681     \else
11682         /BC[\Fld@bordercolor]%
11683     \fi
11684     \ifx\Fld@bcolor\relax
11685     \else
11686         /BG[\Fld@bcolor]%
11687     \fi
11688     /CA(\Fld@radiosymbol)%
11689 >>%
11690 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
11691     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11692 \ifx\@currValue\Fld@default
11693     /V/\Fld@default
11694 \else
11695     /V/Off%
11696 \fi
11697 \Fld@additionalactions
11698 }

```

\PDFForm@Text

```

11699 \def\PDFForm@Text{%
11700 /Subtype/Widget%
11701 \Fld@annotflags
11702 /T(\Fld@name)%
11703 /FT/Tx%
11704 \Fld@flags
11705 /Q \Fld@align
11706 /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
11707 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi

```

```

11708         \ifx\Fld@bordercolor\relax\else 1\fi
11709         \ifx\Fld@bcolor\relax      \else 1\fi
11710         \space
11711     \else
11712         /MK<<%
11713         \ifnum\Fld@rotation=\z@
11714         \else
11715             /R \Fld@rotation
11716         \fi
11717         \ifx\Fld@bordercolor\relax
11718         \else
11719             /BC[\Fld@bordercolor]%
11720         \fi
11721         \ifx\Fld@bcolor\relax
11722         \else
11723             /BG[\Fld@bcolor]%
11724         \fi
11725         >>%
11726     \fi
11727     /DA(/Helv \strip@pt\Fld@charsize\space Tf%
11728         \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
11729     /DV(\Hy@escapestring{\Fld@default})%
11730     /V(\Hy@escapestring{\Fld@value})%
11731     \Fld@additionalactions
11732     \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
11733 }

```

\PDFForm@Submit

```

11734 \def\PDFForm@Submit{%
11735     /Subtype/Widget%
11736     \Fld@annotflags
11737     /T(\Fld@name)%
11738     /FT/Btn%
11739     \Fld@flags
11740     /H/P%
11741     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11742     \ifcase0\ifnum\Fld@rotation=\z@    \else 1\fi
11743         \ifx\Fld@bordercolor\relax\else 1\fi
11744         \space
11745     \else
11746         /MK<<%
11747         \ifnum\Fld@rotation=\z@
11748         \else
11749             /R \Fld@rotation
11750         \fi
11751         \ifx\Fld@bordercolor\relax
11752         \else
11753             /BC[\Fld@bordercolor]%
11754         \fi
11755         >>%
11756     \fi
11757     /A<<%
11758     /S/SubmitForm%
11759     /F<<%
11760     /FS/URL%
11761     /F(\Hy@escapestring{\Form@action})%
11762     >>%

```

```

11763     \Fld@submitflags
11764   >>%
11765 }

\PDFForm@Reset

11766 \ifHy@pdfa
11767 \else
11768   \def\PDFForm@Reset{%
11769     /Subtype/Widget%
11770     \Fld@annotflags
11771     /T(\Fld@name)%
11772     /FT/Btn%
11773     \Fld@flags
11774     /H/P%
11775     /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
11776     \ifcase0\ifnum\Fld@rotation=\z@   \else 1\fi
11777         \ifx\Fld@bordercolor\relax\else 1\fi
11778         \space
11779     \else
11780       /MK<<%
11781         \ifnum\Fld@rotation=\z@
11782         \else
11783           /R \Fld@rotation
11784         \fi
11785         \ifx\Fld@bordercolor\relax
11786         \else
11787           /BC[\Fld@bordercolor]%
11788         \fi
11789       /CA (Clear)
11790       /AC (Done)
11791       >>%
11792     \fi
11793     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
11794     /A<</S/ResetForm>>%
11795   }%
11796 \fi

11797 </pdfform>
11798 <*package>

```

48 Bookmarks in the PDF file

This was originally developed by Yannis Haralambous (it was the separate `repere.sty`); it needed the `repere` or `makebook.pl` post-processor to work properly. Now redundant, as it is done entirely in \LaTeX macros.

To write out the current section title, and its rationalized number, we have to intercept the `\@sect` command, which is rather dangerous. But how else to see the information we need? We do the *same* for `\@ssect`, giving anchors to unnumbered sections. This allows things like bibliographies to get bookmarks when used with a manual `\addcontentsline`

```

11799 \def\phantomsection{%
11800   \Hy@GlobalStepCount\Hy@linkcounter
11801   \xdef\@currentHref{section*.\the\Hy@linkcounter}%
11802   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
11803 }
11804 </package>

```


48.1 Bookmarks

11805 `<*outlines>`

This section was written by Heiko Oberdiek; the code replaces an earlier version by David Carlisle.

The first part of bookmark code is in section 6. Further documentation is available as paper and slides of the talk, that Heiko Oberdiek has given at the EuroTeX'99 meeting in Heidelberg. See `paper.pdf` and `slides.pdf` in the `doc` directory of `hyperref`.

When using the right-to-left typesetting based on ε -TeX, the order of the `\BOOKMARK` commands written to the `\@outlinefile` could appear wrong, because of mis-feature of ε -TeX's implementation (that it processes the shipped out lines left-to-right, instead of the order in which they appear in the document). The wrong order will appear when the file contains two bookmarks on the same line typeset right-to-left.

To work around this problem, the `bookmark@seq@number` counter is used to write the bookmark's sequential number into a comment in the `\@outlinefile`, which could be used to post-process it to achieve the proper ordering of `\BOOKMARK` commands in that file.

```
11806 \def\Hy@writebookmark#1#2#3#4#5{%
11807   % section number, text, label, level, file
11808   \ifx\WriteBookmarks\relax%
11809   \else
11810     \ifnum#4>\Hy@bookmarksdepth\relax
11811     \else
11812       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
11813     \fi
11814   \fi
11815 }
11816 \def\Hy@currentbookmarklevel{0}
11817 \def\Hy@numberline#1{#1 }
11818 \def\@@writetorep#1#2#3#4#5{%
11819   \begingroup
11820     \edef\Hy@tempa{#5}%
11821     \ifx\Hy@tempa\Hy@bookmarkstype
11822       \edef\Hy@level{#4}%
11823       \ifx\Hy@levelcheck Y%
11824         \@tempcnta\Hy@level\relax
11825         \advance\@tempcnta by -1 %
11826         \ifnum\Hy@currentbookmarklevel<\@tempcnta
11827           \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
11828           \advance\@tempcnta by 1 %
11829           \Hy@Warning{%
11830             Difference (\the\@tempcnta) between bookmark levels is %
11831             greater \MessageBreak than one, level fixed%
11832           }%
11833           \@tempcnta\Hy@currentbookmarklevel
11834           \advance\@tempcnta by 1 %
11835           \edef\Hy@level{\the\@tempcnta}%
11836         \fi
11837       \else
11838         \global\let\Hy@levelcheck Y%
11839       \fi
11840       \global\let\Hy@currentbookmarklevel\Hy@level
11841       \@tempcnta\Hy@level\relax
11842       \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
11843       \advance\@tempcnta by -1 %
11844       \edef\Hy@tempa{#3}%
```

```

11845 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
11846 \ifx\Hy@tempa\Hy@tempb
11847   \Hy@Warning{%
11848     The anchor of a bookmark and its parent's must not%
11849     \MessageBreak be the same. Added a new anchor%
11850   }%
11851   \phantomsection
11852 \fi
11853 \ifHy@bookmarksnumbered
11854   \let\numberline\Hy@numberline
11855   \let\partnumberline\Hy@numberline
11856   \let\chapternumberline\Hy@numberline
11857 \else
11858   \let\numberline\@gobble
11859   \let\partnumberline\@gobble
11860   \let\chapternumberline\@gobble
11861 \fi
11862 \pdfstringdef\Hy@tempa{#2}%
11863 \if@filesw
11864   \stepcounter{bookmark@seq@number}%
11865   \protected@write\@outlinefile{}{%
11866     \protect\BOOKMARK
11867       [\Hy@level] [\@bookmarkopenstatus{\Hy@level}] {#3}%
11868     {\Hy@tempa}{\Hy@tempb}%
11869     \@percentchar\space\thebookmark@seq@number
11870   }%
11871 \fi
11872 \fi
11873 \endgroup
11874 }
11875 \newcounter{bookmark@seq@number}

```

In the call of \BOOKMARK the braces around #4 are omitted, because it is not likely, that the level number contains].

```

11876 \newcommand{\currentpdfbookmark}{%
11877   \pdfbookmark[\Hy@currentbookmarklevel]%
11878 }
11879 \newcommand{\subpdfbookmark}{%
11880   \@tempcnta\Hy@currentbookmarklevel
11881   \Hy@StepCount\@tempcnta
11882   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
11883 }
11884 \newcommand{\belowpdfbookmark}[2]{%
11885   \@tempcnta\Hy@currentbookmarklevel
11886   \Hy@StepCount\@tempcnta
11887   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
11888   \advance\@tempcnta by -1 %
11889   \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
11890 }

```

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.

```

11891 \renewcommand\pdfbookmark[3][0]{%
11892   \Hy@writebookmark{}{#2}{#3.#1}{#1}{toc}%
11893   \hyper@anchorstart{#3.#1}\hyper@anchorend
11894 }
11895 \def\BOOKMARK{\@ifnextchar[{\@BOOKMARK}{\@@BOOKMARK[1][-]}}

```

```
11896 \def\@BOOKMARK[#1]{\@ifnextchar[{\@BOOKMARK[#1]}{\@BOOKMARK[#1] [-]}}
```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the texinfo_{pdf} macros.

48.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```
11897 \def\Hy@OutlineRerunCheck{%
11898   \begingroup
11899   \xdef\Hy@OutlineCheckSumBefore{%
11900     \@ifundefined{pdf@filemdfivesum}{-}{%
11901       \pdf@filemdfivesum{\jobname.out}%
11902     }%
11903     :%
11904     \@ifundefined{pdf@filesize}{-}{%
11905       \pdf@filesize{\jobname.out}%
11906     }%
11907   }%
11908   \endgroup
11909   \AtEndDocument{%
11910     \clearpage
11911     \if@files
11912       \immediate\write\@mainaux{%
11913         \string\csname\space Hy@OutlineCheckEnd\string\endcsname
11914       }%
11915     \fi
11916   }%
11917 }
11918 \AtBeginDocument{%
11919   \def\Hy@OutlineCheckEnd{%
11920     \begingroup
11921     \immediate\closeout\@outlinefile
11922     \edef\Hy@OutlineCheckSumAfter{%
11923       \@ifundefined{pdf@filemdfivesum}{-}{%
11924         \pdf@filemdfivesum{\jobname.out}%
11925       }%
11926       :%
11927       \@ifundefined{pdf@filesize}{-}{%
11928         \pdf@filesize{\jobname.out}%
11929       }%
11930     }%
11931     \ifx\Hy@OutlineCheckSumBefore\Hy@OutlineCheckSumAfter
11932     \else
11933       \Hy@WarningNoLine{%
11934         Rerun to get outlines right\MessageBreak
11935         or use package ‘bookmark’%
11936       }%
11937     \fi
11938   \endgroup
11939 }%
11940 }
```

48.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at

the contents of bookmarks, escaping \ and the like.

```
11941 \<vtex>
```

```
11942 \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.

```
11943 \begingroup
11944 \catcode'\'=12 %
11945 \ifnum\Hy@VTeXversion<650 %
11946 \catcode'\=12 %
11947 \gdef\hv@pdf@char#1#2#3{%
11948 \char
11949 \ifcase'#1#2#3 %
11950 "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
11951 \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%
11952 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
11953 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
11954 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
11955 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
11956 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
11957 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
11958 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
11959 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
11960 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
11961 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
11962 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
11963 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
11964 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
11965 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
11966 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
11967 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
11968 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
11969 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
11970 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
11971 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
11972 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
11973 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
11974 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
11975 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
11976 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
11977 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
11978 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
11979 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
11980 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
11981 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
11982 \fi
11983 }%
11984 \else
11985 \gdef\hv@pdf@char{\char'}%
11986 \fi
11987 \endgroup
```

\@@BOOKMARK

```
11988 \def\@@BOOKMARK[#1][#2]#3#4#5{%
11989 \expandafter\edef\csname @count@#3\endcsname{\the\@serial@counter}%
```

```

11990 \edef\@mycount{\the\@serial@counter}%
11991 \Hy@StepCount\@serial@counter
11992 \edef\@parcount{%
11993   \expandafter\ifx\csname @count@#5\endcsname\relax
11994     0%
11995   \else
11996     \csname @count@#5\endcsname
11997   \fi
11998 }%
11999 \immediate\special{%
12000   !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
12001   s=\ifx#2-c\else o\fi,t=#4%
12002 }%
12003 }%

```

\ReadBookmarks

```

12004 \def\ReadBookmarks{%
12005   \begingroup
12006   \def\O{\hv@pdf@char 0}%
12007   \def\1{\hv@pdf@char 1}%
12008   \def\2{\hv@pdf@char 2}%
12009   \def\3{\hv@pdf@char 3}%
12010   \def\({}%
12011   \def\)}%
12012   \def\do##1{%
12013     \ifnum\the\catcode'##1=\active
12014       \makeother##1%
12015     \fi
12016   }%
12017   \dospecials
12018   \InputIfFileExists{\jobname.out}{-}{-}%
12019 \endgroup
12020 \ifx\WriteBookmarks\relax
12021 \else
12022   \if@filesw
12023     \newwrite\@outlinefile
12024     \Hy@OutlineRerunCheck
12025     \immediate\openout\@outlinefile=\jobname.out\relax
12026     \ifHy@typexml
12027       \immediate\write\@outlinefile{<relaxxml>\relax}%
12028     \fi
12029   \fi
12030 \fi
12031 }

12032 </vtex>
12033 <!*vtex>
12034 \def\ReadBookmarks{%
12035   \begingroup
12036   \escapechar='\'%
12037   \let\escapechar\@gobble %
12038   \def\@@BOOKMARK[##1][##2]##3##4##5{\calc@bm@number{##5}}%
12039   \InputIfFileExists{\jobname.out}{-}{-}%
12040   \ifx\WriteBookmarks\relax
12041     \global\let\WriteBookmarks\relax
12042   \fi
12043   \def\@@BOOKMARK[##1][##2]##3##4##5{%

```

```

12044     \def\Hy@temp{##4}%
12045 \< *pdftex>
12046     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12047     \Hy@OutlineName{}\Hy@pstringName{%
12048         ##2\check@bm@number{##3}%
12049     }{%
12050         \expandafter\strip@prefix\meaning\Hy@temp
12051     }%
12052 \< /pdftex>
12053 \< *pdfmark>
12054     \pdfmark{%
12055         pdfmark=/OUT,%
12056         Count={##2\check@bm@number{##3}},%
12057         Dest={##3},%
12058         Title=\expandafter\strip@prefix\meaning\Hy@temp
12059     }%
12060 \< /pdfmark>
12061 \< *dvipdfm>
12062     \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
12063     \@pdfm@mark{%
12064         outline \ifHy@DvipdfmxOutlineOpen
12065             [%
12066             \ifnum##21>\z@
12067             \else
12068             -%
12069             \fi
12070             ] %
12071             \fi
12072             ##1<<%
12073             /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
12074             /A<<%
12075             /S/GoTo%
12076             /D(\Hy@pstringName)%
12077             >>%
12078             >>%
12079         }%
12080 \< /dvipdfm>
12081     }%
12082     {%
12083         \def\WriteBookmarks{0}%
12084         \InputIfFileExists{\jobname.out}{-}{-}%
12085     }%
12086     {%\escapechar\m@ne\InputIfFileExists{\jobname.out}{-}{-}}%
12087     \ifx\WriteBookmarks\relax
12088     \else
12089         \if@filesw
12090             \newwrite\@outlinefile
12091             \Hy@OutlineRerunCheck
12092             \immediate\openout\@outlinefile=\jobname.out\relax
12093             \ifHy@typexml
12094                 \immediate\write\@outlinefile{<relaxxml>\relax}%
12095             \fi
12096             \fi
12097         \fi
12098     \endgroup
12099 }
12100 \< *pdftex>

```

```

12101 \def\Hy@OutlineName#1#2#3#4{%
12102   \pdfoutline goto name{#2}count#3{#4}%
12103 }
12104 </pdfTex>
12105 \def\check@bm@number#1{%
12106   \expandafter\ifx\csname B_#1\endcsname\relax
12107     0%
12108   \else
12109     \csname B_#1\endcsname
12110   \fi
12111 }
12112 \def\calc@bm@number#1{%
12113   \@tempcnta=\check@bm@number{#1}\relax
12114   \advance\@tempcnta by 1 %
12115   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
12116 }
12117 </!vtex>

12118 \ifHy@implicit
12119 \else
12120   \expandafter\endinput
12121 \fi

12122 </outlines>
12123 <*outlines | hypertex>

12124 \let\H@old@ssect\@ssect
12125 \def\@ssect#1#2#3#4#5{%
12126   \H@old@ssect{#1}{#2}{#3}{#4}{#5}%
12127   \phantomsection
12128 }
12129 \let\H@old@schapter\@schapter
12130 \def\@schapter#1{%
12131   \H@old@schapter{#1}%
12132   \begingroup
12133     \let\mkboth\@gobbletwo
12134     \Hy@GlobalStepCount\Hy@linkcounter
12135     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12136     \Hy@raisedlink{%
12137       \hyper@anchorstart{\@currentHref}\hyper@anchorend
12138     }%
12139   \endgroup
12140 }

```

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:

```

12141 \@ifundefined{@chapter}{}{%
12142   \let\Hy@org@chapter\@chapter
12143   \def\@chapter{%
12144     \def\Hy@next{%
12145       \Hy@GlobalStepCount\Hy@linkcounter
12146       \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12147       \Hy@raisedlink{%
12148         \hyper@anchorstart{\@currentHref}\hyper@anchorend
12149       }%
12150     }%
12151     \ifnum\c@secnumdepth>\m@ne
12152       \@ifundefined{if@mainmatter}%

```

```

12153     \iftrue{\csname if@mainmatter\endcsname}%
12154     \let\Hy@next\relax
12155     \fi
12156   \fi
12157   \Hy@next
12158   \Hy@org@chapter
12159 }%
12160 }

12161 \let\H@old@part\@part
12162 \begingroup\expandafter\expandafter\expandafter\endgroup
12163 \expandafter\ifx\csname chapter\endcsname\relax
12164   \let\Hy@secnum@part\z@
12165 \else
12166   \let\Hy@secnum@part\m@ne
12167 \fi
12168 \def\@part{%
12169   \ifnum\Hy@secnum@part>\c@secnumdepth
12170     \phantomsection
12171   \fi
12172   \H@old@part
12173 }

12174 \let\H@old@spart\@spart
12175 \def\@spart#1{%
12176   \H@old@spart{#1}%
12177   \Hy@GlobalStepCount\Hy@linkcounter
12178   \xdef\@currentHref{part*.\the\Hy@linkcounter}%
12179   \Hy@raisedlink{%
12180     \hyper@anchorstart{\@currentHref}\hyper@anchorend
12181   }%
12182 }

12183 \let\H@old@sect\@sect
12184 \def\@sect#1#2#3#4#5#6[#7]#8{%
12185   \ifnum #2>\c@secnumdepth
12186     \Hy@GlobalStepCount\Hy@linkcounter
12187     \xdef\@currentHref{section*.\the\Hy@linkcounter}%
12188   \fi
12189   \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}[#7]{#8}%
12190   \ifnum #2>\c@secnumdepth
12191     \Hy@raisedlink{%
12192       \hyper@anchorstart{\@currentHref}\hyper@anchorend
12193     }%
12194   \fi
12195 }

12196 </outlines | hypertext>
12197 <*outlines>

12198 \expandafter\def\csname Parent-4\endcsname{}
12199 \expandafter\def\csname Parent-3\endcsname{}
12200 \expandafter\def\csname Parent-2\endcsname{}
12201 \expandafter\def\csname Parent-1\endcsname{}
12202 \expandafter\def\csname Parent0\endcsname{}
12203 \expandafter\def\csname Parent1\endcsname{}
12204 \expandafter\def\csname Parent2\endcsname{}
12205 \expandafter\def\csname Parent3\endcsname{}
12206 \expandafter\def\csname Parent4\endcsname{}

12207 </outlines>

```


49 Compatibility with koma-script classes

12208 \langle *outlines | hypertex \rangle

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.

```
12209 \def\Hy@tempa{%
12210   \def\@addchap[##1]##2{%
12211     \typeout{##2}%
12212     \if@twoside
12213       \mkboth{##1}{}%
12214     \else
12215       \mkboth{}{##1}%
12216     \fi
12217     \addtocontents{lof}{\protect\addvspace{10\p@}}%
12218     \addtocontents{lot}{\protect\addvspace{10\p@}}%
12219     \Hy@GlobalStepCount\Hy@linkcounter
12220     \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
12221     \Hy@raisedlink{%
12222       \hyper@anchorstart{\@currentHref}\hyper@anchorend
12223     }%
12224     \if@twocolumn
12225       \topnewpage[\@makeschapterhead{##2}]%
12226     \else
12227       \@makeschapterhead{##2}%
12228       \@afterheading
12229     \fi
12230     \addcontentsline{toc}{chapter}{##1}%
12231   }%
12232 }
12233 \@ifclassloaded{scrbook}{%
12234   \@ifclasslater{scrbook}{2001/01/01}{%
12235     \let\Hy@tempa\@empty
12236   }{}%
12237 }{%
12238   \@ifclassloaded{scrreprt}{%
12239     \@ifclasslater{scrreprt}{2001/01/01}{%
12240       \let\Hy@tempa\@empty
12241     }{}%
12242   }{%
12243     \let\Hy@tempa\@empty
12244   }%
12245 }%
12246 \Hy@tempa
12247  $\rangle$ outlines | hypertex $\rangle$ 
```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek oberdiek@ruf.uni-freiburg.de

50.1 PD1 encoding

```
12248  $\langle$ *pdlenc $\rangle$ 
12249 \DeclareFontEncoding{PD1}{}{}
```

Accents

```
12250 \DeclareTextAccent{\'}{PD1}{\textasciigrave}
```

```

12251 \DeclareTextAccent{'}{PD1}{\textacute}
12252 \DeclareTextAccent{^}{PD1}{\textasciicircum}
12253 \DeclareTextAccent{~}{PD1}{\texttilde}
12254 \DeclareTextAccent{"}{PD1}{\textasciidieresis}
12255 \DeclareTextAccent{r}{PD1}{\textring}
12256 \DeclareTextAccent{v}{PD1}{\textasciicaron}
12257 \DeclareTextAccent{.}{PD1}{\textdotaccent}
12258 \DeclareTextAccent{c}{PD1}{\textcedilla}
12259 \DeclareTextAccent{=}{PD1}{\textasciimacron}
12260 \DeclareTextAccent{b}{PD1}{\textmacronbelow}
12261 \DeclareTextAccent{d}{PD1}{\textdotbelow}
12262 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textasciigrave}
12263 \DeclareTextCompositeCommand{'}{PD1}{\@empty}{\textacute}
12264 \DeclareTextCompositeCommand{^}{PD1}{\@empty}{\textasciicircum}
12265 \DeclareTextCompositeCommand{~}{PD1}{\@empty}{\texttilde}
12266 \DeclareTextCompositeCommand{"}{PD1}{\@empty}{\textasciidieresis}
12267 \DeclareTextCompositeCommand{r}{PD1}{\@empty}{\textring}
12268 \DeclareTextCompositeCommand{v}{PD1}{\@empty}{\textasciicaron}
12269 \DeclareTextCompositeCommand{.}{PD1}{\@empty}{\textdotaccent}
12270 \DeclareTextCompositeCommand{c}{PD1}{\@empty}{\textcedilla}
12271 \DeclareTextCompositeCommand{=}{PD1}{\@empty}{\textasciimacron}
12272 \DeclareTextCompositeCommand{b}{PD1}{\@empty}{\textmacronbelow}
12273 \DeclareTextCompositeCommand{d}{PD1}{\@empty}{\textdotbelow}
12274 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textasciigrave}
12275 \DeclareTextCompositeCommand{'}{PD1}{\ }{\textacute}
12276 \DeclareTextCompositeCommand{^}{PD1}{\ }{\textasciicircum}
12277 \DeclareTextCompositeCommand{~}{PD1}{\ }{\texttilde}
12278 \DeclareTextCompositeCommand{"}{PD1}{\ }{\textasciidieresis}
12279 \DeclareTextCompositeCommand{r}{PD1}{\ }{\textring}
12280 \DeclareTextCompositeCommand{v}{PD1}{\ }{\textasciicaron}
12281 \DeclareTextCompositeCommand{.}{PD1}{\ }{\textdotaccent}
12282 \DeclareTextCompositeCommand{c}{PD1}{\ }{\textcedilla}
12283 \DeclareTextCompositeCommand{=}{PD1}{\ }{\textasciimacron}
12284 \DeclareTextCompositeCommand{b}{PD1}{\ }{\textmacronbelow}
12285 \DeclareTextCompositeCommand{d}{PD1}{\ }{\textdotbelow}
12286 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
12287 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
12288 \DeclareTextCommand{\newtie}{PD1}[1]{\TextSymbolUnavailable{\newtie{#1}}#1}

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Special white space escape characters not for use in bookmarks but for other PDF strings.

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12289 % U+0009 (CHARACTER TABULATION)
12290 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
12291 % U+000A (LINE FEED)
12292 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
12293 % U+000D (CARRIAGE RETURN)
12294 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

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Accent glyph names

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12295 % U+02D8 BREVE; breve
12296 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
12297 % U+02C7 CARON; caron
12298 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
12299 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
12300 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
12301 % U+02D9 DOT ABOVE; dotaccent
12302 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
12303 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
12304 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
12305 % U+02DB OGONEK; ogonek

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12306 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
12307 % U+02DA RING ABOVE; ring
12308 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
12309 % U+02DC SMALL TILDE; ilde, *tilde
12310 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC
\040: U+0020 SPACE; *space, spacehackarabic
\041: U+0021 EXCLAMATION MARK; exclam
12311 % U+0022 QUOTATION MARK; quotedbl
12312 \DeclareTextCommand{\textquotedbl}{PD1}{\string"%} \042 U+0022
12313 % U+0023 NUMBER SIGN; numbersign
12314 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
12315 % U+0024 DOLLAR SIGN; dollar
12316 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
12317 % U+0025 PERCENT SIGN; percent
12318 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
12319 % U+0026 AMPERSAND; ampersand
12320 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026
\047: U+0027 APOSTROPHE; quotesingle

12321 % U+0028 LEFT PARENTHESIS; parenleft
12322 \DeclareTextCommand{\textparenleft}{PD1}{\string\(%} \050 U+0028
12323 % U+0029 RIGHT PARENTHESIS; parenright
12324 \DeclareTextCommand{\textparenright}{PD1}{\string\)%} \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
12325 % U+002E FULL STOP; period
12326 \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
12327 % U+003C LESS-THAN SIGN; less
12328 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C
\075: U+003D EQUALS SIGN; equal
12329 % U+003E GREATER-THAN SIGN; greater
12330 \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
12331 % U+005C REVERSE SOLIDUS; backslash
12332 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C
\135: U+005D RIGHT SQUARE BRACKET; bracketright
12333 % U+005E CIRCUMFLEX ACCENT; asciicircum
12334 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
12335 % U+005F LOW LINE; underscore
12336 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F

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12337 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
12338 % U+0060 GRAVE ACCENT; grave
12339 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060
\141: U+0061 LATIN SMALL LETTER A; a
...
\150: U+0068 LATIN SMALL LETTER H; h
12340 % U+0069 LATIN SMALL LETTER I; i
12341 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069
\152: U+006A LATIN SMALL LETTER J; j
...
\172: U+007A LATIN SMALL LETTER Z; z
12342 % U+007B LEFT CURLY BRACKET; braceleft
12343 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
12344 % U+007C VERTICAL LINE; *bar, verticalbar
12345 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
12346 % U+007D RIGHT CURLY BRACKET; braceright
12347 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
12348 % U+007E TILDE; asciitilde
12349 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
12350 % U+2022 BULLET; bullet
12351 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
12352 % U+2020 DAGGER; dagger
12353 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
12354 % U+2021 DOUBLE DAGGER; daggerdbl
12355 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
12356 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
12357 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
12358 % U+2014 EM DASH; emdash
12359 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
12360 % U+2013 EN DASH; endash
12361 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
12362 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
12363 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
12364 % U+2044 FRACTION SLASH; fraction
12365 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
12366 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
12367 \DeclareTextCommand{\guilsinglleft}{PD1}{\210}% U+2039
12368 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
12369 \DeclareTextCommand{\guilsinglright}{PD1}{\211}% U+203A
12370 % U+2212 MINUS SIGN; minus
12371 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
12372 % U+2030 PER MILLE SIGN; perthousand
12373 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
12374 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
12375 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
12376 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
12377 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
12378 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
12379 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
12380 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
12381 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
12382 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
12383 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
12384 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
12385 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A

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12386 % U+2122 TRADE MARK SIGN; trademark
12387 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
12388 % U+FB01 LATIN SMALL LIGATURE FI; fi
12389 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
12390 % U+FB02 LATIN SMALL LIGATURE FL; fl
12391 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
12392 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
12393 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
12394 % U+0152 LATIN CAPITAL LIGATURE OE; OE
12395 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
12396 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
12397 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
12398 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
12399 \DeclareTextCompositeCommand{\"}{PD1}{Y}{\230}% U+0178
12400 \DeclareTextCommand{\IJ}{PD1}{\230}
12401 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
12402 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
12403 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
12404 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
12405 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
12406 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
12407 % U+0153 LATIN SMALL LIGATURE OE; oe
12408 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
12409 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
12410 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
12411 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
12412 \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.
12413 % U+20AC EURO SIGN; *Euro, euro
12414 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
12415 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
12416 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
12417 % U+00A2 CENT SIGN; cent
12418 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
12419 % U+00A3 POUND SIGN; sterling
12420 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
12421 % U+00A4 CURRENCY SIGN; currency
12422 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
12423 % U+00A5 YEN SIGN; yen
12424 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
12425 % U+00A6 BROKEN BAR; brokenbar
12426 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
12427 % U+00A7 SECTION SIGN; section
12428 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
12429 % U+00A8 DIAERESIS; dieresis
12430 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
12431 % U+00A9 COPYRIGHT SIGN; copyright
12432 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
12433 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
12434 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
12435 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
12436 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
12437 % U+00AC NOT SIGN; logicalnot
12438 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
12439 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not

No glyph \255 in PDFDocEncoding.

12440 % U+00AE REGISTERED SIGN; registered
 12441 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 12442 % U+00AF MACRON; *macron, overscore
 12443 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 12444 % U+00B0 DEGREE SIGN; degree
 12445 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 12446 % U+00B1 PLUS-MINUS SIGN; plusminus
 12447 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 12448 % U+00B2 SUPERSCRIP T TWO; twosuperior
 12449 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 12450 % U+00B3 SUPERSCRIP T THREE; threesuperior
 12451 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 12452 % U+00B4 ACUTE ACCENT; acute
 12453 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4
 12454 % U+00B5 MICRO SIGN; mu, mu1
 12455 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 12456 % U+00B6 PILCROW SIGN; paragraph
 12457 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 12458 % U+00B7 MIDDLE DOT; middot, *periodcentered
 12459 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 12460 % U+00B8 CEDILLA; cedilla
 12461 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 12462 % U+00B9 SUPERSCRIP T ONE; onesuperior
 12463 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
 12464 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 12465 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 12466 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
 12467 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 12468 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 12469 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 12470 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 12471 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 12472 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 12473 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 12474 % U+00BF INVERTED QUESTION MARK; questiondown
 12475 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 12476 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 12477 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 12478 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 12479 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 12480 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 12481 \DeclareTextCompositeCommand{\^}{PD1}{A}{\302}% U+00C2
 12482 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 12483 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
 12484 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 12485 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
 12486 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 12487 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
 12488 % U+00C6 LATIN CAPITAL LETTER AE; AE
 12489 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
 12490 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 12491 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
 12492 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 12493 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
 12494 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 12495 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
 12496 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex

12497 \DeclareTextCompositeCommand{\`}{PD1}{E}{\312}% U+00CA
12498 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12499 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
12500 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12501 \DeclareTextCompositeCommand{\'}{PD1}{I}{\314}% U+00CC
12502 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12503 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
12504 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12505 \DeclareTextCompositeCommand{\^}{PD1}{I}{\316}% U+00CE
12506 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12507 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
12508 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12509 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0
12510 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
12511 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12512 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
12513 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12514 \DeclareTextCompositeCommand{\'}{PD1}{O}{\322}% U+00D2
12515 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12516 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
12517 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12518 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
12519 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12520 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
12521 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12522 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
12523 % U+00D7 MULTIPLICATION SIGN; multiply
12524 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
12525 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12526 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
12527 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12528 \DeclareTextCompositeCommand{\'}{PD1}{U}{\331}% U+00D9
12529 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12530 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
12531 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12532 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
12533 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12534 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
12535 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12536 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
12537 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12538 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
12539 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12540 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
12541 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12542 \DeclareTextCompositeCommand{\'}{PD1}{a}{\340}% U+00E0
12543 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12544 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
12545 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12546 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
12547 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12548 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
12549 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12550 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
12551 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12552 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
12553 % U+00E6 LATIN SMALL LETTER AE; ae

12554 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
12555 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12556 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
12557 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12558 \DeclareTextCompositeCommand{\'}{PD1}{e}{\350}% U+00E8
12559 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12560 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
12561 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12562 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
12563 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12564 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
12565 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12566 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
12567 \DeclareTextCompositeCommand{\'}{PD1}{i}{\354}% U+00EC
12568 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12569 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
12570 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
12571 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12572 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12573 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
12574 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12575 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12576 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
12577 % U+00F0 LATIN SMALL LETTER ETH; eth
12578 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
12579 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12580 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
12581 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12582 \DeclareTextCompositeCommand{\'}{PD1}{o}{\362}% U+00F2
12583 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12584 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
12585 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12586 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
12587 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
12588 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
12589 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
12590 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
12591 % U+00F7 DIVISION SIGN; divide
12592 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
12593 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
12594 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
12595 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
12596 \DeclareTextCompositeCommand{\'}{PD1}{u}{\371}% U+00F9
12597 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
12598 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
12599 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
12600 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
12601 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
12602 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
12603 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
12604 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
12605 % U+00FE LATIN SMALL LETTER THORN; thorn
12606 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
12607 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
12608 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
12609 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.


```

12610 \DeclareTextCommand{\SS}{PD1}{SS}
12611 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}
Aliases (german.sty)
12612 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
12613 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
12614 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
12615 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
12616 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
12617 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
12618 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
12619 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}
Aliases (math names)
12620 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
12621 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
12622 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
12623 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
12624 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
12625 \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;
12626 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
12627 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
12628 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
12629 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
12630 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
12631 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
12632 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
12633 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
12634 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
12635 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
12636 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
12637 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
12638 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
12639 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
12640 </pd1enc>

```

50.2 PU encoding

```

12641 <*puenc>
12642 \DeclareFontEncoding{PU}{-}{-}

```

50.2.1 NFSS2 accents

```

12643 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
12644 \DeclareTextCommand{\'}{PU}[1]{\#1\83\000}% U+0300
12645 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
12646 \DeclareTextCommand{\'}{PU}[1]{\#1\83\001}% U+0301
12647 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
12648 \DeclareTextCommand{\^}{PU}[1]{\#1\83\002}% U+0302
12649 % U+0303 COMBINING TILDE; tildecmb, *tildecomb
12650 \DeclareTextCommand{\~}{PU}[1]{\#1\83\003}% U+0303
12651 % U+0304 COMBINING MACRON; macroncmb
12652 \DeclareTextCommand{\=}{PU}[1]{\#1\83\004}% U+0304
12653 % U+0306 COMBINING BREVE; brevecmb
12654 \DeclareTextCommand{\u}{PU}[1]{\#1\83\006}% U+0306
12655 \DeclareTextCommand{\U}{PU}[1]{\#1\83\006}% U+0306
12656 % U+0307 COMBINING DOT ABOVE; dotaccentcmb

```

```

12657 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
12658 % U+0308 COMBINING DIAERESIS; dieresiscmb
12659 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
12660 % U+030A COMBINING RING ABOVE; ringcmb
12661 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
12662 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
12663 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
12664 % U+030C COMBINING CARON; caroncmb
12665 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
12666 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravescmb
12667 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
12668 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F
12669 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
12670 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
12671 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
12672 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
12673 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
12674 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
12675 % U+0327 COMBINING CEDILLA; cedillacmb
12676 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
12677 % U+0328 COMBINING OGONEK; ogonekcmb
12678 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
12679 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
12680 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
12681 % U+20DD COMBINING ENCLOSING CIRCLE
12682 \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.

```

12683 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}
12684 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
12685 \DeclareTextCompositeCommand{\^}{PU}{\@empty}{\textasciicircum}
12686 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\texttilde}
12687 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
12688 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
12689 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
12690 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
12691 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
12692 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
12693 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
12694 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
12695 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
12696 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
12697 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
12698 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
12699 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
12700 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
12701 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}
12702 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}
12703 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
12704 \DeclareTextCompositeCommand{\^}{PU}{\ }{\textasciicircum}
12705 \DeclareTextCompositeCommand{\~}{PU}{\ }{\texttilde}
12706 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
12707 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
12708 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
12709 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
12710 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
12711 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}

```

```

12712 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
12713 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
12714 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
12715 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
12716 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
12717 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
12718 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
12719 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
12720 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

12721 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}
12722 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
12723 \DeclareTextCommand{\capitalgrave}{PU}[1]{\`{#1}}
12724 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
12725 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
12726 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
12727 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\#{#1}}
12728 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
12729 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
12730 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
12731 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
12732 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
12733 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
12734 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
12735 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

12736 % U+0009 (CHARACTER TABULATION)
12737 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
12738 % U+000A (LINE FEED)
12739 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
12740 % U+000D (CARRIAGE RETURN)
12741 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

12742 % U+0022 QUOTATION MARK; quotedbl
12743 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
12744 % U+0023 NUMBER SIGN; numbersign
12745 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
12746 % U+0024 DOLLAR SIGN; dollar
12747 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
12748 % U+0025 PERCENT SIGN; percent
12749 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
12750 % U+0026 AMPERSAND; ampersand
12751 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
12752 % U+0027 APOSTROPHE; quotesingle
12753 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
12754 % U+0028 LEFT PARENTHESIS; parenleft
12755 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
12756 % U+0029 RIGHT PARENTHESIS; parenright
12757 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
12758 % U+002A ASTERISK; asterisk
12759 \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
 12760 % U+003C LESS-THAN SIGN; less
 12761 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C
 \80\075: U+003D EQUALS SIGN; equal
 12762 % U+003E GREATER-THAN SIGN; greater
 12763 \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
 12764 % U+005C REVERSE SOLIDUS; backslash
 12765 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 12766 % U+005E CIRCUMFLEX ACCENT; asciicircum
 12767 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 12768 % U+005F LOW LINE; underscore
 12769 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 12770 % U+0060 GRAVE ACCENT; grave
 12771 \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
 12772 % U+0069 LATIN SMALL LETTER I; i
 12773 \DeclareTextCompositeCommand{\.}{PU}{\i}{i} % \80\151 U+0069
 12774 \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
 12775 % U+007B LEFT CURLY BRACKET; braceleft
 12776 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 12777 % U+007C VERTICAL LINE; *bar, verticalbar
 12778 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 12779 % U+007D RIGHT CURLY BRACKET; braceright
 12780 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 12781 % U+007E TILDE; asciitilde
 12782 \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
 12783 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 12784 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 12785 % U+00A2 CENT SIGN; cent

12786 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 12787 % U+00A3 POUND SIGN; sterling
 12788 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 12789 % U+00A4 CURRENCY SIGN; currency
 12790 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 12791 % U+00A5 YEN SIGN; yen
 12792 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 12793 % U+00A6 BROKEN BAR; brokenbar
 12794 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 12795 % U+00A7 SECTION SIGN; section
 12796 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 12797 % U+00A8 DIAERESIS; dieresis
 12798 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
 12799 % U+00A9 COPYRIGHT SIGN; copyright
 12800 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
 12801 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 12802 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
 12803 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotleft
 12804 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
 12805 % U+00AC NOT SIGN; logicalnot
 12806 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
 12807 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
 \80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
 12808 % U+00AE REGISTERED SIGN; registered
 12809 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
 12810 % U+00AF MACRON; *macron, overscore
 12811 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
 12812 % U+00B0 DEGREE SIGN; degree
 12813 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
 12814 % U+00B1 PLUS-MINUS SIGN; plusminus
 12815 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
 12816 % U+00B2 SUPERSCRIPT TWO; twosuperior
 12817 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
 12818 % U+00B3 SUPERSCRIPT THREE; threesuperior
 12819 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
 12820 % U+00B4 ACUTE ACCENT; acute
 12821 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
 12822 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
 12823 % U+00B5 MICRO SIGN; mu, mu1
 12824 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
 12825 % U+00B6 PILCROW SIGN; paragraph
 12826 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
 12827 % U+00B7 MIDDLE DOT; middot, *periodcentered
 12828 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
 12829 % U+00B8 CEDILLA; cedilla
 12830 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
 12831 % U+00B9 SUPERSCRIPT ONE; onesuperior
 12832 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
 12833 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 12834 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
 12835 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guillemotright
 12836 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
 12837 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 12838 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
 12839 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 12840 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
 12841 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters

12842 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
12843 % U+00BF INVERTED QUESTION MARK; questiondown
12844 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
12845 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
12846 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
12847 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
12848 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
12849 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
12850 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
12851 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
12852 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
12853 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
12854 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
12855 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
12856 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
12857 % U+00C6 LATIN CAPITAL LETTER AE; AE
12858 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
12859 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
12860 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
12861 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
12862 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
12863 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
12864 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
12865 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
12866 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
12867 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
12868 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
12869 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
12870 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
12871 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
12872 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
12873 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
12874 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
12875 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
12876 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
12877 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
12878 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
12879 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
12880 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
12881 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
12882 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
12883 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
12884 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
12885 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
12886 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
12887 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
12888 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
12889 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
12890 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
12891 % U+00D7 MULTIPLICATION SIGN; multiply
12892 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
12893 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
12894 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
12895 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
12896 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
12897 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
12898 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA

12899 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
12900 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
12901 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
12902 \DeclareTextCompositeCommand{\\"}{PU}{U}{\80\334}% U+00DC
12903 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
12904 \DeclareTextCompositeCommand{\' }{PU}{Y}{\80\335}% U+00DD
12905 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
12906 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
12907 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
12908 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF
12909 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
12910 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
12911 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
12912 \DeclareTextCompositeCommand{\' }{PU}{a}{\80\341}% U+00E1
12913 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
12914 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
12915 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
12916 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
12917 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
12918 \DeclareTextCompositeCommand{\\"}{PU}{a}{\80\344}% U+00E4
12919 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
12920 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
12921 % U+00E6 LATIN SMALL LETTER AE; ae
12922 \DeclareTextCommand{\ae}{PU}{\80\346}% U+00E6
12923 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
12924 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
12925 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
12926 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
12927 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
12928 \DeclareTextCompositeCommand{\' }{PU}{e}{\80\351}% U+00E9
12929 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
12930 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
12931 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
12932 \DeclareTextCompositeCommand{\\"}{PU}{e}{\80\353}% U+00EB
12933 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
12934 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
12935 \DeclareTextCompositeCommand{\' }{PU}{i}{\80\354}% U+00EC
12936 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
12937 \DeclareTextCompositeCommand{\' }{PU}{i}{\80\355}% U+00ED
12938 \DeclareTextCompositeCommand{\' }{PU}{i}{\80\355}% U+00ED
12939 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
12940 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12941 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
12942 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
12943 \DeclareTextCompositeCommand{\\"}{PU}{i}{\80\357}% U+00EF
12944 \DeclareTextCompositeCommand{\\"}{PU}{i}{\80\357}% U+00EF
12945 % U+00F0 LATIN SMALL LETTER ETH; eth
12946 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
12947 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
12948 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
12949 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
12950 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
12951 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
12952 \DeclareTextCompositeCommand{\' }{PU}{o}{\80\363}% U+00F3
12953 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
12954 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
12955 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde

12956 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
 12957 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
 12958 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
 12959 % U+00F7 DIVISION SIGN; divide
 12960 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
 12961 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
 12962 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
 12963 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
 12964 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}% U+00F9
 12965 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
 12966 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 12967 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 12968 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 12969 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 12970 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 12971 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 12972 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 12973 % U+00FE LATIN SMALL LETTER THORN; thorn
 12974 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 12975 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 12976 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

12977 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 12978 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 12979 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 12980 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 12981 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 12982 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 12983 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 12984 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 12985 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 12986 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 12987 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 12988 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 12989 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 12990 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 12991 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 12992 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 12993 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 12994 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 12995 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 12996 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 12997 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
 12998 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 12999 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 13000 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 13001 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 13002 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 13003 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 13004 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 13005 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 13006 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 13007 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 13008 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
 13009 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash

13010 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
13011 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
13012 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
13013 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
13014 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
13015 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
13016 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
13017 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
13018 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
13019 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve
13020 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
13021 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
13022 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
13023 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
13024 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
13025 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
13026 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
13027 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
13028 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
13029 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
13030 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
13031 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
13032 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
13033 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
13034 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
13035 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
13036 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
13037 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
13038 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
13039 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
13040 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
13041 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
13042 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
13043 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
13044 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
13045 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaaccent
13046 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
13047 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
13048 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
13049 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
13050 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
13051 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
13052 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
13053 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
13054 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
13055 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
13056 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
13057 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
13058 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
13059 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
13060 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
13061 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
13062 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
13063 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
13064 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
13065 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
13066 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B

13067 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
 13068 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
 13069 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
 13070 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 13071 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
 13072 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
 13073 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
 13074 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
 13075 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 13076 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 13077 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
 13078 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
 13079 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 13080 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
 13081 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
 13082 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
 13083 % U+0133 LATIN SMALL LIGATURE IJ; ij
 13084 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 13085 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 13086 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 13087 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 13088 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 13089 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 13090 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaaccent
 13091 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 13092 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 13093 \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`.

13094 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 13095 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 13096 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 13097 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 13098 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 13099 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 13100 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaaccent
 13101 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 13102 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 13103 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 13104 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 13105 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 13106 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 13107 \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`.

13108 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 13109 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 13110 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 13111 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 13112 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 13113 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 13114 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 13115 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 13116 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 13117 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143

13118 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
13119 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
13120 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaaccent
13121 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
13122 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
13123 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146
13124 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
13125 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
13126 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
13127 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
13128 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napostrophe, quoterightn
13129 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
13130 % U+014A LATIN CAPITAL LETTER ENG; Eng
13131 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
13132 % U+014B LATIN SMALL LETTER ENG; eng
13133 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
13134 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
13135 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
13136 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
13137 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
13138 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
13139 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
13140 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
13141 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
13142 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odblacute, Ohungarumlaut
13143 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
13144 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohungarumlaut
13145 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
13146 % U+0152 LATIN CAPITAL LIGATURE OE; OE
13147 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
13148 % U+0153 LATIN SMALL LIGATURE OE; oe
13149 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
13150 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
13151 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
13152 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
13153 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
13154 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaaccent
13155 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
13156 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
13157 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
13158 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
13159 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
13160 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
13161 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
13162 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
13163 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
13164 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
13165 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
13166 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
13167 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
13168 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
13169 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
13170 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
13171 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
13172 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
13173 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
13174 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron

13175 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
13176 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
13177 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
13178 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
13179 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
13180 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
13181 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
13182 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
13183 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
13184 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
13185 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
13186 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
13187 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
13188 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
13189 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
13190 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
13191 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
13192 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
13193 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
13194 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
13195 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
13196 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
13197 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
13198 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
13199 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
13200 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
13201 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
13202 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
13203 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
13204 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
13205 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
13206 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
13207 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
13208 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
13209 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
13210 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
13211 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
13212 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
13213 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
13214 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
13215 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
13216 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
13217 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
13218 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
13219 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
13220 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
13221 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
13222 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
13223 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
13224 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
13225 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
13226 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
13227 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
13228 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
13229 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
13230 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent
13231 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C

13232 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 13233 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 13234 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 13235 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 13236 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 13237 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

13238 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 13239 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 13240 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 13241 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 13242 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 13243 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 13244 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 13245 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 13246 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 13247 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 13248 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\320}% U+01D0
 13249 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 13250 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 13251 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 13252 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 13253 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 13254 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 13255 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 13256 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 13257 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 13258 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 13259 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 13260 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 13261 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 13262 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 13263 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 13264 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 13265 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 13266 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 13267 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
 13268 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 13269 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 13270 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 13271 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 13272 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 13273 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
 13274 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 13275 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 13276 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
 13277 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
 13278 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
 13279 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
 13280 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
 13281 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
 13282 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
 13283 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
 13284 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
 13285 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC
 13286 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute

13287 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
 13288 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacut
 13289 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\376}% U+01FE
 13290 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
 13291 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
 13292 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
 13293 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
 13294 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
 13295 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
 13296 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
 13297 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 13298 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 13299 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 13300 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
 13301 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 13302 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
 13303 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 13304 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 13305 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
 13306 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 13307 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
 13308 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 13309 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 13310 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 13311 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 13312 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 13313 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 13314 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 13315 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 13316 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 13317 % U+021E LATIN CAPITAL LETTER H WITH CARON
 13318 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 13319 % U+021F LATIN SMALL LETTER H WITH CARON
 13320 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 13321 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 13322 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 13323 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 13324 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 13325 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 13326 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 13327 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 13328 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 13329 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 13330 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 13331 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 13332 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 13333 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 13334 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 13335 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 13336 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 13337 % U+0237 LATIN SMALL LETTER DOTLESS J
 13338 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

13339 % U+02C7 CARON; caron
 13340 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 13341 % U+02D8 BREVE; breve

13342 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 13343 % U+02D9 DOT ABOVE; dotaccent
 13344 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 13345 % U+02DA RING ABOVE; ring
 13346 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 13347 % U+02DB OGONEK; ogonek
 13348 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 13349 % U+02DC SMALL TILDE; ilde, *tilde
 13350 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 13351 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 13352 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 13353 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 13354 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 13355 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 13356 % U+02F7 MODIFIER LETTER LOW TILDE
 13357 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

13358 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 13359 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 13360 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 13361 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 13362 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcmb
 13363 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 13364 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 13365 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 13366 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 13367 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

13368 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 13369 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 13370 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 13371 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 13372 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 13373 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 13374 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 13375 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 13376 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 13377 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 13378 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 13379 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 13380 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omicrontonos
 13381 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 13382 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilonontonos
 13383 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 13384 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 13385 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 13386 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; iotadieresis-tonos
 13387 \DeclareTextCompositeCommand{\'}{PU}{\textIotadieresis}{\83\220}% U+0390
 13388 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 13389 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391
 13390 % U+0392 GREEK CAPITAL LETTER BETA; Beta
 13391 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
 13392 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
 13393 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
 13394 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta

13395 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
13396 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
13397 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
13398 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
13399 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
13400 % U+0397 GREEK CAPITAL LETTER ETA; Eta
13401 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
13402 % U+0398 GREEK CAPITAL LETTER THETA; Theta
13403 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
13404 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
13405 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
13406 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
13407 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
13408 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
13409 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
13410 % U+039C GREEK CAPITAL LETTER MU; Mu
13411 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
13412 % U+039D GREEK CAPITAL LETTER NU; Nu
13413 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
13414 % U+039E GREEK CAPITAL LETTER XI; Xi
13415 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
13416 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
13417 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
13418 % U+03A0 GREEK CAPITAL LETTER PI; Pi
13419 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
13420 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
13421 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
13422 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
13423 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
13424 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
13425 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
13426 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
13427 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
13428 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
13429 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
13430 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
13431 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
13432 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
13433 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
13434 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
13435 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
13436 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
13437 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
13438 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
13439 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilondieresis
13440 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
13441 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
13442 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
13443 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
13444 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
13445 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etatonos
13446 \DeclareTextCompositeCommand{'}{PU}{\texteta}{\83\256}% U+03AE
13447 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
13448 \DeclareTextCompositeCommand{'}{PU}{\textiota}{\83\257}% U+03AF
13449 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; upsilondieresis
13450 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\260}% U+03B0
13451 % U+03B1 GREEK SMALL LETTER ALPHA; alpha

13452 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
13453 % U+03B2 GREEK SMALL LETTER BETA; beta
13454 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
13455 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
13456 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
13457 % U+03B4 GREEK SMALL LETTER DELTA; delta
13458 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
13459 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
13460 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
13461 % U+03B6 GREEK SMALL LETTER ZETA; zeta
13462 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
13463 % U+03B7 GREEK SMALL LETTER ETA; eta
13464 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
13465 % U+03B8 GREEK SMALL LETTER THETA; theta
13466 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
13467 % U+03B9 GREEK SMALL LETTER IOTA; iota
13468 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
13469 % U+03BA GREEK SMALL LETTER KAPPA; kappa
13470 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
13471 % U+03BB GREEK SMALL LETTER LAMDA; lambda
13472 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
13473 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
13474 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
13475 % U+03BD GREEK SMALL LETTER NU; nu
13476 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
13477 % U+03BE GREEK SMALL LETTER XI; xi
13478 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
13479 % U+03BF GREEK SMALL LETTER OMICRON; omicron
13480 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
13481 % U+03C0 GREEK SMALL LETTER PI; pi
13482 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
13483 % U+03C1 GREEK SMALL LETTER RHO; rho
13484 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
13485 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
13486 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
13487 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
13488 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
13489 % U+03C4 GREEK SMALL LETTER TAU; tau
13490 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
13491 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
13492 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
13493 % U+03C6 GREEK SMALL LETTER PHI; phi
13494 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
13495 % U+03C7 GREEK SMALL LETTER CHI; chi
13496 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
13497 % U+03C8 GREEK SMALL LETTER PSI; psi
13498 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
13499 % U+03C9 GREEK SMALL LETTER OMEGA; omega
13500 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
13501 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadieresis
13502 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
13503 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; upsilondieresis
13504 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
13505 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
13506 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
13507 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
13508 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD

13509 \DeclareTextCompositeCommand{\'}{PU}{\textupsilon}{\83\315}% U+03CD
 13510 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
 13511 \DeclareTextCompositeCommand{\'}{PU}{\textomega}{\83\316}% U+03CE
 13512 % U+03DA GREEK LETTER STIGMA; Stigmagreek
 13513 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
 13514 % U+03DB GREEK SMALL LETTER STIGMA
 13515 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
 13516 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 13517 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 13518 % U+03DD GREEK SMALL LETTER DIGAMMA
 13519 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 13520 % U+03DE GREEK LETTER KOPPA; Koppagreek
 13521 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 13522 % U+03DF GREEK SMALL LETTER KOPPA
 13523 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 13524 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 13525 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 13526 % U+03E1 GREEK SMALL LETTER SAMPI
 13527 \DeclareTextCommand{\textsampigreek}{PU}{\83\341}% U+03E1

50.2.9 Cyrillic: U+0400 to U+04FF

Thanks to Vladimir Volovich (vvv@vvv.vsu.ru) for the help with the Cyrillic glyph names.

13528 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
 13529 \DeclareTextCompositeCommand{\'}{PU}{\CYRE}{\84\000}% U+0400
 13530 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrrillic, *afii10023
 13531 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
 13532 \DeclareTextCompositeCommand{\"}{PU}{\CYRE}{\84\001}% ???
 13533 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
 13534 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
 13535 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
 13536 \DeclareTextCompositeCommand{\'}{PU}{\CYRG}{\84\003}% U+0403
 13537 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrrillic, *afii10053
 13538 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
 13539 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
 13540 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
 13541 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyrrillic, *afii10055
 13542 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
 13543 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrrillic, *afii10056
 13544 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
 13545 \DeclareTextCompositeCommand{\"}{PU}{\CYRII}{\84\007}% U+0407
 13546 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
 13547 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
 13548 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
 13549 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
 13550 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
 13551 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
 13552 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060
 13553 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
 13554 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
 13555 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
 13556 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
 13557 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
 13558 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrrillic, *afii10062
 13559 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
 13560 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
 13561 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145

13562 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
13563 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
13564 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
13565 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
13566 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
13567 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
13568 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
13569 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
13570 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
13571 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
13572 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
13573 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
13574 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
13575 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
13576 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
13577 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
13578 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
13579 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
13580 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
13581 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
13582 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
13583 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
13584 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
13585 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
13586 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
13587 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
13588 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
13589 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
13590 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
13591 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
13592 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
13593 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
13594 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
13595 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
13596 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
13597 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
13598 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
13599 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
13600 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
13601 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
13602 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
13603 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
13604 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
13605 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
13606 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
13607 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
13608 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
13609 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426
13610 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
13611 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
13612 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
13613 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
13614 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
13615 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
13616 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
13617 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
13618 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045

13619 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
13620 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
13621 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
13622 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
13623 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
13624 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
13625 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
13626 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
13627 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
13628 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
13629 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
13630 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
13631 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
13632 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
13633 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
13634 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
13635 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
13636 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
13637 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
13638 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
13639 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
13640 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
13641 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
13642 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
13643 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
13644 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
13645 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
13646 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
13647 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
13648 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
13649 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
13650 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
13651 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
13652 \DeclareTextCommand{\cyrl}{PU}{\84\073}% U+043B
13653 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
13654 \DeclareTextCommand{\cyrm}{PU}{\84\074}% U+043C
13655 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
13656 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
13657 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
13658 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
13659 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
13660 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
13661 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
13662 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
13663 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
13664 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
13665 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
13666 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442
13667 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
13668 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
13669 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
13670 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
13671 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
13672 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
13673 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
13674 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
13675 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic

13676 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
13677 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
13678 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
13679 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
13680 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
13681 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
13682 \DeclareTextCommand{\cyrhrdsn}{PU}{\84\112}% U+044A
13683 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
13684 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
13685 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
13686 \DeclareTextCommand{\cyrsoftsn}{PU}{\84\114}% U+044C
13687 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
13688 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
13689 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
13690 \DeclareTextCommand{\cyrYu}{PU}{\84\116}% U+044E
13691 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
13692 \DeclareTextCommand{\cyrYa}{PU}{\84\117}% U+044F
13693 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
13694 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
13695 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
13696 \DeclareTextCommand{\cyrIo}{PU}{\84\121}% U+0451
13697 \DeclareTextCompositeCommand{\"}{PU}{\cyre}{\84\121}% U+0451
13698 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
13699 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
13700 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
13701 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
13702 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
13703 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
13704 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
13705 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
13706 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
13707 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
13708 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
13709 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
13710 \DeclareTextCompositeCommand{\"}{PU}{\cyrii}{\84\127}% U+0457
13711 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
13712 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
13713 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
13714 \DeclareTextCommand{\cyrLje}{PU}{\84\131}% U+0459
13715 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
13716 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
13717 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
13718 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
13719 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
13720 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
13721 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
13722 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D
13723 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
13724 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
13725 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
13726 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
13727 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
13728 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
13729 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
13730 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
13731 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
13732 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146

13733 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
13734 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
13735 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
13736 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
13737 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
13738 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
13739 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
13740 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
13741 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
13742 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
13743 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
13744 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleiotifiedcyrillic
13745 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
13746 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleiotifiedcyrillic
13747 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
13748 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
13749 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
13750 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
13751 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
13752 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotifiedcyrillic
13753 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
13754 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyrillic
13755 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
13756 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
13757 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
13758 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
13759 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
13760 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
13761 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
13762 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
13763 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
13764 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
13765 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
13766 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
13767 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
13768 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
13769 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
13770 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
13771 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
13772 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; Izhitsadblgravecyrillic
13773 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476
13774 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE ACCENT; izhitsadblgravecyrillic
13775 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
13776 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
13777 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
13778 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
13779 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
13780 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyrillic
13781 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
13782 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
13783 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
13784 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlocyrillic
13785 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
13786 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlocyrillic
13787 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
13788 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
13789 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E

13790 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 13791 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 13792 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 13793 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 13794 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 13795 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 13796 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 13797 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrilliccmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyrilliccmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumatacyrilliccmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyrilliccmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 13798 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 13799 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 13800 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 13801 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 13802 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 13803 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 13804 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 13805 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 13806 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 13807 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 13808 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 13809 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 13810 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturncyrillic, *afii10050
 13811 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 13812 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, gheupturncyrillic
 13813 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491
 13814 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestrokecyrillic
 13815 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 13816 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 13817 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 13818 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemiddlehookcyrillic
 13819 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 13820 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemiddlehookcyrillic
 13821 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 13822 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 13823 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 13824 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 13825 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 13826 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 13827 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 13828 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 13829 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 13830 \DeclareTextCommand{\cyrzds}{PU}{\84\231}% U+0499
 13831 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 13832 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 13833 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 13834 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 13835 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B

13836 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaverticalstrokecyrillic
13837 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
13838 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaverticalstrokecyrillic
13839 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
13840 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
13841 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
13842 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
13843 \DeclareTextCommand{\cyrkhrs}{PU}{\84\237}% U+049F
13844 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
13845 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
13846 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
13847 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
13848 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
13849 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
13850 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
13851 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
13852 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
13853 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
13854 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
13855 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
13856 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemiddlehookcyrillic
13857 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
13858 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
13859 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
13860 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
13861 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
13862 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
13863 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
13864 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
13865 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
13866 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
13867 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
13868 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
13869 \DeclareTextCompositeCommand{\k}{PU}{\cyrs}{\84\253}% U+04AB
13870 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
13871 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
13872 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
13873 \DeclareTextCommand{\cyrtdsc}{PU}{\84\255}% U+04AD
13874 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
13875 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
13876 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; ustraightcyrillic
13877 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
13878 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
13879 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
13880 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; ustraightstrokecyrillic
13881 \DeclareTextCommand{\cyrhcrs}{PU}{\84\261}% U+04B1
13882 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadescendercyrillic
13883 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
13884 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
13885 \DeclareTextCommand{\cyrhds}{PU}{\84\263}% U+04B3
13886 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
13887 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
13888 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
13889 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
13890 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
13891 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
13892 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic

13893 \DeclareTextCommand{\cyrchrdsc}{PU}{\84\267}% U+04B7
 13894 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Cheverticalstrokecyrillic
 13895 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 13896 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; cheverticalstrokecyrillic
 13897 \DeclareTextCommand{\cyrchvcrs}{PU}{\84\271}% U+04B9
 13898 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 13899 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA
 13900 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 13901 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 13902 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasiancyrillic
 13903 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 13904 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
 13905 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 13906 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
 13907 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 13908 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 13909 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
 13910 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 13911 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 13912 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 13913 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 13914 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 13915 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 13916 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 13917 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 13918 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 13919 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 13920 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 13921 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 13922 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 13923 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 13924 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 13925 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 13926 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 13927 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 13928 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 13929 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 13930 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassiancyrillic
 13931 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 13932 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassiancyrillic
 13933 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 13934 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 13935 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 13936 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 13937 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 13938 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 13939 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 13940 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 13941 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 13942 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 13943 \DeclareTextCompositeCommand{"}{PU}{\CYRA}{\84\322}% U+04D2
 13944 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 13945 \DeclareTextCompositeCommand{"}{PU}{\cyra}{\84\323}% U+04D3
 13946 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 13947 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 13948 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic

13949 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
13950 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevacyrillic
13951 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
13952 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevacyrillic
13953 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
13954 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
13955 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
13956 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
13957 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
13958 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadieresiscyrillic
13959 \DeclareTextCompositeCommand{\"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
13960 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadieresiscyrillic
13961 \DeclareTextCompositeCommand{\"}{PU}{\cyrschwa}{\84\333}% U+04DB
13962 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhedieresiscyrillic
13963 \DeclareTextCompositeCommand{\"}{PU}{\CYRZH}{\84\334}% U+04DC
13964 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieresiscyrillic
13965 \DeclareTextCompositeCommand{\"}{PU}{\cyrzh}{\84\335}% U+04DD
13966 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieresiscyrillic
13967 \DeclareTextCompositeCommand{\"}{PU}{\CYRZ}{\84\336}% U+04DE
13968 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresiscyrillic
13969 \DeclareTextCompositeCommand{\"}{PU}{\cyrz}{\84\337}% U+04DF
13970 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasiancyrillic
13971 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
13972 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
13973 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
13974 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
13975 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
13976 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
13977 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
13978 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresiscyrillic
13979 \DeclareTextCompositeCommand{\"}{PU}{\CYRI}{\84\344}% U+04E4
13980 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresiscyrillic
13981 \DeclareTextCompositeCommand{\"}{PU}{\cyri}{\84\345}% U+04E5
13982 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresiscyrillic
13983 \DeclareTextCompositeCommand{\"}{PU}{\CYRO}{\84\346}% U+04E6
13984 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresiscyrillic
13985 \DeclareTextCompositeCommand{\"}{PU}{\cyro}{\84\347}% U+04E7
13986 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
13987 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
13988 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
13989 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
13990 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS; Obarreddieresiscyrillic
13991 \DeclareTextCompositeCommand{\"}{PU}{\CYROTLD}{\84\352}% U+04EA
13992 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarreddieresiscyrillic
13993 \DeclareTextCompositeCommand{\"}{PU}{\cyrotld}{\84\353}% U+04EB
13994 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
13995 \DeclareTextCompositeCommand{\"}{PU}{\CYREREV}{\84\354}% U+04EC
13996 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS
13997 \DeclareTextCompositeCommand{\"}{PU}{\cyreref}{\84\355}% U+04ED
13998 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
13999 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
14000 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
14001 \DeclareTextCompositeCommand{\=}{PU}{\cyru}{\84\357}% U+04EF
14002 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
14003 \DeclareTextCompositeCommand{\"}{PU}{\CYRU}{\84\360}% U+04F0
14004 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
14005 \DeclareTextCompositeCommand{\"}{PU}{\cyru}{\84\361}% U+04F1

14006 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhungarumlautcyrillic
 14007 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 14008 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhungarumlautcyrillic
 14009 \DeclareTextCompositeCommand{\h}{PU}{\cyru}{\84\363}% U+04F3
 14010 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chedieresiscyrillic
 14011 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 14012 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieresiscyrillic
 14013 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 14014 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 14015 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 14016 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 14017 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 14018 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudieresiscyrillic
 14019 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 14020 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudieresiscyrillic
 14021 \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
 14022 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 14023 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 14024 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 14025 \DeclareTextCommand{\cyrrhk}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

14026 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 14027 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

14028 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 14029 \DeclareTextCompositeCommand{\.}{PU}{B}{\9036\002}% U+1E02
 14030 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 14031 \DeclareTextCompositeCommand{\.}{PU}{b}{\9036\003}% U+1E03
 14032 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 14033 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 14034 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 14035 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 14036 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 14037 \DeclareTextCompositeCommand{\.}{PU}{D}{\9036\012}% U+1E0A
 14038 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
 14039 \DeclareTextCompositeCommand{\.}{PU}{d}{\9036\013}% U+1E0B
 14040 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
 14041 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
 14042 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
 14043 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
 14044 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
 14045 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
 14046 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
 14047 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
 14048 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
 14049 \DeclareTextCompositeCommand{\.}{PU}{F}{\9036\036}% U+1E1E
 14050 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
 14051 \DeclareTextCompositeCommand{\.}{PU}{f}{\9036\037}% U+1E1F
 14052 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron

14053 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
14054 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
14055 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
14056 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
14057 \DeclareTextCompositeCommand{\.}{PU}{H}{\9036\042}% U+1E22
14058 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
14059 \DeclareTextCompositeCommand{\.}{PU}{h}{\9036\043}% U+1E23
14060 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
14061 \DeclareTextCompositeCommand{\"}{PU}{H}{\9036\046}% U+1E26
14062 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
14063 \DeclareTextCompositeCommand{\"}{PU}{h}{\9036\047}% U+1E27
14064 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
14065 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
14066 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
14067 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
14068 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
14069 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
14070 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
14071 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
14072 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
14073 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
14074 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
14075 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
14076 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
14077 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
14078 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
14079 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
14080 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
14081 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
14082 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
14083 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
14084 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
14085 \DeclareTextCompositeCommand{\.}{PU}{M}{\9036\100}% U+1E40
14086 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
14087 \DeclareTextCompositeCommand{\.}{PU}{m}{\9036\101}% U+1E41
14088 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
14089 \DeclareTextCompositeCommand{\.}{PU}{N}{\9036\104}% U+1E44
14090 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
14091 \DeclareTextCompositeCommand{\.}{PU}{n}{\9036\105}% U+1E45
14092 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
14093 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
14094 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow
14095 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
14096 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
14097 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
14098 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
14099 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
14100 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
14101 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
14102 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
14103 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
14104 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
14105 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
14106 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
14107 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
14108 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
14109 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E

14110% U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
14111\DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
14112% U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
14113\DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
14114% U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
14115\DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
14116% U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
14117\DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
14118% U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
14119\DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
14120% U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
14121\DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
14122% U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
14123\DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
14124% U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
14125\DeclareTextCompositeCommand{\`}{PU}{W}{\9036\200}% U+1E80
14126% U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
14127\DeclareTextCompositeCommand{\`}{PU}{w}{\9036\201}% U+1E81
14128% U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
14129\DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
14130% U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
14131\DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
14132% U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
14133\DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
14134% U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
14135\DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
14136% U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
14137\DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
14138% U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
14139\DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
14140% U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
14141\DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
14142% U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
14143\DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
14144% U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
14145\DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
14146% U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
14147\DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
14148% U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
14149\DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
14150% U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
14151\DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F
14152% U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
14153\DeclareTextCompositeCommand{\^}{PU}{Z}{\9036\220}% U+1E90
14154% U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
14155\DeclareTextCompositeCommand{\^}{PU}{z}{\9036\221}% U+1E91
14156% U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
14157\DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
14158% U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
14159\DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
14160% U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
14161\DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
14162% U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
14163\DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
14164% U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
14165\DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
14166% U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring

14167 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 14168 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotaccent
 14169 \DeclareTextCompositeCommand{.}{PU}{\textlongs}{\9036\233}% U+1E9B
 14170 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 14171 \DeclareTextCompositeCommand{\~}{PU}{E}{\9036\274}% U+1EBC
 14172 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 14173 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}% U+1EBD
 14174 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 14175 \DeclareTextCompositeCommand{\`}{PU}{Y}{\9036\362}% U+1EF2
 14176 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 14177 \DeclareTextCompositeCommand{\`}{PU}{y}{\9036\363}% U+1EF3
 14178 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 14179 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}% U+1EF8
 14180 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 14181 \DeclareTextCompositeCommand{\~}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

14182 % U+200C ZERO WIDTH NON-JOINER; *afii61664, zerowidthnonjoiner
 14183 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 14184 % U+2013 EN DASH; endash
 14185 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 14186 % U+2014 EM DASH; emdash
 14187 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 14188 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 14189 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 14190 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 14191 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 14192 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 14193 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 14194 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 14195 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 14196 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
 14197 \DeclareTextCommand{\textquotedblleft}{PU}{\9040\034}% U+201C
 14198 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
 14199 \DeclareTextCommand{\textquotedblright}{PU}{\9040\035}% U+201D
 14200 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 14201 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 14202 % U+2020 DAGGER; dagger
 14203 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 14204 % U+2021 DOUBLE DAGGER; daggerdbl
 14205 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021
 14206 % U+2022 BULLET; bullet
 14207 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 14208 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 14209 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 14210 % U+2030 PER MILLE SIGN; perthousand
 14211 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 14212 % U+2031 PER TEN THOUSAND SIGN
 14213 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 14214 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guilsinglleft
 14215 \DeclareTextCommand{\guilsinglleft}{PU}{\9040\071}% U+2039
 14216 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guilsinglright
 14217 \DeclareTextCommand{\guilsinglright}{PU}{\9040\072}% U+203A
 14218 % U+203B REFERENCE MARK; referencemark
 14219 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 14220 % U+203D INTERROBANG
 14221 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D

14222 % U+2044 FRACTION SLASH; fraction
 14223 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 14224 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 14225 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 14226 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 14227 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 14228 % U+2052 COMMERCIAL MINUS SIGN
 14229 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

14230 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 14231 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 14232 % U+2074 SUPERSCRIPT FOUR; foursuperior
 14233 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 14234 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 14235 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
 14236 % U+2076 SUPERSCRIPT SIX; sixsuperior
 14237 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 14238 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 14239 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 14240 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 14241 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 14242 % U+2079 SUPERSCRIPT NINE; ninesuperior
 14243 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 14244 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 14245 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 14246 % U+207B SUPERSCRIPT MINUS
 14247 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 14248 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 14249 \DeclareTextCommand{\textequalssuperior}{PU}{\9040\174}
 14250 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 14251 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 14252 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 14253 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 14254 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 14255 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 14256 % U+2080 SUBSCRIPT ZERO; zeroinferior
 14257 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 14258 % U+2081 SUBSCRIPT ONE; oneinferior
 14259 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 14260 % U+2082 SUBSCRIPT TWO; twoinferior
 14261 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 14262 % U+2083 SUBSCRIPT THREE; threeinferior
 14263 \DeclareTextCommand{\textthreeminferior}{PU}{\9040\203}% U+2083
 14264 % U+2084 SUBSCRIPT FOUR; fourinferior
 14265 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 14266 % U+2085 SUBSCRIPT FIVE; fiveinferior
 14267 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 14268 % U+2086 SUBSCRIPT SIX; sixinferior
 14269 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 14270 % U+2087 SUBSCRIPT SEVEN; seveninferior
 14271 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 14272 % U+2088 SUBSCRIPT EIGHT; eightinferior
 14273 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 14274 % U+2089 SUBSCRIPT NINE; nineinferior
 14275 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 14276 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior

14277 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 14278 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 14279 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

14280 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 14281 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 14282 % U+20A4 LIRA SIGN; afii08941, *lira
 14283 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 14284 % U+20A6 NAIRA SIGN
 14285 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 14286 % U+20A7 PESETA SIGN; peseta
 14287 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 14288 % U+20A9 WON SIGN; won
 14289 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 14290 % U+20AB DONG SIGN; dong
 14291 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 14292 % U+20AC EURO SIGN; *Euro, euro
 14293 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 14294 % U+20B1 PESO SIGN
 14295 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 14296 % U+20B2 GUARANI SIGN
 14297 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

14298 % U+2103 DEGREE CELSIUS; centigrade
 14299 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 14300 % U+2116 NUMERO SIGN; *afii61352, numero
 14301 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 14302 % U+2117 SOUND RECORDING COPYRIGHT
 14303 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 14304 % U+211E PRESCRIPTION TAKE; prescription
 14305 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 14306 % U+2120 SERVICE MARK
 14307 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 14308 % U+2122 TRADE MARK SIGN; trademark
 14309 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 14310 % U+2126 OHM SIGN; Ohm, Omega
 14311 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126
 14312 % U+2127 INVERTED OHM SIGN
 14313 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 14314 % U+212B ANGSTROM SIGN; angstrom
 14315 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 14316 % U+212E ESTIMATED SYMBOL; estimated
 14317 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 14318 % U+2135 ALEF SYMBOL; aleph
 14319 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

14320 % U+2190 LEFTWARDS ARROW; arrowleft
 14321 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 14322 % U+2191 UPWARDS ARROW; arrowup
 14323 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 14324 % U+2192 RIGHTWARDS ARROW; arrowright
 14325 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 14326 % U+2193 DOWNWARDS ARROW; arrowdown
 14327 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

14328 % U+2212 MINUS SIGN; minus
14329 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
14330 % U+221A SQUARE ROOT; radical
14331 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

14332 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
14333 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
14334 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
14335 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

14336 % U+2422 BLANK SYMBOL
14337 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
14338 % U+2423 OPEN BOX; blank
14339 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

14340 % U+2460 CIRCLED DIGIT ONE; onecircle
14341 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
14342 % U+2461 CIRCLED DIGIT TWO; twocircle
14343 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
14344 % U+2462 CIRCLED DIGIT THREE; threecircle
14345 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
14346 % U+2463 CIRCLED DIGIT FOUR; fourcircle
14347 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
14348 % U+2464 CIRCLED DIGIT FIVE; fivecircle
14349 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
14350 % U+2465 CIRCLED DIGIT SIX; sixcircle
14351 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
14352 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
14353 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
14354 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
14355 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
14356 % U+2468 CIRCLED DIGIT NINE; ninecircle
14357 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
14358 % U+2469 CIRCLED NUMBER TEN; tencircle
14359 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
14360 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
14361 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
14362 % U+246B CIRCLED NUMBER TWELVE; twelvecircle
14363 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
14364 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
14365 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
14366 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
14367 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
14368 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
14369 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
14370 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
14371 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
14372 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
14373 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
14374 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
14375 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
14376 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
14377 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472

14378 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
 14379 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
 14380 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
 14381 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
 14382 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
 14383 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
 14384 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
 14385 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
 14386 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
 14387 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
 14388 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
 14389 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
 14390 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
 14391 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
 14392 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
 14393 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
 14394 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
 14395 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
 14396 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
 14397 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
 14398 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
 14399 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
 14400 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
 14401 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
 14402 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
 14403 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
 14404 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
 14405 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
 14406 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
 14407 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
 14408 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
 14409 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
 14410 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
 14411 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
 14412 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
 14413 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
 14414 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
 14415 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7
 14416 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 14417 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 14418 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 14419 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 14420 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 14421 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 14422 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 14423 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 14424 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 14425 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 14426 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 14427 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 14428 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 14429 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 14430 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 14431 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 14432 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 14433 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 14434 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle

14435 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 14436 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 14437 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 14438 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 14439 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 14440 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 14441 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 14442 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 14443 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 14444 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 14445 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 14446 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 14447 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 14448 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 14449 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 14450 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 14451 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 14452 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 14453 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 14454 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 14455 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 14456 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 14457 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 14458 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 14459 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 14460 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 14461 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 14462 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 14463 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 14464 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 14465 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 14466 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 14467 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 14468 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 14469 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 14470 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 14471 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 14472 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle
 14473 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 14474 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 14475 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 14476 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 14477 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 14478 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 14479 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 14480 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 14481 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 14482 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 14483 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 14484 % U+24EA CIRCLED DIGIT ZERO
 14485 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

14486 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 14487 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 14488 % U+25EF LARGE CIRCLE; largecircle
 14489 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

```
14490 % U+266A EIGHTH NOTE; musicalnote
14491 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
14492 % U+26AD MARRIAGE SYMBOL
14493 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
14494 % U+26AE DIVORCE SYMBOL
14495 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE
```

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

```
14496 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
14497 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
14498 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
14499 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7
```

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

```
14500 % U+FB01 LATIN SMALL LIGATURE FI; fi
14501 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
14502 % U+FB02 LATIN SMALL LIGATURE FL; fl
14503 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02
```

50.2.25 Miscellaneous

```
14504 \DeclareTextCommand{\SS}{PU}{SS}
```

50.2.26 Aliases

Aliases (german.sty)

```
14505 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
14506 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
14507 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
14508 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
14509 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
14510 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
14511 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
14512 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}
```

Aliases (math names)

```
14513 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
14514 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}
14515 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
14516 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
14517 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
14518 </puenc>
```

50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

```
14519 <*puvnenc>
14520 \DeclareTextCommand{\abreve}{PU}{\81\003}
14521 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
14522 \DeclareTextCommand{\dj}{PU}{\81\021}
14523 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
14524 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
14525 \DeclareTextCommand{\ohorn}{PU}{\81\241}
14526 \DeclareTextCommand{\uhorn}{PU}{\81\260}
14527 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
14528 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
```

14529 \DeclareTextCommand{\DJ}{PU}{\81\020}
14530 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
14531 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
14532 \DeclareTextCommand{\OHORN}{PU}{\81\240}
14533 \DeclareTextCommand{\UHORN}{PU}{\81\257}

14534 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
14535 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
14536 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
14537 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
14538 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
14539 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
14540 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
14541 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
14542 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
14543 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
14544 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
14545 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
14546 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
14547 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
14548 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
14549 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
14550 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
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14552 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
14553 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
14554 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
14555 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
14556 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
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14563 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
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14570 \DeclareTextCompositeCommand{\d}{PU}{\ocircumflex}{\9036\331}
14571 \DeclareTextCompositeCommand{\'}{PU}{\ocircumflex}{\9036\323}
14572 \DeclareTextCompositeCommand{\h}{PU}{\ocircumflex}{\9036\325}
14573 \DeclareTextCompositeCommand{\~}{PU}{\ocircumflex}{\9036\327}
14574 \DeclareTextCompositeCommand{\'}{PU}{\ohorn}{\9036\333}
14575 \DeclareTextCompositeCommand{\d}{PU}{\ohorn}{\9036\343}
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14577 \DeclareTextCompositeCommand{\h}{PU}{\ohorn}{\9036\337}
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14580 \DeclareTextCompositeCommand{\d}{PU}{u}{\9036\345}
14581 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\371}
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14585 \DeclareTextCompositeCommand{\d}{PU}{\uhorn}{\9036\361}

14586 \DeclareTextCompositeCommand{\'}{PU}{\uhorn}{\9036\353}
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14595 \DeclareTextCompositeCommand{\d}{PU}{A}{\9036\240}
14596 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\300}
14597 \DeclareTextCompositeCommand{\h}{PU}{A}{\9036\242}
14598 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}
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14600 \DeclareTextCompositeCommand{\d}{PU}{\ABREVE}{\9036\266}
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14617 \DeclareTextCompositeCommand{\h}{PU}{\ECIRCUMFLEX}{\9036\302}
14618 \DeclareTextCompositeCommand{\~}{PU}{\ECIRCUMFLEX}{\9036\304}
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14621 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\314}
14622 \DeclareTextCompositeCommand{\h}{PU}{I}{\9036\310}
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14626 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\322}
14627 \DeclareTextCompositeCommand{\h}{PU}{O}{\9036\316}
14628 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}
14629 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\320}
14630 \DeclareTextCompositeCommand{\d}{PU}{\OCIRCUMFLEX}{\9036\330}
14631 \DeclareTextCompositeCommand{\'}{PU}{\OCIRCUMFLEX}{\9036\322}
14632 \DeclareTextCompositeCommand{\h}{PU}{\OCIRCUMFLEX}{\9036\324}
14633 \DeclareTextCompositeCommand{\~}{PU}{\OCIRCUMFLEX}{\9036\326}
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14636 \DeclareTextCompositeCommand{\'}{PU}{\OHORN}{\9036\334}
14637 \DeclareTextCompositeCommand{\h}{PU}{\OHORN}{\9036\336}
14638 \DeclareTextCompositeCommand{\~}{PU}{\OHORN}{\9036\340}
14639 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}
14640 \DeclareTextCompositeCommand{\d}{PU}{U}{\9036\344}
14641 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\331}
14642 \DeclareTextCompositeCommand{\h}{PU}{U}{\9036\346}

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14643 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}
14644 \DeclareTextCompositeCommand{\'}{PU}{\UHORN}{\9036\350}
14645 \DeclareTextCompositeCommand{\d}{PU}{\UHORN}{\9036\360}
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14651 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}
14652 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
14653 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
14654 </puvnenc>

```

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

```

14655 <*puarenc>
14656 \DeclareTextCommand{\hamza}{PU}{\86\041}% 0621;afii57409;ARABIC LETTER HAMZA
14657 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LETTER ALEF WITH MADDA A
14658 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LETTER ALEF WITH HAMZA A
14659 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LETTER WAW WITH HAMZA AE
14660 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LETTER ALEF WITH HA
14661 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LETTER YEH WITH HAMZA ABOVE
14662 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
14663 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
14664 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
14665 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
14666 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LETTER THEH
14667 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LETTER JEEM
14668 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
14669 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
14670 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
14671 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
14672 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
14673 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
14674 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
14675 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LETTER SHEEN
14676 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
14677 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
14678 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
14679 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
14680 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
14681 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LETTER GHAIN
14682 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
14683 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
14684 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
14685 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
14686 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
14687 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LETTER MEEM
14688 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
14689 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
14690 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afii57448;ARABIC LETTER WAW
14691 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afii57449;ARABIC LETTER ALEF MAKURA
14692 \DeclareTextCommand{\ya}{PU}{\86\112}% 064A;afii57450;ARABIC LETTER YEH
14693 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
14694 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN

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14695 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
14696 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
14697 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afii57455;ARABIC DAMMA
14698 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afii57456;ARABIC KASRA
14699 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afii57457;ARABIC SHADDA
14700 \DeclareTextCommand{\sukun}{PU}{\86\122}% 0652;afii57458;ARABIC SUKUN

```

Farsi

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14701 \DeclareTextCommand{\peh}{PU}{\86\176}% 067E;afii57506;ARABIC LETTER PEH
14702 \DeclareTextCommand{\tcheh}{PU}{\86\206}% 0686;afii57507;ARABIC LETTER TCHEH
14703 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afii57508;ARABIC LETTER JEH
14704 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afii????;FARSI LETTER KAF
14705 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afii57509;ARABIC LETTER GAF
14706 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afii????;FARSI LETTER YEH

14707 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
14708 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ

14709 </puarenc>

```

51 End of file hycheck.tex

```

14710 < *check>
14711 \typeout{}
14712 \begin{document}
14713 \end{document}
14714 </check>

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