

Hypertext marks in L^AT_EX

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1 Documentation overview for hyperref

The documentation for package hyperref consists of several files:

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

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

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

Options This file provides a short option summary.

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

Bookmark talk, paper The paper version of the talk.

Source code documentation:

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

backref.dtx “Back referencing from bibliographical citations”

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

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3 File hyccheck.tex

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

```

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

\checklatex Optional argument: release date of  $\LaTeX$ .
4 \newcommand*{\checklatex}[1][]{\%
5 \typeout{}}\%
6 \typeout{* Format: 'LaTeX2e' #1}\%
7 \typeout{\space\space Loaded: '\fmtname' \fmtversion}\%
8 }\%
```

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

```

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

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

```

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

`\HyC@checkPackage`

```

18 \def\HyC@checkPackage{\%
19 \typeout{}}\%
20 \begingroup
21 \edef\x{\endgroup
22 \noexpand\RequirePackage{\HyC@package}}\%
23 \ifx\HyC@date\@empty\relax\else[\HyC@date]\fi\%
24 }\%
25 \x
26 \typeout{}}\%
27 \typeout{\%
28 * Package '\HyC@package'\%
29 \ifx\HyC@date\@empty
30 \else
31 \space\HyC@date
32 \fi
33 }\%
34 \@ifundefined{ver@\HyC@package.sty}{\%
35 }\typeout{\%
36 \space\space Loaded: '\HyC@package' \%
37 \csname ver@\HyC@package.sty\endcsname
38 }\%
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 `\cmdl` with an space at the end of the command name, defined by `\newcommand`. Therefore the further parsing is done by `\HyC@nc@opt` or `\HyC@nc@noopt` of the `\HyC@newcommand` chain.

```

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

```

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

```

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

```

```

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

```

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

```

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

```

`\HyC@checkItem` A single check.

```

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

```

`\HyC@string` Some shorthands.

```

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

```

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

```

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

```

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

```

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

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

```

4 Package options and setup

4.1 Save catcodes

There are many packages that change the standard catcodes.

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

```

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

```

\Hy@SetCatcodes

```

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

```

\Hy@RestoreCatcodes

```

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

```

```

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

```

```

231 \Hy@SetCatcodes

```

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

```

232 \RequirePackage{ltxcmds}[2010/03/09]
233 \@ifpackagelater{ltxcmds}{2010/10/25}{%
234   \long\def\ltx@LocalAppendToMacro#1#2{%
235     \global\let\LTXcmds@gtemp#1%
236     \ifx\ltx@undefined\LTXcmds@gtemp
237       \global\let\LTXcmds@gtemp\ltx@empty
238     \else
239       \ifx\relax\LTXcmds@gtemp
240         \global\let\LTXcmds@gtemp\ltx@empty
241       \fi
242     \fi
243   \begingroup
244     \toks0\expandafter{\LTXcmds@gtemp#2}%
245     \xdef\LTXcmds@gtemp{\the\toks0}%
246   \endgroup
247   \let#1\LTXcmds@gtemp
248 }%
249 }

250 \RequirePackage{infwarerr}[2010/04/08]
251 \RequirePackage{keyval}[1997/11/10]
252 \RequirePackage{kvsetkeys}[2007/09/29]
253 \RequirePackage{pdfescape}[2007/11/11]
254 \RequirePackage{ifpdf}[2006/02/20]
255 \RequirePackage{ifvtex}
256 \RequirePackage{ifxetex}[2006/08/21]
257 \RequirePackage{hycolor}
258 \RequirePackage{letltxmacro}[2008/06/13]
259 \def\Hy@Error{\@PackageError{hyperref}}
260 \def\Hy@Warning{\@PackageWarning{hyperref}}
261 \def\Hy@WarningNoLine{\@PackageWarningNoLine{hyperref}}
262 \def\Hy@Info{\@PackageInfo{hyperref}}
263 \def\Hy@InfoNoLine{\@PackageInfoNoLine{hyperref}}
264 \def\Hy@Message#1{%
265   \GenericWarning{%
266     (hyperref)\@spaces\@spaces\@spaces\@spaces
267   }{%

```

```

268   Package hyperref Message: #1\ltx@gobble
269 }%
270 }

```

4.2 Version check

\Hy@VersionChecked

```

271 \chardef\Hy@VersionChecked=0 %

```

\Hy@VersionCheck

```

272 \def\Hy@VersionCheck#1{%
273   \begingroup
274   \ltx@ifundefined{ver@hyperref.sty}{%
275     \Hy@Error{%
276       This should not happen!\MessageBreak
277       Missing hyperref version%
278     }\@ehd
279   }{%
280     \ltx@ifundefined{ver@#1}{%
281       \Hy@Error{%
282         This should not happen!\MessageBreak
283         Missing version of '#1'%
284       }\@ehd
285     }{%
286       \def\x##1##2##3{%
287         \expandafter\expandafter\expandafter\Hy@@VersionCheck
288         \expandafter\expandafter\expandafter##2%
289         \csname ver@##3\endcsname##1##1\@nil
290       }%
291       \x{ }\y{hyperref.sty}%
292       \x{ }\z{#1}%
293       \ifx\y\z
294       \else
295         \Hy@Error{%
296           Version mismatch!\MessageBreak
297           * \y: hyperref.sty\MessageBreak
298           * \z: #1%
299         }\@ehd
300       \fi
301     }%
302   }%
303 \endgroup
304 \chardef\Hy@VersionChecked=1 %
305 }

```

\Hy@@VersionCheck

```

306 \def\Hy@@VersionCheck #1#2 #3 #4\@nil{%
307   \def#1{#2 #3}%
308 }

```

4.3 Checks with regular expressions

```

309 \ltx@ifundefined{pdfmatch}{%
310   \def\Hy@Match#1#2#3#4{%
311   }{%
312   \def\Hy@Match#1#2{%

```

```

313 \begingroup
314 \edef\~{\ltx@backslashchar\string~}%
315 \edef\.\{\ltx@backslashchar.}%
316 \edef\[\{\ltx@backslashchar[]%
317 \edef\$\{\ltx@backslashchar$}%
318 \edef\(\{\ltx@backslashchar(}%
319 \edef\)\{\ltx@backslashchar)}%
320 \edef\|\{\ltx@backslashchar|}%
321 \edef\*\{\ltx@backslashchar*}%
322 \edef\+\{\ltx@backslashchar+}%
323 \edef\?\{\ltx@backslashchar?}%
324 \edef\{\{\ltx@backslashchar\ltx@leftbracechar}%
325 \edef\}\{\ltx@rightbracechar}%
326 \edef\\{\ltx@backslashchar\ltx@backslashchar}%
327 \let\ \ltx@space
328 \ifcase\pdfmatch{#2}{#1} %
329 \endgroup
330 \expandafter\ltx@secondoftwo
331 \or
332 \endgroup
333 \expandafter\ltx@firstoftwo
334 \else
335 \Hy@Warning{%
336   Internal error: Wrong pattern!\MessageBreak
337   --> #2 <--\MessageBreak
338   Pattern check ignored%
339 }%
340 \endgroup
341 \expandafter\ltx@firstoftwo
342 \fi
343 }%
344 \ltx@ifpackagelater{ltxcmds}{2010/09/11}{}{%
345 \begingroup
346 \lccode'0=\{\relax
347 \lowercase{\endgroup
348 \def\ltx@leftbracechar{0}%
349 }%
350 \begingroup
351 \lccode'0=\}\relax
352 \lowercase{\endgroup
353 \def\ltx@rightbracechar{0}%
354 }%
355 }%
356 }

```

4.4 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 \LaTeX processing.

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

```

357 \ifundefined{AfterBeginDocument}{%
358 \def\AfterBeginDocument{\AtBeginDocument}%
359 }{}%

```

`\Hy@AtBeginDocument` For the case that package ‘`hyperref`’ is loaded using `\AtBeginDocument`, we have to

wrap the calls of `\AtBeginDocument`/`\AfterBeginDocument` in `\AtEndOfPackage`. However, packages must be loaded in `\AtEndOfPackage` *before* package ‘kvoptions’ has to perform its option cleanup. Therefore we use a hook.

```
360 \def\Hy@AtBeginDocument{%
361   \ltx@LocalAppendToMacro\Hy@AtBeginDocumentHook
362 }
```

`\Hy@AtEndOfPackage`

```
363 \def\Hy@AtEndOfPackage{%
364   \ltx@LocalAppendToMacro\Hy@AtEndOfPackageHook
365 }
```

`\Hy@AtBeginDocumentHook`

```
366 \def\Hy@AtBeginDocumentHook{}
```

`\Hy@AtEndOfPackageHook`

```
367 \def\Hy@AtEndOfPackageHook{}
```

Install the hook, before package ‘kvoptions’ is loaded.

```
368 \AtEndOfPackage{%
369   \Hy@AtEndOfPackageHook
370   \let\Hy@AtEndOfPackageHook\@undefined
371   \AfterBeginDocument{%
372     \Hy@AtBeginDocumentHook}%
373   \let\Hy@AtBeginDocumentHook\@undefined
374   }%
375 }
```

Package kvoptions is used for processing options that are given as key value pairs. The package provides `\ProcessKeyvalOptions`, formerly known as `\ProcessOptionsWithKV`.

```
376 \RequirePackage{kvoptions}[2009/07/21]
```

4.5 Switches

```
377 \newif\ifHy@typexml
378 \newif\ifHy@activeanchor
379 \newif\ifHy@backref
380 \newif\ifHy@bookmarks
381 \newif\ifHy@bookmarksnumbered
382 \newif\ifHy@bookmarksopen
383 \newif\ifHy@breaklinks
384 \newif\ifHy@centerwindow
385 \newif\ifHy@CJKbookmarks
386 \newif\ifHy@colorlinks
387 \newif\ifHy@draft
388 \let\Hy@finaltrue\Hy@draftfalse
389 \let\Hy@finalfalse\Hy@drafttrue
390 \newif\ifHy@escapeform
391 \newif\ifHy@figures
392 \newif\ifHy@fitwindow
393 \newif\ifHy@frenchlinks
394 \newif\ifHy@hyperfootnotes
395 \newif\ifHy@hyperindex
396 \newif\ifHy@hypertextnames
397 \newif\ifHy@implicit
398 \newif\ifHy@linktocpage
```

```

399 \newif\ifHy@localanchorname
400 \newif\ifHy@menubar
401 \newif\ifHy@naturalnames
402 \newif\ifHy@nesting
403 \newif\ifHy@newwindowset
404 \newif\ifHy@newwindow
405 \newif\ifHy@ocgcolorlinks
406 \newif\ifHy@pageanchor
407 \newif\ifHy@pagelabels
408 \newif\ifHy@pdfpagehidden
409 \newif\ifHy@pdfstring
410 \newif\ifHy@plainpages
411 \newif\ifHy@psize
412 \newif\ifHy@raiselinks
413 \newif\ifHy@seminarslides
414 \newif\ifHy@setpagesize
415 \newif\ifHy@texht
416 \newif\ifHy@toolbar
417 \newif\ifHy@unicode
418 \newif\ifHy@usetitle
419 \newif\ifHy@verbose
420 \newif\ifHy@windowui
421 \newif\ifHy@displaydoctitle
422 \newif\ifHy@pdfa

```

Defaults for the switches are now set.

```

423 \Hy@backreffalse
424 \Hy@bookmarksnumberedfalse
425 \Hy@bookmarksopenfalse
426 \Hy@bookmarkstrue
427 \Hy@breaklinksfalse
428 \Hy@centerwindowfalse
429 \Hy@CJKbookmarksfalse
430 \Hy@escapeformfalse
431 \Hy@figuresfalse
432 \Hy@fitwindowfalse
433 \Hy@hyperfootnotetrue
434 \Hy@hyperindextrue
435 \Hy@hypertextnamestrue
436 \Hy@implicittrue
437 \Hy@linktocpagefalse
438 \Hy@localanchornamefalse
439 \Hy@menubartrue
440 \Hy@naturalnamesfalse
441 \Hy@nestingfalse
442 \Hy@newwindowsetfalse
443 \Hy@newwindowfalse
444 \Hy@pageanchortrue
445 \Hy@pagelabelstrue
446 \Hy@pdfpagehiddenfalse
447 \Hy@pdfstringfalse
448 \Hy@plainpagesfalse
449 \Hy@raiselinksfalse
450 \Hy@setpagesizetrue
451 \Hy@texhtfalse
452 \Hy@toolbartrue
453 \Hy@typexmlfalse
454 \Hy@unicodefalse

```



```

455 \Hy@usetitlefalse
456 \Hy@verbosefalse
457 \Hy@windowuitrue
458 \Hy@displaydoctitlefalse
459 \Hy@pdfafalse

```

5 Common help macros

`\Hy@StepCount`

```

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

```

`\Hy@GlobalStepCount`

```

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

```

```

462 \newdimen\@linkdim
463 \let\Hy@driver\@empty
464 \let\MaybeStopEarly\relax
465 \newcount\Hy@linkcounter
466 \newcount\Hy@pagecounter
467 \Hy@linkcounter0
468 \Hy@pagecounter0

```

5.1 Macros for recursions

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

```

469 \long\def\Hy@ReturnAfterElseFi#1\else#2\fi{\fi#1}
470 \long\def\Hy@ReturnAfterFi#1\fi{\fi#1}

471 \let\Hy@ReturnEnd\@empty
472 \long\def\Hy@ReturnAfterFiFiEnd#1\fi#2\Hy@ReturnEnd{\fi\fi#1}
473 \long\def\Hy@ReturnAfterElseFiFiEnd#1\else#2\Hy@ReturnEnd{\fi\fi#1}

```

5.2 Babel's protection of shorthand characters

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

```

474 \def\Hy@safe@activetrue{\csname @safe@activetrue\endcsname}
475 \def\Hy@safe@activesfalse{\csname @safe@activesfalse\endcsname}

```

5.3 Coordinate transformations

At some places numbers in pdf units are expected (eg: FitBH, ...). The following macros perform the transformation from TeX units (pt) to PDF units (bp).

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

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

- It cannot be used inside `\usepackage`, because LaTeX expands the options before package `hyperref` is loaded and `\hypercalsbp` is defined.
- With e-TeX extensions an expandable implementation is very easy; `\hypercalsbp` can be used everywhere and is expanded at use.
- Without e-TeX's features `\hypercalsbp` cannot be implemented expandable (practically) and have to be supported by `\hypercalsbpdef`. Limitations:

- Works only in options that use `\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
476 \begingroup\expandafter\expandafter\expandafter\endgroup
477 \expandafter\ifx\csname dimexpr\endcsname\relax
478   \def\hypercalcbpdef#1#2{%
479     \begingroup
480       \toks@{}%
481       \HyCal@scan#2\hypercalcbp\@nil
482       \expandafter\endgroup
483       \expandafter\def\expandafter#1\expandafter{\the\toks@}%
484     }%
485   \def\HyCal@scan#1\hypercalcbp#2\@nil{%
486     \toks@\expandafter{\the\toks@ #1}%
487     \ifx\#2\%
488       \else
489         \Hy@ReturnAfterFi{%
490           \HyCal@do#2\@nil
491         }%
492       \fi
493     }%
494   \def\HyCal@do#1#2\@nil{%
495     \ifpackageloaded{calc}{}%
496     \Hy@Warning{%
497       For calculations \string\hypercalcbp\space needs\MessageBreak
498       package calc or e-TeX%
499     }%
500   }%
501   \setlength{\dimen@}{#1}%
502   \setlength{\dimen@}{0.99626401\dimen@}%
503   \edef\x{%
504     \toks@{}%
505     \the\toks@
506     \strip@pt\dimen@
507   }%
508   \x
509   \HyCal@scan#2\@nil
510 }%
511 \else
512   \def\hypercalcbp#1{%
513     \strip@pt\dimexpr 0.99626401\dimexpr #1\relax\relax
514   }%
515   \def\hypercalcbpdef{\def}%
516 \fi

```

6 Dealing with PDF strings

The PDF string stuff done by Heiko Oberdiek.

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

6.1 Description of PDF strings

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

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

<code>\\</code>	the backslash itself
<code>\), \((</code>	unbalanced parentheses
<code>\n, \r, \t, \b, \f</code>	special white space escape sequences
<code>\ddd</code>	octal character code <i>ddd</i>
- Strings are stored either in PDFDocEncoding, which is a superset of ISO Latin1 and is compatible with Unicode with character codes below 256, or in Unicode.

6.2 Definition of `\pdfstringdef`

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

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

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

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

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

- The result should obey the rules of the PDF specification for strings.
- The string can safely be processed by \TeX , because the tokens have only catcodes 10 until 12.

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

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

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

```
518 \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.

```
519 \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.

```
520 \edef\0{\string\0}%
521 \edef\1{\string\1}%
522 \edef\2{\string\2}%
523 \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.

```
524 \ifHy@unicode
525 \edef\8{\string\8}%
526 \edef\9{\string\9}%
527 \fontencoding{PU}%
528 \HyPsd@UTFviii
529 \def\ifpdfstringunicode###1##2{##1}%
530 \else
531 \fontencoding{PD1}%
532 \def\ifpdfstringunicode###1##2{##2}%
533 \fi
534 \let\utf@viii@undeferr\HyPsd@utf@viii@undeferr
535 \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).

```
536 \@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).

```
537 \let\@inmathwarn\HyPsd@inmathwarn
```

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

```
538 \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.

```
539 \let\{\textbraceleft
540 \let\}\textbraceright
541 \let\\\textbackslash
542 \let\#\textnumbersign
543 \let\$\textdollar
544 \let\%\textpercent
545 \let\&\textampersand
546 % \let\~\textasciitilde
547 \let\_ \textunderscore
548 \let\textP\textparagraph
549 \let\ldots\textellipsis
550 \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.

```
551 \def\{\pdfstringdefWarn\}%
552 \def\newline{\pdfstringdefWarn\newline}%
```

Logos. Because the box shifting used in the T_EX logo does not work while writing to a file, the standard T_EX logos are redefined.

```
553 \def\TeX{\TeX}%
554 \def\LaTeX{\LaTeX}%
555 \def\LaTeXe{\LaTeXe}%
556 \def\LaTeX2{\LaTeX2}%
557 \ifHy@unicode\textepsilon\else e\fi
558 }%
559 \def\TeX{\TeX}%
560 \ifHy@unicode\textepsilon\else e\fi
561 -\TeX%
562 }%
563 \def\SliTeX{\SliTeX}%
564 \def\MF{Metafont}%
565 \def\MP{Metapost}%
```

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

```

566 \let\fontencoding\@gobble
567 \let\fontfamily\@gobble
568 \let\fontseries\@gobble
569 \let\fontshape\@gobble
570 \let\fontsize\@gobbletwo
571 \let\selectfont\@empty
572 \let\usefont\@gobblefour
573 \let\emph\@firstofone
574 \let\textnormal\@firstofone
575 \let\textrm\@firstofone
576 \let\textsf\@firstofone
577 \let\texttt\@firstofone
578 \let\textbf\@firstofone
579 \let\textmd\@firstofone
580 \let\textit\@firstofone
581 \let\textsc\@firstofone
582 \let\textsl\@firstofone
583 \let\textup\@firstofone
584 \let\normalfont\@empty
585 \let\rmfamily\@empty
586 \let\sffamily\@empty
587 \let\ttfamily\@empty
588 \let\bfseries\@empty
589 \let\mdseries\@empty
590 \let\itshape\@empty
591 \let\scshape\@empty
592 \let\slshape\@empty
593 \let\upshape\@empty
594 \let\em\@empty
595 \let\rm\@empty
596 \let\Huge\@empty
597 \let\LARGE\@empty
598 \let\Large\@empty
599 \let\footnotesize\@empty
600 \let\huge\@empty
601 \let\large\@empty
602 \let\normalsize\@empty
603 \let\scriptsize\@empty
604 \let\small\@empty
605 \let\tiny\@empty
606 \let\mathversion\@gobble
607 \let\phantom\@gobble
608 \let\vphantom\@gobble
609 \let\hphantom\@gobble

```

Package color.

```

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

```

Upper- and lowercase.

```

611 \def\MakeUppercase{\MakeUppercaseUnsupportedInPdfStrings}%
612 \def\MakeLowercase{\MakeLowercaseUnsupportedInPdfStrings}%

```

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

```

613 \let\textlatin\@firstofone
614 \let\IfUndefined{language@group}{-}{%
615 \csname HyPsd@babel@language@group\endcsname
616 }%
617 \HyPsd@GreekPatch
618 \HyPsd@SpanishPatch
619 \HyPsd@RussianPatch
620 \HyPsd@BabelPatch
621 \let\@safe@activestrue\relax
622 \let\@safe@activesfalse\relax

```

Disable `\cyr`, used in `russianb.ldf`.

```

623 \let\cyr\relax

```

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

```

624 \let\es@roman\@Roman

```

Package german.

```

625 \let\glqq\textglqq
626 \let\grqq\textgrqq
627 \let\glq\textglq
628 \let\grq\textgrq
629 \let\flqq\textflqq
630 \let\frqq\textfrqq
631 \let\flq\textflq
632 \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}

```

```

633 \let\if@mid@expandable\@firstoftwo

```

AMS classes.

```

634 \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.

```

635 \let\hspace\HyPsd@hspace

```

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

```

636 \let\label\@gobble
637 \let\index\@gobble
638 \let\glossary\@gobble
639 \let\href\HyPsd@href
640 \let\@mkboth\@gobbletwo

```

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

```
641 \let\ref\HyPsd@ref
642 \let\pageref\HyPsd@pageref
643 \let\nameref\HyPsd@nameref
644 \let\autoref\HyPsd@autoref
```

Miscellaneous commands.

```
645 \let\leavevmode\@empty
646 \let\mbox\@empty
```

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

```
647 \def\halign{\pdfstringdefWarn\halign\@gobble}%
648 \let\ignorespaces\HyPsd@ignorespaces
649 \let\Hy@SectionAnchorHref\@gobble
```

Patch for cjk bookmarks.

```
650 \HyPsd@CJKhook
```

User hook. The switch `\Hy@pdfstring` is turned on. So user commands can detect that they are processed not to be typesetted within \TeX 's stomach, but to be expanded by the mouth to give a PDF string. At this place before interpreting the string in `#2` additional redefinitions can be added by the hook `\pdfstringdefPreHook`.

The position in the middle of the redefinitions is a compromise: The user should be able to provide his own (perhaps better) redefinitions, but some commands should have their original meaning, because they can be used in the hook (`\bgroup`, or `\@protected@testopt`, and `\@ifnextchar` for `\renewcommand`).

```
651 \Hy@pdfstringtrue
652 \pdfstringdefPreHook
```

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

```
653 \HyPsd@LetUnexpandableSpace\space
654 \HyPsd@LetUnexpandableSpace\ %
655 \HyPsd@LetUnexpandableSpace~%
656 \HyPsd@LetUnexpandableSpace\nobreakspace
```

Package xspace.

```
657 \ltx@ifundefined{@xspace}{%
658 \let\xspace\HyPsd@ITALCORR
659 }{%
660 \let\xspace\HyPsd@XSPACE
661 }%
662 \let\/\HyPsd@ITALCORR
663 \let\bgroup\/%
664 \let\egroup\/%
```

Redefinitions of miscellaneous commands. Hyphenation does not make sense.

```
665 \let\discretionary\@gobbletwo
```

`\@ifstar` is defined in \LaTeX as follows:

```
\def\@ifstar#1{\@ifnextchar *{\@firstoftwo{#1}}}
```


`\@ifnextchar` doesn't work, because it uses stomach commands like `\let` and `\futurelet`. But it doesn't break. Whereas `\@firstoftwo{#1}` gives an error message because `\@firstoftwo` misses its second argument.

A mimicry of `\@ifnextchar` only with expandible commands would be very extensive and the result would be only an approximation. So here a cheaper solution follows in order to get rid of the error message at least:

```
666 \def\@ifnextchar{\HyPsd@ifnextchar\@ifnextchar}%
667 \def\kernel@ifnextchar{\HyPsd@ifnextchar\kernel@ifnextchar}%
668 \def\new@ifnextchar{\HyPsd@ifnextchar\new@ifnextchar}%
669 \let\@protected@testopt\HyPsd@protected@testopt
```

Support for package 'xargs':

```
670 \let\@protected@testopt\xargs\HyPsd@protected@testopt
```

6.2.2 Expansion

There are several possibilities to expand tokens within \LaTeX :

`\protected@edef`: The weakest form isn't usable, because it does not expand the font encoding commands. They are made robust and protect themselves.

`\csname`: First the string is expanded within a `\csname` and `\endcsname`. Then the command name is converted to characters with catcode 12 by `\string` and the first escape character removed by `\@gobble`. This method has the great *advantage* that stomach tokens that aren't allowed in PDF strings are detected by \TeX and reported as errors in order to force the user to write correct things. So he get no wrong results by forgetting the proofreading of his text. But the *disadvantage* is that old wrong code cannot processed without errors. Mainly the error message is very cryptic and for the normal user hard to understand. \TeX provides no way to catch the error caused by `\csname` or allows to support the user with a descriptive error message. Therefore the experienced user had to enable this behaviour by an option `exactdef` in previous versions less or equal 6.50.

`\edef` This version uses this standard form for expansion. It is stronger than \LaTeX 's `\protected@edef`. So the font encoding mechanism works and the glyph commands are converted to the correct tokens for PDF strings with the definitions of the PD1 encoding. Because the protecting mechanism of \LaTeX doesn't work within an `\edef`, there are situations thinkable where code can break. For example, assignments and definitions aren't performed and so undefined command errors or argument parsing errors can occur. But this is only a compatibility problem with old texts. Now there are possibilities to write code that gives correct PDF strings (see `\texorpdfstring`). In the most cases unexpandable commands and tokens (math shift, grouping characters) remains. They don't cause an error like with `\csname`. However a PDF reader isn't \TeX , so these tokens are viewed verbatim. So this version detects them now, and removes them with an descriptive warning for the user. As additional features `xspace` support is possible and grouping characters can be used without problems, because they are removed silently.

Generic messages. While expanding via `\xdef` the `\Generic...` messages don't work and causes problems (error messages, invalid .out file). So they are disabled while expanding and removed silently, because a user warning would be too expensive (memory and runtime, `\pdfstringdef` is slow enough).

```
671 \begingroup
672 \let\GenericError\@gobblefour
673 \let\GenericWarning\@gobbletwo
```

```
674 \let\GenericInfo\@gobbletwo
```

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

```
675 \ifx\nofrenchguillemets\@undefined
676 \else
677 \nofrenchguillemets
678 \fi
```

Definition commands and expansion. Redefining the defining commands (see sec. 6.5.12). The original meaning of `\xdef` is saved in `\Hy@temp`.

```
679 \let\Hy@temp\xdef
680 \let\def\HyPsd@DefCommand
681 \let\gdef\HyPsd@DefCommand
682 \let\edef\HyPsd@DefCommand
683 \let\xdef\HyPsd@DefCommand
684 \let\futurelet\HyPsd@LetCommand
685 \let\let\HyPsd@LetCommand
686 \Hy@temp#1{#2}%
687 \endgroup
```

6.2.3 Postprocessing

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

```
688 \ifx#1\@empty
689 \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.

```
690 \HyPsd@ProtectSpaces#1%
691 \let\HyPsd@String\@empty
692 \expandafter\HyPsd@RemoveBraces\expandafter{#1|}%
693 \global\let#1\HyPsd@String
```

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

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

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

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

```

694 \let\HyPsd@SPACEOPTI\relax
695 {%
696 \let\HyPsd@String\@empty
697 \expandafter\HyPsd@CheckCatcodes#1\HyPsd@end
698 \global\let#1\HyPsd@String
699 }%
700 \expandafter\HyPsd@RemoveMask\expandafter
701 | \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.

```

702 \expandafter\HyPsd@Subst\expandafter{\HyPsd@GLYPHERR}{\relax}#1%
703 \let\HyPsd@String\@empty
704 \expandafter\HyPsd@GlyphProcess#1\relax\@empty
705 \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.

```
706 \HyPsd@StringSubst{\}{\textbackslash}#1%
```

Spaces. All spaces have already the form `\040`. The last postprocessing step will be an optimizing of the spaces, so we already introduce already the necessary command `\HyPsd@SPACEOPTI`. But first it is defined to be `\relax` in order to prevent a too early expansion by an `\edef`. Secondly a `\relax` serves as a marker for a token that is detected by `\xspace`.

The code of `frenchb.ldf` can produce an additional space before `\guillemotright`, because `\lastskip` and `\unskip` do not work. Therefore it is removed here.

```

707 \ifHy@unicode
708 \expandafter\HyPsd@StringSubst\csname 80\040\endcsname
709 \HyPsd@SPACEOPTI#1%
710 \edef\Hy@temp@A{\HyPsd@SPACEOPTI\HyPsd@SPACEOPTI\80\273}%
```

```

711 \expandafter\HyPsd@Subst\expandafter{\Hy@temp@A}%
712 {\HyPsd@SPACEOPTI\80\273}#1%
713 \else
714 \HyPsd@StringSubst{\040}\HyPsd@SPACEOPTI#1%
715 \expandafter\HyPsd@Subst\expandafter{%
716 \expandafter\HyPsd@SPACEOPTI\expandafter\HyPsd@SPACEOPTI
717 \string\273}{\HyPsd@SPACEOPTI\273}#1%
718 \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.

```

719 \ifHy@unicode
720 \HyPsd@StringSubst{\}){\80\051}#1%
721 \HyPsd@Subst){\80\051}#1%
722 \let\HyPsd@empty\relax
723 \expandafter\HyPsd@StringSubst\csname 80\051\endcsname
724 {\HyPsd@empty\80\051}#1%
725 \else
726 \HyPsd@StringSubst{\}){\051}#1%
727 \HyPsd@Subst){\051}#1%
728 \let\HyPsd@empty\relax
729 \HyPsd@StringSubst{\051}{\HyPsd@empty\string\)}#1%
730 \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`.

```

731 \expandafter\HyPsd@Subst\expandafter{\}/\HyPsd@empty#1%
732 \ltx@ifundefined{@xspace}{%
733 }{%
734 \let\HyPsd@xspace\relax
735 \expandafter\HyPsd@Subst\expandafter
736 {\HyPsd@XSPACE}\HyPsd@xspace#1%
737 \let\HyPsd@xspace\HyPsd@doxspace
738 }%
739 \xdef#1{#1\HyPsd@empty}%

```

Ligatures. \TeX forms ligatures in its stomach, but the PDF strings are treated only by \TeX 's mouth. The `PDFDocEncoding` contains some ligatures, but the current version 3 of the `AcrobatReader` lacks the `fi` and `fl` glyphs, and the Linux version lacks the `emdash` and `endash` glyphs. So the necessary code is provided here, but currently disabled, hoping that version 4 of the `AcrobatReader` is better. To break the ligatures the user can use

an empty group, because it leads to an insertion of an `\HyPsd@empty`. If this ligature code will be enabled some day, then the italic correction should also break the ligatures. Currently this occurs only, if package `xspace` is loaded.

Since newer AcrobatReader versions now show the en- and emdash in a correct way (AR7/Linux, AR8/Linux), the substitution code for them is enabled starting with version 6.78l.

```

740 \HyPsd@Subst{---}\textemdash#1%
741 \HyPsd@Subst{--}\textendash#1%
742 % \HyPsd@Subst{fi}\textfi#1%
743 % \HyPsd@Subst{fl}\textfl#1%
744 \HyPsd@Subst{!'}\textexclamdown#1%
745 \HyPsd@Subst{?'}\textquestiondown#1%
```

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

```

746 \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.

```

747 \ifHy@unicode
748 \HyPsd@StringSubst\(\textparenleft#1%
749 \HyPsd@Subst(\textparenleft#1%
750 \else
751 \HyPsd@StringSubst\({\050}#1%
752 \HyPsd@Subst({\050}#1%
753 \HyPsd@StringSubst{\050}{\string\{ }#1%
754 \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.

```

755 \ifHy@unicode
756 \edef\HyPsd@SPACEOPTI{\80\040}%
757 \else
758 \let\HyPsd@SPACEOPTI\HyPsd@spaceopti
759 \fi
760 \xdef#1{#1\@empty}%
761 \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.

```

762 \endgroup
763 \begingroup
764 \ifHy@unicode
765 \HyPsd@ConvertToUnicode#1%
```

Try conversion back to PDFDocEncoding.

```

766 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
767 \ltx@ifundefined{StringEncodingConvertTest}{%
768 }{%
769 \EdefUnescapeString\HyPsd@temp#1%
```

```

770 \ifxetex
771 \let\HyPsd@UnescapedString\HyPsd@temp
772 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
773 {utf16be}{ascii-print}{%
774 \EdefEscapeString\HyPsd@temp\HyPsd@temp
775 \global\let#1\HyPsd@temp
776 \HyPsd@EscapeTeX#1%
777 \Hy@unicodfalse
778 }{%
779 \HyPsd@ToBigChars#1%
780 }%
781 \else
782 \StringEncodingConvertTest\HyPsd@temp\HyPsd@temp
783 {utf16be}{pdfdoc}{%
784 \EdefEscapeString\HyPsd@temp\HyPsd@temp
785 \global\let#1\HyPsd@temp
786 \HyPsd@EscapeTeX#1%
787 \Hy@unicodfalse
788 }{ }%
789 \fi
790 }%
791 \fi
792 \fi
793 \HyPsd@XeTeXBigCharsfalse

```

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

```

794 \pdfstringdefPostHook#1%
795 \endgroup
796 }

```

`\Hy@pdfstringdef`

```

797 \def\Hy@pdfstringdef#1#2{%
798 \pdfstringdef\Hy@gtemp{#2}%
799 \let#1\Hy@gtemp
800 }

```

6.3 Encodings

6.3.1 XeTeX

```

801 \edef\Hy@temp{\catcode0=\the\catcode0\relax}
802 \catcode\z@=12 %
803 \ifxetex
804 \expandafter\@firstofone
805 \else
806 \let\HyPsd@XeTeXBigCharstrue\@empty
807 \let\HyPsd@XeTeXBigCharsfalse\@empty
808 \expandafter\@gobble
809 \fi
810 {%
811 \newif\ifHyPsd@XeTeXBigChars
812 \def\HyPsd@XeTeXBigCharsfalse{%
813 \global\let\ifHyPsd@XeTeXBigChars\iffalse
814 }%
815 \def\HyPsd@XeTeXBigCharstrue{%
816 \global\let\ifHyPsd@XeTeXBigChars\iftrue

```

```

817 }%
818 \def\HyPsd@ToBigChars#1{%
819 \ifHyPsd@XeTeXBigChars
820 \EdefEscapeHex\HyPsd@UnescapedString{%
821 \expandafter\@gobbletwo\HyPsd@UnescapedString
822 }%
823 \begingroup
824 \toks@{%}%
825 \escapechar=92\relax
826 \let\x\HyPsd@ToBigChar
827 \expandafter\HyPsd@ToBigChar\HyPsd@UnescapedString
828 \relax\relax\relax\relax\relax\relax\relax
829 \edef\x{%
830 \endgroup
831 \gdef\noexpand#1{\the\toks@}%
832 }%
833 \x
834 \fi
835 }%
836 \def\HyPsd@ToBigChar#1#2#3#4{%
837 \ifx\relax#1\relax
838 \let\x\relax
839 \else
840 \count@=#1#2#3#4\relax
841 \let\y\@empty
842 \lccode\z@=\count@
843 \ifnum\count@=40 % (
844 \let\y\@backslashchar
845 \else
846 \ifnum\count@=41 % )
847 \let\y\@backslashchar
848 \else
849 \ifnum\count@=92 % backslash
850 \let\y\@backslashchar
851 \else
852 \ifnum\count@=10 % newline
853 \edef\y##1{\string\n}%
854 \else
855 \ifnum\count@=13 % carriage return
856 \edef\y##1{\string\r}%
857 \fi
858 \fi
859 \fi
860 \fi
861 \fi
862 \lowercase{%
863 \toks@\expandafter{%
864 \the\expandafter\toks@
865 \y
866 ^^@%
867 }%
868 }%
869 \fi
870 \x
871 }%
872 }
873 \Hy@temp

```

6.3.2 Workaround for package linguex

```

874 \@ifpackageloaded{linguex}{%
875   \let\HyLinguex@OrgB\b
876   \let\HyLinguex@OrgC\c
877   \let\HyLinguex@OrgD\d
878   \def\HyLinguex@Restore{%
879     \let\b\HyLinguex@OrgB
880     \let\c\HyLinguex@OrgC
881     \let\d\HyLinguex@OrgD
882   }%
883   \Hy@AtEndOfPackage{%
884     \pdfstringdefDisableCommands{%
885       \let\IfUndefined{oldb}{\let\b\oldb}%
886       \let\IfUndefined{oldc}{\let\c\oldc}%
887       \let\IfUndefined{oldd}{\let\d\oldd}%
888     }%
889   }%
890 }{%
891   \let\HyLinguex@Restore\relax
892 }%

```

6.3.3 PD1 encoding

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

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

```

893 \@ifundefined{T@PD1}{%
894   \input{pd1enc.def}%
895   \HyLinguex@Restore
896 }{}
897 \DeclareFontFamily{PD1}{pdf}{}
898 \DeclareFontShape{PD1}{pdf}{m}{n}{ <-> cmr10 }{}
899 \DeclareFontSubstitution{PD1}{pdf}{m}{n}

```

6.3.4 PU encoding

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

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

```

900 \def\HyPsd@InitUnicode{%
901   \@ifundefined{T@PU}{%
902     \input{puenc.def}%
903     \HyLinguex@Restore
904   }{}%
905   \DeclareFontFamily{PU}{pdf}{}%
906   \DeclareFontShape{PU}{pdf}{m}{n}{ <-> cmr10 }{}%
907   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
908   \let\HyPsd@InitUnicode\relax
909 }

```


6.4 Additional user commands

6.4.1 `\texorpdfstring`

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

```

910 \def\texorpdfstring{%
911   \ifHy@pdfstring
912     \expandafter\@secondoftwo
913   \else
914     \expandafter\@firstoftwo
915   \fi
916 }
```

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`.

```

917 \@ifundefined{pdfstringdefPreHook}{%
918   \let\pdfstringdefPreHook\empty
919 }{}
920 \@ifundefined{pdfstringdefPostHook}{%
921   \let\pdfstringdefPostHook\@gobble
922 }{}
```

`\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`.

```

923 \def\pdfstringdefDisableCommands{%
924   \begingroup
925     \makeatletter
926     \HyPsd@DisableCommands
927 }
```

`\HyPsd@DisableCommands`

```

928 \long\def\HyPsd@DisableCommands#1{%
929   \toks0=\expandafter{\pdfstringdefPreHook}%
930   \toks1={#1}%
931   \xdef\pdfstringdefPreHook{\the\toks0 \the\toks1}%
932 \endgroup
933 }
```

`\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`.

```
934 \def\pdfstringdefWarn#1{%
935   \expandafter\noexpand\csname<>-string#1\endcsname
936 }
```

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.

```
937 \begingroup
938   \catcode0=12 %
939   \def\x{\endgroup
940     \def\HyPsd@ignorespaces{%
941       \romannumeral\expandafter'\expandafter^^@%
942       \romannumeral'^^@%
943     }%
944   }%
945 \x
```

6.5.2 Babel languages

Since version 2008/03/16 v3.8j babel uses inside `\AtBeginDocument`:

```
\pdfstringdefDisableCommands{%
  \languageshorthands{system}%
}
```

As consequence the shorthands are shown in the bookmarks, not its result. Therefore `\languageshorthands` is disabled before the user hook. If there is a need to use the command, then `\HyOrg@languageshorthands` can be used inside `\pdfstringdefDisableCommands`.

```
946 \def\HyPsd@BabelPatch{%
947   \let\HyOrg@languageshorthands\languageshorthands
948   \let\languageshorthands\HyPsd@LanguageShorthands
949 }
950 \RequirePackage{pdftexcmds}[2009/04/10]
951 \begingroup\expandafter\expandafter\expandafter\endgroup
952 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
953   \let\HyPsd@langshort@system\@empty
954   \def\HyPsd@LanguageShorthands#1{%
955     \expandafter\ifx\csname HyPsd@langshort@#1\endcsname
956       \HyPsd@langshort@system
957     \expandafter\@gobble
958   \else
```

```

959 \expandafter\@firstofone
960 \fi
961 {%
962 \HyOrg@languageshorthands{#1}%
963 }%
964 }%
965 \else
966 \def\HyPsd@LanguageShorthands#1{%
967 \ifnum\pdf@strcmp{#1}{system}=\z@
968 \expandafter\@gobble
969 \else
970 \expandafter\@firstofone
971 \fi
972 {%
973 \HyOrg@languageshorthands{#1}%
974 }%
975 }%
976 \fi
977 \def\Hy@temp{%
978 \@ifpackageloaded{babel}{%
979 \@ifpackagelater{babel}{2008/03/16}{%
980 \let\Hy@temp\@empty
981 }{%
982 \def\HyPsd@BabelPatch{%
983 \let\HyOrg@languageshorthands\languageshorthands
984 }%
985 }%
986 }{}%
987 }
988 \Hy@temp
989 \expandafter\Hy@AtBeginDocument\expandafter{\Hy@temp}
990 \newif\ifHy@next

Nothing to do for english.
991 \ltx@ifundefined{danish@sh@@"@sel}{-}{%
992 \def\HyPsd@babel@danish{%
993 \declare@shorthand{danish}{-}{-}%
994 \declare@shorthand{danish}{-}{-}%
995 }%
996 }
997 \ltx@ifundefined{dutch@sh@@"@sel}{-}{%
998 \def\HyPsd@babel@dutch{%
999 \declare@shorthand{dutch}{-}{-}%
1000 \declare@shorthand{dutch}{-}{-}%
1001 }%
1002 }
1003 \ltx@ifundefined{finnish@sh@@"@sel}{-}{%
1004 \def\HyPsd@babel@finnish{%
1005 \declare@shorthand{finnish}{-}{-}%
1006 }%
1007 }
1008 \ltx@ifundefined{french@sh@@"@sel}{-}{%
1009 \def\HyPsd@babel@frenchb{%
1010 \def\guill@spacing{ }%
1011 }%
1012 }
1013 \ltx@ifundefined{german@sh@@"@sel}{-}{%

```

```

1014 \def\HyPsd@babel@german{%
1015   \declare@shorthand{german}{f}{f}%
1016   \declare@shorthand{german}{"}{|}%
1017   \declare@shorthand{german}{"}~}{-}%
1018 }%
1019 }
1020 \ltx@ifundefined{macedonian@sh@"@sel}{%}{%
1021   \def\HyPsd@babel@macedonian{%
1022     \declare@shorthand{macedonian}{"}{|}%
1023     \declare@shorthand{macedonian}{"}~}{-}%
1024   }%
1025 }{}
1026 \ltx@ifundefined{ngerman@sh@"@sel}{%}{%
1027   \def\HyPsd@babel@ngerman{%
1028     \declare@shorthand{ngerman}{"}{|}%
1029     \declare@shorthand{ngerman}{"}~}{-}%
1030   }%
1031 }
1032 \ltx@ifundefined{portuges@sh@"@sel}{%}{%
1033   \def\HyPsd@babel@portuges{%
1034     \declare@shorthand{portuges}{"}{|}%
1035   }%
1036 }
1037 \ltx@ifundefined{russian@sh@"@sel}{%}{%
1038   \def\HyPsd@babel@russian{%
1039     \declare@shorthand{russian}{"}{|}%
1040     \declare@shorthand{russian}{"}~}{-}%
1041   }%
1042 }
1043 \ltx@ifundefined{slovene@sh@"@sel}{%}{%
1044   \def\HyPsd@babel@slovene{%
1045     \declare@shorthand{slovene}{"}{|}%
1046   }%
1047 }

```

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

```

1048 \ltx@ifundefined{spanish@sh@>@sel}{%}{%
1049   \def\HyPsd@babel@spanish{%
1050     \declare@shorthand{spanish}{<<}{\guillemotleft}%
1051     \declare@shorthand{spanish}{>>}{\guillemotright}%
1052     \declare@shorthand{spanish}{"}=}{-}%
1053     \declare@shorthand{spanish}{"}~}{-}%
1054     \declare@shorthand{spanish}{"}!}{\textexclamdown}%
1055     \declare@shorthand{spanish}{"}?}{\textquestiondown}%
1056   }%
1057 }
1058 \ltx@ifundefined{swedish@sh@"@sel}{%}{%
1059   \def\HyPsd@babel@swedish{%
1060     \declare@shorthand{swedish}{"}{|}%
1061     \declare@shorthand{swedish}{"}~}{-}%
1062   }%
1063 }
1064 \ltx@ifundefined{ukrainian@sh@"@sel}{%}{%
1065   \def\HyPsd@babel@ukrainian{%
1066     \declare@shorthand{ukrainian}{"}{|}%
1067     \declare@shorthand{ukrainian}{"}~}{-}%
1068   }%
1069 }

```

```

1070 \ltx@ifundefined{usorbian@sh@{sel}}{}{}%
1071 \def\HyPsd@babel@usorbian{%
1072 \declare@shorthand{usorbian}{f}{f}%
1073 \declare@shorthand{usorbian}{|}{|}%
1074 }%
1075 }

1076 \ltx@ifundefined{greek@sh@string~@sel}{}%
1077 \let\HyPsd@GreekPatch\@empty
1078 }{}%
1079 \def\HyPsd@GreekPatch{%
1080 \let\greeknumeral\HyPsd@greeknumeral
1081 \let\Greeknnumeral\HyPsd@Greeknnumeral
1082 }%
1083 }

1084 \def\HyPsd@greeknumeral#1{%
1085 \HyPsd@GreekNum\@firstoftwo{#1}%
1086 }

1087 \def\HyPsd@Greeknnumeral#1{%
1088 \HyPsd@GreekNum\@secondoftwo{#1}%
1089 }

1090 \def\HyPsd@GreekNum#1#2{%
1091 \ifHy@unicode
1092 \ifnum#2<\@ne
1093 \@arabic{#2}%
1094 \else
1095 \ifnum#2<1000000 %
1096 \HyPsd@@GreekNum#1{#2}%
1097 \else
1098 \@arabic{#2}%
1099 \fi
1100 \fi
1101 \else
1102 \@arabic{#2}%
1103 \fi
1104 }

1105 \def\HyPsd@@GreekNum#1#2{%
1106 \ifnum#2<\@m
1107 \ifnum#2<10 %
1108 \expandafter\HyPsd@GreekNumI
1109 \expandafter\@gobble\expandafter#1\number#2%
1110 \else
1111 \ifnum#2<100 %
1112 \expandafter\HyPsd@GreekNumII
1113 \expandafter\@gobble\expandafter#1\number#2%
1114 \else
1115 \expandafter\HyPsd@GreekNumIII
1116 \expandafter\@gobble\expandafter#1\number#2%
1117 \fi
1118 \fi
1119 \ifnum#2>\z@
1120 \textnumeralsigngreek
1121 \fi
1122 \else
1123 \ifnum#2<\@M
1124 \expandafter\HyPsd@GreekNumIV\expandafter#1\number#2%
1125 \else
1126 \ifnum#2<100000 %

```

```

1127 \expandafter\HyPsd@GreekNumV\expandafter#1\number#2%
1128 \else
1129 \expandafter\HyPsd@GreekNumVI\expandafter#1\number#2%
1130 \fi
1131 \fi
1132 \fi
1133 }
1134 \def\HyPsd@GreekNumI#1#2#3{%
1135 #1{%
1136 \ifnum#3>\z@
1137 \textnumeralsignlowergreek
1138 \fi
1139 }%
1140 \expandafter#2%
1141 \ifcase#3 %
1142 {}{}%
1143 \or\textalpha\textAlpha
1144 \or\textbeta\textBeta
1145 \or\textgamma\textGamma
1146 \or\textdelta\textDelta
1147 \or\textepsilon\textEpsilon
1148 \or\textstigmagreek\textStigmagreek
1149 \or\textzeta\textZeta
1150 \or\texteta\textEta
1151 \or\texttheta\textTheta
1152 \else
1153 {}{}%
1154 \fi
1155 }
1156 \def\HyPsd@GreekNumII#1#2#3#4{%
1157 #1{%
1158 \ifnum#3>\z@
1159 \textnumeralsignlowergreek
1160 \fi
1161 }%
1162 \expandafter#2%
1163 \ifcase#3 %
1164 {}{}%
1165 \or\textiota\textIota
1166 \or\textkappa\textKappa
1167 \or\textlambda\textLambda
1168 \or\textmu\textMu
1169 \or\textnu\textNu
1170 \or\textxi\textXi
1171 \or\textomicron\textOmicron
1172 \or\textpi\textPi
1173 \or\textkoppagreek\textKoppagreek
1174 \else
1175 {}{}%
1176 \fi
1177 \HyPsd@GreekNumI#1#2#4%
1178 }
1179 \def\HyPsd@GreekNumIII#1#2#3#4#5{%
1180 #1{%
1181 \ifnum#3>\z@
1182 \textnumeralsignlowergreek
1183 \fi

```

```

1184 }%
1185 \expandafter#2%
1186 \ifcase#3 %
1187 {}{}%
1188 \or\textrho\textRho
1189 \or\textsigma\textSigma
1190 \or\texttau\textTau
1191 \or\textupsilon\textUpsilon
1192 \or\textphi\textPhi
1193 \or\textchi\textChi
1194 \or\textpsi\textPsi
1195 \or\textomega\textOmega
1196 \or\textsampigreek\textSampigreek
1197 \else
1198 {}{}%
1199 \fi
1200 \HyPsd@GreekNumII#1#2#4#5%
1201 }
1202 \def\HyPsd@GreekNumIV#1#2#3#4#5{%
1203 \HyPsd@GreekNumI\@firstofone#1#2%
1204 \HyPsd@@GreekNum#1{#3#4#5}%
1205 }
1206 \def\HyPsd@GreekNumV#1#2#3#4#5#6{%
1207 \HyPsd@GreekNumII\@firstofone#1#2#3%
1208 \HyPsd@@GreekNum#1{#4#5#6}%
1209 }
1210 \def\HyPsd@GreekNumVI#1#2#3#4#5#6#7{%
1211 \HyPsd@GreekNumIII\@firstofone#1#2#3#4%
1212 \HyPsd@@GreekNum#1{#5#6#7}%
1213 }

1214 \def\HyPsd@SpanishPatch{%
1215 \ltx@ifundefined{es@save@dot}{%
1216 }{%
1217 \let\.\es@save@dot
1218 }%
1219 }

```

Shorthand "- of 'russianb.ldf' is not expandable, therefore it is disabled and replaced by -.

```

1220 \def\HyPsd@RussianPatch{%
1221 \ltx@ifundefined{russian@sh@"@-@}{%
1222 }{%
1223 \@namedef{russian@sh@"@-@}{-}%
1224 }%
1225 }

```

6.5.3 CJK patch

```

1226 \RequirePackage{intcalc}[2007/09/27]

```

\HyPsd@CJKhook

```

1227 \def\HyPsd@CJKhook{%
1228 \ltx@ifpackageloaded{CJK}{%
1229 \let\CJK@kern\relax
1230 \let\CJKkern\relax
1231 \let\CJK@CJK\relax
1232 \ifHy@CJKbookmarks

```

```

1233 \HyPsd@CJKhook@bookmarks
1234 \fi
1235 \HyPsd@CJKhook@unicode
1236 }{}%
1237 }

```

6.5.4 CJK bookmarks

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

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

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

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

```

1238 \begingroup
1239 \catcode"7F=\active
1240 \toks@{}%
1241 \let\CJK@ignorespaces\empty
1242 \def\CJK@char#1{\@gobbletwo}%
1243 \let\CJK@charx\@gobblefour
1244 \let\CJK@punctchar\@gobblefour
1245 \def\CJK@punctcharx#1{\@gobblefour}%
1246 \catcode"7F=\active
1247 \def^^7f#1^^7f#2^^7f{%
1248   \string #1\HyPsd@DecimalToOctal{#2}%
1249 }%
1250 % ... ?
1251 \ifHy@unicode
1252   \def\Hy@cjkpu{\80}%
1253 \else
1254   \let\Hy@cjkpu\@empty
1255 \fi
1256 \HyPsd@CJKActiveChars
1257 }%
1258 \count@=127 %
1259 \@whilenum\count@<255 \do{%
1260   \advance\count@ by 1 %
1261   \lccode'\~=\count@
1262   \lowercase{%
1263     \toks@\expandafter{\the\toks@ ~}%
1264   }%
1265 }%
1266 \toks@\expandafter{\the\toks@ !}%
1267 \xdef\HyPsd@CJKhook@bookmarks{%
1268   \the\toks@
1269 }%
1270 \endgroup

```

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

```

1271 \def\HyPsd@CJKActiveChars#1{%
1272   \ifx#1!%
1273     \let\HyPsd@CJKActiveChars\relax

```



```

1274 \else
1275 \edef#1{\noexpand\Hy@cjkpu\string#1}%
1276 \fi
1277 \HyPsd@CJKActiveChars
1278 }

```

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

```

1279 \def\HyPsd@DecimalToOctal#1{%
1280 \ifcase #1 %
1281 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1282 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1283 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1284 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1285 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1286 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1287 \or 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1288 \or 8\or 9\or \072\or \073\or \074\or \075\or \076\or \077%
1289 \or @\or A\or B\or C\or D\or E\or F\or G%
1290 \or H\or I\or J\or K\or L\or M\or N\or O%
1291 \or P\or Q\or R\or S\or T\or U\or V\or W%
1292 \or X\or Y\or Z\or \133\or \134\or \135\or \136\or \137%
1293 \or \140\or a\or b\or c\or d\or e\or f\or g%
1294 \or h\or i\or j\or k\or l\or m\or n\or o%
1295 \or p\or q\or r\or s\or t\or u\or v\or w%
1296 \or x\or y\or z\or \173\or \174\or \175\or \176\or \177%
1297 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1298 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1299 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1300 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1301 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1302 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1303 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1304 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1305 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1306 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1307 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1308 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1309 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1310 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1311 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1312 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1313 \fi
1314 }

```

6.5.5 CJK unicode

\HyPsd@CJKhook@unicode

```

1315 \def\HyPsd@CJKhook@unicode{%
1316 \let\Unicode\HyPsd@CJK@Unicode
1317 \let\CJKnumber\HyPsd@CJKnumber
1318 \let\CJKdigits\HyPsd@CJKdigits
1319 }

```

\HyPsd@CJK@Unicode

```

1320 \def\HyPsd@CJK@Unicode#1#2{%
1321 \ifnum#1<256 %

```

```

1322 \HyPsd@DecimalToOctalFirst{#1}%
1323 \HyPsd@DecimalToOctalSecond{#2}%
1324 \else
1325 \933%
1326 \expandafter\expandafter\expandafter\HyPsd@HighA
1327 \intcalcDiv{#1}{4}!%
1328 \933%
1329 \ifcase\intcalcMod{#1}{4} %
1330 4\or 5\or 6\or 7%
1331 \fi
1332 \HyPsd@DecimalToOctalSecond{#2}%
1333 \fi
1334 }

1335 \def\HyPsd@HighA#1!{%
1336 \expandafter\expandafter\expandafter\HyPsd@HighB
1337 \IntCalcDiv#1!64!!%
1338 \expandafter\expandafter\expandafter\HyPsd@HighD
1339 \IntCalcMod#1!64!!%
1340 }
1341 \def\HyPsd@HighB#1!{%
1342 \expandafter\expandafter\expandafter\HyPsd@HighC
1343 \IntCalcDec#1!!%
1344 }
1345 \def\HyPsd@HighC#1!{%
1346 \IntCalcDiv#1!4!%
1347 \@backslashchar
1348 \IntCalcMod#1!4!%
1349 }
1350 \def\HyPsd@HighD#1!{%
1351 \ifcase\IntCalcDiv#1!8! %
1352 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1353 \fi
1354 \ifcase\IntCalcMod#1!8! %
1355 0\or 1\or 2\or 3\or 4\or 5\or 6\or 7%
1356 \fi
1357 }
1358 \def\HyPsd@DecimalToOctalFirst#1{%
1359 \9%
1360 \ifcase#1 %
1361 000\or 001\or 002\or 003\or 004\or 005\or 006\or 007%
1362 \or 010\or 011\or 012\or 013\or 014\or 015\or 016\or 017%
1363 \or 020\or 021\or 022\or 023\or 024\or 025\or 026\or 027%
1364 \or 030\or 031\or 032\or 033\or 034\or 035\or 036\or 037%
1365 \or 040\or 041\or 042\or 043\or 044\or 045\or 046\or 047%
1366 \or 050\or 051\or 052\or 053\or 054\or 055\or 056\or 057%
1367 \or 060\or 061\or 062\or 063\or 064\or 065\or 066\or 067%
1368 \or 070\or 071\or 072\or 073\or 074\or 075\or 076\or 077%
1369 \or 100\or 101\or 102\or 103\or 104\or 105\or 106\or 107%
1370 \or 120\or 111\or 112\or 113\or 114\or 115\or 116\or 117%
1371 \or 120\or 121\or 122\or 123\or 124\or 125\or 126\or 127%
1372 \or 130\or 131\or 132\or 133\or 134\or 135\or 136\or 137%
1373 \or 140\or 141\or 142\or 143\or 144\or 145\or 146\or 147%
1374 \or 150\or 151\or 152\or 153\or 154\or 155\or 156\or 157%
1375 \or 160\or 161\or 162\or 163\or 164\or 165\or 166\or 167%
1376 \or 170\or 171\or 172\or 173\or 174\or 175\or 176\or 177%
1377 \or 200\or 201\or 202\or 203\or 204\or 205\or 206\or 207%
1378 \or 210\or 211\or 212\or 213\or 214\or 215\or 216\or 217%

```

```

1379 \or 220\or 221\or 222\or 223\or 224\or 225\or 226\or 227%
1380 \or 230\or 231\or 232\or 233\or 234\or 235\or 236\or 237%
1381 \or 240\or 241\or 242\or 243\or 244\or 245\or 246\or 247%
1382 \or 250\or 251\or 252\or 253\or 254\or 255\or 256\or 257%
1383 \or 260\or 261\or 262\or 263\or 264\or 265\or 266\or 267%
1384 \or 270\or 271\or 272\or 273\or 274\or 275\or 276\or 277%
1385 \or 300\or 301\or 302\or 303\or 304\or 305\or 306\or 307%
1386 \or 310\or 311\or 312\or 313\or 314\or 315\or 316\or 317%
1387 \or 320\or 321\or 322\or 323\or 324\or 325\or 326\or 327%
1388 \or 330\or 331\or 332\or 333\or 334\or 335\or 336\or 337%
1389 \or 340\or 341\or 342\or 343\or 344\or 345\or 346\or 347%
1390 \or 350\or 351\or 352\or 353\or 354\or 355\or 356\or 357%
1391 \or 360\or 361\or 362\or 363\or 364\or 365\or 366\or 367%
1392 \or 370\or 371\or 372\or 373\or 374\or 375\or 376\or 377%
1393 \fi
1394 }
1395 \def\HyPsd@DecimalToOctalSecond#1{%
1396 \ifcase #1 %
1397 \000\or \001\or \002\or \003\or \004\or \005\or \006\or \007%
1398 \or \010\or \011\or \012\or \013\or \014\or \015\or \016\or \017%
1399 \or \020\or \021\or \022\or \023\or \024\or \025\or \026\or \027%
1400 \or \030\or \031\or \032\or \033\or \034\or \035\or \036\or \037%
1401 \or \040\or \041\or \042\or \043\or \044\or \045\or \046\or \047%
1402 \or \050\or \051\or \052\or \053\or \054\or \055\or \056\or \057%
1403 \or \060\or \061\or \062\or \063\or \064\or \065\or \066\or \067%
1404 \or \070\or \071\or \072\or \073\or \074\or \075\or \076\or \077%
1405 \or \100\or \101\or \102\or \103\or \104\or \105\or \106\or \107%
1406 \or \110\or \111\or \112\or \113\or \114\or \115\or \116\or \117%
1407 \or \120\or \121\or \122\or \123\or \124\or \125\or \126\or \127%
1408 \or \130\or \131\or \132\or \133\or \134\or \135\or \136\or \137%
1409 \or \140\or \141\or \142\or \143\or \144\or \145\or \146\or \147%
1410 \or \150\or \151\or \152\or \153\or \154\or \155\or \156\or \157%
1411 \or \160\or \161\or \162\or \163\or \164\or \165\or \166\or \167%
1412 \or \170\or \171\or \172\or \173\or \174\or \175\or \176\or \177%
1413 \or \200\or \201\or \202\or \203\or \204\or \205\or \206\or \207%
1414 \or \210\or \211\or \212\or \213\or \214\or \215\or \216\or \217%
1415 \or \220\or \221\or \222\or \223\or \224\or \225\or \226\or \227%
1416 \or \230\or \231\or \232\or \233\or \234\or \235\or \236\or \237%
1417 \or \240\or \241\or \242\or \243\or \244\or \245\or \246\or \247%
1418 \or \250\or \251\or \252\or \253\or \254\or \255\or \256\or \257%
1419 \or \260\or \261\or \262\or \263\or \264\or \265\or \266\or \267%
1420 \or \270\or \271\or \272\or \273\or \274\or \275\or \276\or \277%
1421 \or \300\or \301\or \302\or \303\or \304\or \305\or \306\or \307%
1422 \or \310\or \311\or \312\or \313\or \314\or \315\or \316\or \317%
1423 \or \320\or \321\or \322\or \323\or \324\or \325\or \326\or \327%
1424 \or \330\or \331\or \332\or \333\or \334\or \335\or \336\or \337%
1425 \or \340\or \341\or \342\or \343\or \344\or \345\or \346\or \347%
1426 \or \350\or \351\or \352\or \353\or \354\or \355\or \356\or \357%
1427 \or \360\or \361\or \362\or \363\or \364\or \365\or \366\or \367%
1428 \or \370\or \371\or \372\or \373\or \374\or \375\or \376\or \377%
1429 \fi
1430 }
1431 \def\HyPsd@CJKNumber#1{%
1432 \ifnum#1<\z@
1433 \CJK@minus
1434 \expandafter\HyPsd@@CJKNumber\expandafter{\number-\number#1}%
1435 \else

```

```

1436 \expandafter\HyPsd@@CJKnumber\expandafter{\number#1}%
1437 \fi
1438 }
1439 \def\HyPsd@@CJKnumber#1{%
1440 \ifcase#1 %
1441 \CJK@zero\or\CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1442 \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine\or
1443 \CJK@ten\or\CJK@ten\CJK@one\or\CJK@ten\CJK@two\or
1444 \CJK@ten\CJK@three\or\CJK@ten\CJK@four\or\CJK@ten\CJK@five\or
1445 \CJK@ten\CJK@six\or\CJK@ten\CJK@seven\or\CJK@ten\CJK@eight\or
1446 \CJK@ten\CJK@nine
1447 \else
1448 \ifnum#1<10000 %
1449 \HyPsd@CJKnumberFour#1!\@empty{20}%
1450 \@empty
1451 \else
1452 \ifnum#1<100000000 %
1453 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1454 \IntCalcDiv#1!10000!%
1455 !\{20}%
1456 \CJK@tenthousand
1457 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1458 \IntCalcMod#1!10000!%
1459 !\CJK@zero{10}%
1460 \@empty
1461 \else
1462 \expandafter\HyPsd@CJKnumberLarge
1463 \number\IntCalcDiv#1!100000000!\expandafter!%
1464 \number\IntCalcMod#1!100000000!!%
1465 \fi
1466 \fi
1467 \fi
1468 }
1469 \def\HyPsd@CJKnumberLarge#1!#2!{%
1470 \HyPsd@CJKnumberFour#1!\{20}%
1471 \CJK@hundredmillion
1472 \ifnum#2=\z@
1473 \else
1474 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1475 \IntCalcDiv#2!10000!%
1476 !\CJK@zero{10}%
1477 \CJK@tenthousand
1478 \expandafter\expandafter\expandafter\HyPsd@CJKnumberFour
1479 \IntCalcMod#2!10000!%
1480 !\CJK@zero{10}%
1481 \@empty
1482 \fi
1483 }
1484 \def\HyPsd@CJKnumberFour#1!#2#3{%
1485 \ifnum#1=\z@
1486 \expandafter\@gobble
1487 \else
1488 \ifnum#1<1000 %
1489 #2%
1490 \HyPsd@CJKnumberThree#1!\{#3}%
1491 \else
1492 \HyPsd@@CJKnumber{\IntCalcDiv#1!1000!}%

```

```

1493     \CJK@thousand
1494     \expandafter\expandafter\expandafter\HyPsd@CJKnumberThree
1495     \IntCalcMod#1!1000!%
1496     !\CJK@zero{10}%
1497     \fi
1498 \fi
1499 }
1500 \def\HyPsd@CJKnumberThree#1!#2#3{%
1501     \ifnum#1=\z@
1502     \else
1503     \ifnum#1<100 %
1504         #2%
1505         \HyPsd@CJKnumberTwo#1!#{#3}%
1506     \else
1507         \HyPsd@@CJKnumber{\IntCalcDiv#1!100!}%
1508         \CJK@hundred
1509         \expandafter\expandafter\expandafter\HyPsd@CJKnumberTwo
1510         \IntCalcMod#1!100!%
1511         !\CJK@zero{10}%
1512     \fi
1513 \fi
1514 }
1515 \def\HyPsd@CJKnumberTwo#1!#2#3{%
1516     \ifnum#1=\z@
1517     \else
1518     \ifnum#1<#3 %
1519         #2%
1520         \HyPsd@@CJKnumber{#1}%
1521     \else
1522         \HyPsd@@CJKnumber{\IntCalcDiv#1!10!}%
1523         \CJK@ten
1524         \ifnum\IntCalcMod#1!10!=\z@
1525         \else
1526             \HyPsd@@CJKnumber{\IntCalcMod#1!10!}%
1527         \fi
1528     \fi
1529 \fi
1530 }
1531 \def\HyPsd@CJKdigits#1{%
1532     \ifx*#1\relax
1533     \expandafter\HyPsd@@CJKdigits\expandafter\CJK@zero
1534     \else
1535     \HyPsd@@CJKdigits\CJK@null{#1}%
1536     \fi
1537 }
1538 \def\HyPsd@@CJKdigits#1#2{%
1539     \ifx\#2\%
1540     \else
1541     \HyPsd@@@CJKdigits#1#2\@nil
1542     \fi
1543 }%
1544 \def\HyPsd@@@CJKdigits#1#2#3\@nil{%
1545     \HyPsd@CJKdigit#1{#2}%
1546     \ifx\#3\%
1547     \expandafter\@gobble
1548     \else
1549     \expandafter\@firstofone

```

```

1550 \fi
1551 {%
1552   \HyPsd@@@CJKdigits#1#3\@nil
1553 }%
1554 }
1555 \def\HyPsd@CJKdigit#1#2{%
1556   \ifcase#2 %
1557     #1\or
1558     \CJK@one\or\CJK@two\or\CJK@three\or\CJK@four\or
1559     \CJK@five\or\CJK@six\or\CJK@seven\or\CJK@eight\or\CJK@nine
1560 \fi
1561 }

```

6.5.6 \@inmathwarn-Patch

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

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

```

\def\@current@cmd#1{%
  \ifx\protect\@typesetprotect
    \@inmathwarn#1%
  \else
    \noexpand#1\expandafter\@gobble
  \fi}
\def\@changed@cmd#1#2{%
  \ifx\protect\@typesetprotect
    \@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}

1562 \def\HyPsd@inmathwarn#1#2{%
1563   \ifx#2\expandafter

```

```

1564 \expandafter\ifx\csname\cf@encoding\string#1\endcsname\relax
1565 \HyPsd@GLYPHERR
1566 \expandafter\@gobble\string#1%
1567 >%
1568 \expandafter\expandafter\expandafter\HyPsd@EndWithElse
1569 \else
1570 \expandafter\expandafter\expandafter\HyPsd@GobbleFiFi
1571 \fi
1572 \else
1573 \expandafter#2%
1574 \fi
1575 }
1576 \def\HyPsd@GobbleFiFi#1\fi#2\fi{}
1577 \def\HyPsd@EndWithElse#1\else{\else}

```

\HyPsd@add@accent

```

1578 \def\HyPsd@add@accent#1#2{%
1579 \HyPsd@GLYPHERR\expandafter\@gobble\string#1+\string#2>%
1580 #2%
1581 }%

```

6.5.7 Unexpandable spaces

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

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

These properties are used in \HyPsd@CheckCatcodes.

```

1582 \def\HyPsd@LetUnexpandableSpace#1{%
1583 \expandafter\futurelet\expandafter#1\expandafter\@gobble\space\relax
1584 }

```

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

```

1585 \HyPsd@LetUnexpandableSpace\HyPsd@UnexpandableSpace

```

6.5.8 Marker for commands

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

```

1586 \edef\HyPsd@XSPACE{\string#\string X}
1587 \edef\HyPsd@ITALCORR{\string#\string I}
1588 \edef\HyPsd@GLYPHERR{\string#\string G}

```

6.5.9 \hspace fix

\HyPsd@hspace

```

1589 \def\HyPsd@hspace#1{\HyPsd@@hspace#1*END}

```

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

```
1590 \def\HyPsd@@hspace#1*#2\END{%
1591   \ifx\#2\%
1592     \HyPsd@hspacetest{#1}%
1593   \else
1594     \expandafter\HyPsd@hspacetest
1595   \fi
1596 }
```

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

```
1597 \def\HyPsd@hspacetest#1{\ifdim#1>\z@\space\fi}
```

6.5.10 Fix for AMS classes

```
1598 \ltx@ifundefined{tocsection}{%
1599   \let\HyPsd@AMSclassfix\relax
1600 }{%
1601   \def\HyPsd@AMSclassfix{%
1602     \let\tocpart\HyPsd@tocsection
1603     \let\tocchapter\HyPsd@tocsection
1604     \let\tocappendix\HyPsd@tocsection
1605     \let\tocsection\HyPsd@tocsection
1606     \let\tocsubsection\HyPsd@tocsection
1607     \let\tocsubsubsection\HyPsd@tocsection
1608     \let\tocparagraph\HyPsd@tocsection
1609   }%
1610   \def\HyPsd@tocsection#1#2#3{%
1611     \if @#2@ \else \if @#1@ \else #1 \fi #2. \fi
1612     #3%
1613   }%
1614 }
```

6.5.11 Reference commands

`\HyPsd@href`

```
1615 \def\HyPsd@href#1#{\@secondoftwo}
```

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

```
1616 \def\HyPsd@ref#1{\HyPsd@@ref#1*\END}%
```

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

```
1617 \def\HyPsd@@ref#1*#2\END{%
1618   \ifx\#2\%
1619     \HyPsd@@@ref{#1}%
1620   \else
1621     \expandafter\HyPsd@@@ref
1622   \fi
1623 }
```

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

```
1624 \def\HyPsd@@@ref#1{%
1625   \expandafter\ifx\csname r@#1\endcsname\relax
1626     ??%
1627   \else
```



```

1628 \expandafter\expandafter\expandafter
1629 \@car\csname r@#1\endcsname\@nil
1630 \fi
1631 }

```

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

```

1632 \def\HyPsd@pageref#1{\HyPsd@@pageref#1*\END}

```

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

```

1633 \def\HyPsd@@pageref#1*#2\END{%
1634 \ifx\#2\%
1635 \HyPsd@@@pageref{#1}%
1636 \else
1637 \expandafter\HyPsd@@@pageref
1638 \fi
1639 }

```

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

```

1640 \def\HyPsd@@@pageref#1{%
1641 \expandafter\ifx\csname r@#1\endcsname\relax
1642 ??%
1643 \else
1644 \expandafter\expandafter\expandafter\expandafter
1645 \expandafter\expandafter\expandafter\@car
1646 \expandafter\expandafter\expandafter\@gobble
1647 \csname r@#1\endcsname{}\@nil
1648 \fi
1649 }

```

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

```

1650 \def\HyPsd@nameref#1{\HyPsd@@nameref#1*\END}

```

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

```

1651 \def\HyPsd@@nameref#1*#2\END{%
1652 \ifx\#2\%
1653 \HyPsd@@@nameref{#1}%
1654 \else
1655 \expandafter\HyPsd@@@nameref
1656 \fi
1657 }

```

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

```

1658 \def\HyPsd@@@nameref#1{%
1659 \expandafter\ifx\csname r@#1\endcsname\relax
1660 ??%
1661 \else
1662 \expandafter\expandafter\expandafter\expandafter
1663 \expandafter\expandafter\expandafter\@car
1664 \expandafter\expandafter\expandafter\@gobbletwo
1665 \csname r@#1\endcsname{}\@nil
1666 \fi
1667 }

```

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

```
1668 \def\HyPsd@autoref#1{\HyPsd@@autoref#1*\END}
```

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

```
1669 \def\HyPsd@@autoref#1*#2\END{%
1670   \ifx\#2\%
1671     \HyPsd@@@autoref{#1}%
1672   \else
1673     \expandafter\HyPsd@@@autoref
1674   \fi
1675 }
```

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

```
1676 \def\HyPsd@@@autoref#1{%
1677   \expandafter\ifx\csname r@#1\endcsname\relax
1678     ??%
1679   \else
1680     \expandafter\expandafter\expandafter\HyPsd@autorefname
1681       \csname r@#1\endcsname\{}{}{}{}@nil
1682     \expandafter\expandafter\expandafter
1683       \@car\csname r@#1\endcsname\@nil
1684   \fi
1685 }
```

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

```
1686 \def\HyPsd@autorefname#1#2#3#4#5\@nil{%
1687   \ifx\#4\%
1688   \else
1689     \HyPsd@@autorefname#4.\@nil
1690   \fi
1691 }
```

`\HyPsd@@autorefname`

```
1692 \def\HyPsd@@autorefname#1.#2\@nil{%
1693   \ltx@ifundefined{#1autorefname}{%
1694     \ltx@ifundefined{#1name}{%
1695     }{%
1696       \csname#1name\endcsname\space
1697     }%
1698   }{%
1699     \csname#1autorefname\endcsname\space
1700   }%
1701 }
```

6.5.12 Redefining the defining commands

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

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

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

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

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

The difference between `\HyPsd@DefCommand` and `\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
1702 \begingroup
1703   \def\x#1#2{%
1704     \endgroup
1705     \let#1\def
1706     \def\HyPsd@DefCommand##1##2##{%
1707       #1%
1708       \expandafter\noexpand
1709       \csname\expandafter\@gobble\string##1\@empty\endcsname
1710       \@gobble
1711     }%
1712     \let#2\let
1713     \def\HyPsd@@LetCommand##1{%
1714       \expandafter\ifx\csname##1\expandafter\endcsname
1715         \csname iftrue\endcsname
1716       \pdfstringdefWarn\let
1717       \expandafter\@gobble
1718     \else
1719       \expandafter\ifx\csname##1\expandafter\endcsname
1720         \csname iffalse\endcsname
1721       \pdfstringdefWarn\let
1722       \expandafter\expandafter\expandafter\@gobble
1723     \else
1724       #2%
1725       \expandafter\noexpand
1726       \csname##1\expandafter\expandafter\expandafter\endcsname
1727     \fi
1728     \fi
1729   }%
1730 }%
1731 \expandafter\x\csname <def>-command\expandafter\endcsname
1732   \csname <let>-command\endcsname
1733 \def\HyPsd@LetCommand#1{%
1734   \expandafter\expandafter\expandafter\HyPsd@@LetCommand
1735   \expandafter\expandafter\expandafter{%
1736     \expandafter\@gobble\string#1\@empty
1737   }%

```

1738 }

6.5.13 \ifnextchar

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

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

```
1739 \def\HyPsd@ifnextchar#1{%
1740   \pdfstringdefWarn#1%
1741   \expandafter\@gobbletwo\@gobble
1742 }
```

6.5.14 \@protected@testoptifnextchar

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

```
1743 \def\HyPsd@protected@testopt#1{%
1744   \pdfstringdefWarn#1%
1745   \@gobbletwo
1746 }
```

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:

```
1747 \def\HyPsd@Warning#1{%
1748   \begingroup
1749   \def\space{ }%
1750   \Hy@Warning{#1}%
1751   \endgroup
1752 }
```

6.6.2 Protecting spaces

```
1753 \RequirePackage{etexcmds}[2007/09/09]
1754 \ifetex@unexpanded
1755   \expandafter\@secondoftwo
1756 \else
1757   \expandafter\@firstoftwo
1758 \fi
1759 {%
```

\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`.

```

1760 \def\HyPsd@ProtectSpaces#1{%
1761   \iftrue
1762     \expandafter\HyPsd@@ProtectSpacesFi
1763     \expandafter|\expandafter\@empty#1| \HyPsd@End#1%
1764   \fi
1765 }%
```

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

```

1766 \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@End#3\fi{%
1767   \fi
1768   \ifx\scrollmode#2\scrollmode
1769     \HyPsd@RemoveMask#1\HyPsd@End#3%
1770   \else
1771     \gdef#3{#1\HyPsd@UnexpandableSpace#2}%
1772     \expandafter\HyPsd@@ProtectSpacesFi#3\HyPsd@End#3%
1773   \fi
1774 }%
```

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.

```

1775 \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1776   \toks@{\expandafter{#1}}%
1777   \xdef#2{\the\toks@}%
1778 }%

1779 }{%
1780   \let\HyPsd@fi\fi
1781   \def\HyPsd@ProtectSpaces#1{%
1782     \xdef#1{%
1783       \iftrue
1784         \expandafter\HyPsd@@ProtectSpacesFi
1785         \expandafter|\expandafter\@empty#1| %
1786       \HyPsd@fi
1787     }%
1788     \expandafter\HyPsd@RemoveMask#1\HyPsd@End#1%
1789   }%
1790   \def\HyPsd@@ProtectSpacesFi#1 #2\HyPsd@fi{%
1791     \fi
1792     \etex@unexpanded{#1}%
1793     \ifx\scrollmode#2\scrollmode
1794     \else
1795       \HyPsd@@ProtectSpacesFi\HyPsd@UnexpandableSpace#2%
1796     \HyPsd@fi
1797   }%
1798   \def\HyPsd@RemoveMask|#1|\HyPsd@End#2{%
1799     \xdef#2{\etex@unexpanded\expandafter{#1}}%
1800   }%
1801 }
```

6.6.3 Remove grouping braces

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

```

1802 \def\HyPsd@RemoveBraces#1{%
1803   \ifx\scrollmode#1\scrollmode
1804   \else
1805     \HyPsd@@RemoveBracesFi#1\HyPsd@End{#1}%
1806   \fi
1807 }

```

`\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`.

```

1808 \def\HyPsd@@RemoveBracesFi#1#2\HyPsd@End#3\fi{%
1809   \fi
1810   \def\Hy@temp@A{#1#2}%
1811   \def\Hy@temp@B{#3}%
1812   \ifx\Hy@temp@A\Hy@temp@B
1813     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1814       \HyPsd@String#1%
1815     }%
1816     \ifx\scrollmode#2\scrollmode
1817     \else
1818       \Hy@ReturnAfterFiFiEnd{%
1819         \HyPsd@RemoveBraces{#2}%
1820       }%
1821     \fi
1822   \else
1823     \def\Hy@temp@A{#1}%
1824     \HyPsd@AppendItalcorr\HyPsd@String
1825     \ifx\Hy@temp@A\@empty
1826       \Hy@ReturnAfterElseFiFiEnd{%
1827         \HyPsd@RemoveBraces{#2}%
1828       }%
1829     \else
1830       \HyPsd@ProtectSpaces\Hy@temp@A
1831       \HyPsd@AppendItalcorr\Hy@temp@A
1832       \Hy@ReturnAfterFiFiEnd{%
1833         \expandafter\HyPsd@RemoveBraces\expandafter
1834           {\Hy@temp@A#2}%
1835       }%
1836     \fi
1837   \fi
1838   \Hy@ReturnEnd
1839 }

```

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

```

1840 \def\HyPsd@AppendItalcorr#1{%
1841   \expandafter\HyPsd@@AppendItalcorr\expandafter{\/#1}%
1842 }
1843 \def\HyPsd@@AppendItalcorr#1#2{%
1844   \expandafter\def\expandafter#2\expandafter{#2#1}%
1845 }

```

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`).

```

1846 \def\HyPsd@CheckCatcodes#1#2\HyPsd@end{%
1847   \global\let\HyPsd@Rest\relax
1848   \ifcat\relax\noexpand#1\relax
1849     \ifx#1\protect
1850       \else
1851         \ifx#1\penalty
1852           \setbox\z@=\hbox{%
1853             \afterassignment\HyPsd@AfterCountRemove
1854             \count@=#2\HyPsd@end
1855           }%
1856         \else
1857           \ifx#1\kern
1858             \setbox\z@=\hbox{%
1859               \afterassignment\HyPsd@AfterDimenRemove
1860               \dimen@=#2\HyPsd@end
1861             }%
1862           \else
1863             \ifx#1\hskip
1864               \setbox\z@=\hbox{%
1865                 \afterassignment\HyPsd@AfterSkipRemove
1866                 \skip@=#2\HyPsd@end
1867               }%
1868             \else
1869               \HyPsd@CatcodeWarning{#1}%
1870             \fi
1871           \fi
1872         \fi
1873       \else
1874         \ifcat#1A% letter
1875           \expandafter\def\expandafter\HyPsd@String\expandafter{%
1876             \HyPsd@String#1%
1877           }%
1878         \else
1879           \ifcat#1 % SPACE
1880             \expandafter\def\expandafter\HyPsd@String\expandafter{%
1881               \HyPsd@String\HyPsd@SPACEOPTI
1882             }%
1883           \else
1884             \ifcat$#1%
1885               \HyPsd@CatcodeWarning{math shift}%
1886             \else
1887               \ifcat&#1%
1888                 \HyPsd@CatcodeWarning{alignment tab}%
1889               \fi
1890             \fi
1891           \fi
1892         \fi
1893       \fi
1894     \fi
1895   }%
1896 \enddef

```

```

1890     \else
1891     \ifcat^#1%
1892     \HyPsd@CatcodeWarning{superscript}%
1893     \else
1894     \ifcat_#1%
1895     \HyPsd@CatcodeWarning{subscript}%
1896     \else
1897     \expandafter\def\expandafter\HyPsd@String\expandafter{%
1898     \HyPsd@String#1%
1899     }%
1900     \fi
1901     \fi
1902     \fi
1903     \fi
1904     \fi
1905     \fi
1906     \fi
1907     \ifx\HyPsd@Rest\relax
1908     \ifx\scrollmode#2\scrollmode
1909     \else
1910     \Hy@ReturnAfterFiFiEnd{%
1911     \HyPsd@CheckCatcodes#2\HyPsd@End
1912     }%
1913     \fi
1914     \else
1915     \ifx\HyPsd@Rest\@empty
1916     \else
1917     \Hy@ReturnAfterFiFiEnd{%
1918     \expandafter\HyPsd@CheckCatcodes\HyPsd@Rest\HyPsd@End
1919     }%
1920     \fi
1921     \fi
1922     \Hy@ReturnEnd
1923 }

```

Remove counts, dimens, skips.

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

```

1924 \def\HyPsd@AfterCountRemove#1\HyPsd@End{%
1925 \gdef\HyPsd@Rest{#1}%
1926 }

```

\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.

```

1927 \def\HyPsd@AfterDimenRemove#1\HyPsd@End{%
1928 \ifdim\ifx\HyPsd@String\@empty\z@\else\dimen@>1ex %
1929 \HyPsd@ReplaceSpaceWarning{\string\kern\space\the\dimen@}%
1930 \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1931 \else
1932 \ifdim\dimen@=\z@
1933 \else
1934 \HyPsd@RemoveSpaceWarning{\string\kern\space\the\dimen@}%
1935 \fi
1936 \gdef\HyPsd@Rest{#1}%
1937 \fi

```


1938 }

\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).

```
1939 \def\HyPsd@AfterSkipRemove#1\HyPsd@end{%
1940   \ifdim\ifx\HyPsd@String\@empty\z@\else\skip@>\fi>1ex %
1941   \HyPsd@ReplaceSpaceWarning{\string\hskip\space\the\skip@}%
1942   \gdef\HyPsd@Rest{\HyPsd@UnexpandableSpace #1}%
1943   \else
1944   \ifdim\skip@=\z@
1945   \else
1946   \HyPsd@RemoveSpaceWarning{\string\kern\space\the\skip@}%
1947   \fi
1948   \gdef\HyPsd@Rest{#1}%
1949   \fi
1950 }
```

Catcode warnings.

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

```
1951 \def\HyPsd@CatcodeWarning#1{%
1952   \HyPsd@Warning{%
1953     Token not allowed in a PDF string (%
1954     \ifHy@unicode
1955       Unicode%
1956     \else
1957       PDFDocEncoding%
1958     \fi
1959   ):%
1960   \MessageBreak removing '\HyPsd@RemoveCmdPrefix#1'%
1961   }%
1962 }
1963 \begingroup
1964   \catcode'\|=0 %
1965   \catcode'\|=12 %
1966   \gdef\HyPsd@RemoveCmdPrefix#1{%
1967     \expandafter\HyPsd@@RemoveCmdPrefix
1968     \string#1\@empty\<>\@empty\@empty
1969   }%
1970   \gdef\HyPsd@@RemoveCmdPrefix#1\<>-#2\@empty#3\@empty{#1#2}%
1971 \endgroup
```

\HyPsd@RemoveSpaceWarning

```
1972 \def\HyPsd@RemoveSpaceWarning#1{%
1973   \HyPsd@Warning{%
1974     Token not allowed in a PDF string (%
1975     \ifHy@unicode
1976       Unicode%
1977     \else
1978       PDFDocEncoding%
1979     \fi
1980   ):%
1981   \MessageBreak #1\MessageBreak
1982   removed%
1983   }%
1984 }
```

\HyPsd@ReplaceSpaceWarning

```
1985 \def\HyPsd@ReplaceSpaceWarning#1{%
1986 \HyPsd@Warning{%
1987   Token not allowed in a PDF string (%
1988   \ifHy@unicode
1989     Unicode%
1990   \else
1991     PDFDocEncoding%
1992   \fi
1993   ):%
1994   \MessageBreak #1\MessageBreak
1995   replaced by space%
1996 }%
1997 }
```

6.6.5 Check for wrong glyphs

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

```
1998 \def\HyPsd@GlyphProcess#1\relax#2\@empty{%
1999 \expandafter\def\expandafter\HyPsd@String\expandafter{%
2000 \HyPsd@String#1%
2001 }%
2002 \ifx\#2\%
2003 \else
2004 \Hy@ReturnAfterFi{%
2005 \HyPsd@GlyphProcessWarning#2\@empty
2006 }%
2007 \fi
2008 }
2009 \def\HyPsd@GlyphProcessWarning#1>#2\@empty{%
2010 \HyPsd@@@GlyphProcessWarning#1++>%
2011 \HyPsd@GlyphProcess#2\@empty
2012 }
2013 \def\HyPsd@@@GlyphProcessWarning#1+#2+#3>{%
2014 \ifx\#2\%
2015 \HyPsd@Warning{%
2016   Glyph not defined in %
2017   P\ifHy@unicode U\else D1\fi\space encoding,\MessageBreak
2018   removing '@backslashchar#1'%
2019 }%
2020 \else
2021 \HyPsd@Warning{%
2022   Composite letter '@backslashchar#1+#2'\MessageBreak
2023   not defined in P\ifHy@unicode U\else D1\fi\space encoding,%
2024   \MessageBreak
2025   removing '@backslashchar#1'%
2026 }%
2027 \fi
2028 }
```

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.

```

2029 \def\HyPsd@spaceopti#1{ % first space
2030   \ifx\HyPsd@spaceopti#1%
2031     \040%
2032   \else
2033     #1%
2034   \fi
2035 }%

```

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.

```

2036 \def\HyPsd@Subst#1#2#3{%
2037   \def\HyPsd@@ReplaceFi##1##2\END\fi{%
2038     \fi
2039     ##1%
2040     \ifx\scrollmode##2\scrollmode
2041     \else
2042       #2%
2043       \HyPsd@@ReplaceFi##2\END
2044     \fi
2045   }%
2046   \xdef#3{%
2047     \iftrue
2048       \expandafter\HyPsd@@ReplaceFi#3#1\END
2049     \fi
2050   }%
2051 }

```

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

```

2052 \def\HyPsd@StringSubst#1{%
2053   \expandafter\HyPsd@Subst\expandafter{\string#1}%
2054 }

```

`\HyPsd@EscapeTeX`

```

2055 \begingroup
2056   \lccode'\!='\%%
2057   \lccode'\|='\%%
2058   \lccode'\(=\{\%
2059   \lccode'\)='\}%
2060   \lccode'0=\ltx@zero
2061   \lccode'1=\ltx@zero
2062   \lccode'3=\ltx@zero
2063   \lccode'4=\ltx@zero
2064   \lccode'5=\ltx@zero
2065   \lccode'7=\ltx@zero
2066 \lowercase{\endgroup
2067   \def\HyPsd@EscapeTeX#1{%
2068     \HyPsd@Subst!{|045}#1%
2069     \HyPsd@Subst({|173}#1%
2070     \HyPsd@Subst){|175}#1%

```

```

2071 }%
2072 }

```

6.6.7 Support for package xspace

`\HyPsd@doxspace` `\xspace` does not work, because it uses a `\futurelet` that cannot be executed in T_EX'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.

```

2073 \def\HyPsd@doxspace#1{%
2074   \ifx#1\relax\else
2075     \ifx#1.\else
2076       \ifx#1:\else
2077         \ifx#1,\else
2078           \ifx#1;\else
2079             \ifx#1'\else
2080               \ifx#1?\else
2081                 \ifx#1/\else
2082                   \ifx#1-\else
2083                     \ifx#1'\else
2084                       \HyPsd@SPACEOPTI
2085                     \fi
2086                   \fi
2087                 \fi
2088               \fi
2089             \fi
2090           \fi
2091         \fi
2092       \fi
2093     \fi
2094   \fi
2095   #1%
2096 }%

```

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.

```

2097 \begingroup
2098   \catcode'\|=0 %
2099   \catcode'\|=12 %

```

`\HyPsd@ConvertToUnicode`

```

2100 |gdef|HyPsd@ConvertToUnicode#1{%
2101   |xdef#1{%
2102     |expandafter|HyPsd@DoConvert#1|@empty|@empty|@empty
2103   }%
2104   |ifx#1|@empty
2105   |else
2106     |xdef#1{%
2107       \376\377%
2108       #1%
2109     }%
2110   |fi
2111 }%

```

\HyPsd@DoConvert

```

2112 |gdef|HyPsd@DoConvert#1{%
2113 |ifx#1|@empty
2114 |else
2115 |Hy@ReturnAfterFi{%
2116 |ifx#1\%%
2117 \%%
2118 |expandafter|HyPsd@DoEscape
2119 |else
2120 |HyPsd@Char{#1}%
2121 |expandafter|HyPsd@DoConvert
2122 |fi
2123 }%
2124 |fi
2125 }%

```

\HyPsd@DoEscape

```

2126 |gdef|HyPsd@DoEscape#1{%
2127 |ifx#19%
2128 |expandafter|HyPsd@GetTwoBytes
2129 |else
2130 |Hy@ReturnAfterFi{%
2131 |ifx#18%
2132 00%
2133 |expandafter|HyPsd@GetTwoBytes
2134 |else
2135 #1%
2136 |expandafter|HyPsd@GetOneByte
2137 |fi
2138 }%
2139 |fi
2140 }%

```

\HyPsd@GetTwoBytes

```

2141 |gdef|HyPsd@GetTwoBytes#1\#2#3#4{%
2142 #1\#2#3#4%
2143 |HyPsd@DoConvert
2144 }%

```

\HyPsd@GetOneByte

```

2145 |gdef|HyPsd@GetOneByte#1#2{%
2146 #1#2%
2147 |HyPsd@DoConvert
2148 }%
2149 |endgroup

```

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

```

2150 \def\HyPsd@GetNextTwoTokens#1#2#3\END#4{%
2151 \xdef#4{#4#1#2}%
2152 \HyPsd@@ConvertToUnicode#3\END#4%
2153 }

```

\HyPsd@Char

```

2154 \begingroup
2155 \catcode0=9 %
2156 \catcode'\^=7 %

```

```

2157 \catcode'\^^^=12 %
2158 \def\x{^^^0000}%
2159 \expandafter\endgroup
2160 \ifx\x\@empty
2161 \def\HyPsd@Char#1{%
2162 \ifnum'#1<128 %
2163 \@backslashchar 000#1%
2164 \else
2165 \ifnum'#1<65536 %
2166 \expandafter\HyPsd@CharTwoByte\number'#1!%
2167 \else
2168 \expandafter\expandafter\expandafter\HyPsd@CharSurrogate
2169 \intcalcSub{'#1}{65536}!%
2170 \fi
2171 \fi
2172 }%
2173 \def\HyPsd@CharTwoByte#1!{%
2174 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2175 \IntCalcDiv#1!256!!%
2176 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2177 \IntCalcMod#1!256!!%
2178 }%
2179 \def\HyPsd@CharOctByte#1!{%
2180 \@backslashchar
2181 \IntCalcDiv#1!64!%
2182 \intcalcDiv{\IntCalcMod#1!64!}{8}%
2183 \IntCalcMod#1!8!%
2184 }%
2185 \def\HyPsd@CharSurrogate#1!{%
2186 \@backslashchar 33%
2187 \IntCalcDiv#1!262144!%
2188 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2189 \intcalcDiv{\IntCalcMod#1!262144!}{1024}!%
2190 \@backslashchar 33%
2191 \expandafter\expandafter\expandafter\IntCalcAdd
2192 \intcalcDiv{\IntCalcMod#1!1024!}{256}!4!%
2193 \expandafter\expandafter\expandafter\HyPsd@CharOctByte
2194 \IntCalcMod#1!256!!%
2195 }%
2196 \else
2197 \def\HyPsd@Char#1{%
2198 \@backslashchar 000#1%
2199 }%
2200 \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

```

```

2201 \begingroup\expandafter\expandafter\expandafter\endgroup
2202 \expandafter\ifx\csname numexpr\endcsname\relax
2203   \let\HyPsd@UTFviii\relax
2204 \else
2205   \begingroup
2206     \lccode'\~='^f4\relax
2207   \lowercase{\endgroup
2208     \def\HyPsd@UTFviii{%
2209       \let\UTFviii@two@octets\HyPsd@UTFviii@two
2210       \let\UTFviii@three@octets\HyPsd@UTFviii@three
2211       \let\UTFviii@four@octets\HyPsd@UTFviii@four
2212       \ifx~\HyPsd@UTFviii@ccxliv@undef
2213         \let~\HyPsd@UTFviii@ccxliv@def
2214       \fi
2215       \let\unichar\HyPsd@unichar
2216     }%
2217   }%
2218   \def\HyPsd@UTFviii@ccxliv@undef{\@inpenc@undefined@{utf8}}%
2219   \edef\HyPsd@UTFviii@ccxliv@def{%
2220     \noexpand\UTFviii@four@octets\string ^f4%
2221   }%

```

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.

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

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

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

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

$$(5)$$

```

2222 \def\HyPsd@UTFviii@two#1#2{%
2223   \expandafter\HyPsd@UTFviii@@two
2224   \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2225   \number'#1\expandafter| %
2226   \number\dimexpr.125\dimexpr'#2sp\expandafter\relax\expandafter| %
2227   \number'#2 \@nil
2228 }%
2229 \def\HyPsd@UTFviii@@two#1|#2|#3|#4|\@nil{%
2230   \expandafter\8%
2231   \number\dimexpr #1-48\expandafter\relax
2232   \csname\number\dimexpr #2-4*#1\relax\expandafter\endcsname
2233   \number\dimexpr #3-8*%
2234   \number\dimexpr.125\dimexpr#3sp\relax\relax\expandafter\relax
2235   \number\dimexpr #4-8*#3\relax
2236 }%

```

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

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

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

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

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

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

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

(12)

```

2237 \def\HyPsd@UTFviii@three#1#2#3{%
2238 \expandafter\HyPsd@UTFviii@@three
2239 \number\dimexpr.25\dimexpr'#1sp\expandafter\relax\expandafter| %
2240 \number'#1\expandafter| %
2241 \number\ifnum\dimexpr'#2-128\relax <32 0\else 1\fi\expandafter| %
2242 \number\dimexpr.25\dimexpr'#2sp\expandafter\relax\expandafter| %
2243 \number'#2\expandafter| %
2244 \number\dimexpr.125\dimexpr'#3sp\expandafter\relax\expandafter| %
2245 \number'#3 \@nil
2246 }%
2247 \def\HyPsd@UTFviii@@three#1|#2|#3|#4|#5|#6|#7\@nil{%
2248 \expandafter\9%
2249 \number\dimexpr #1-56\expandafter\relax
2250 \number\dimexpr 2*(#2-4*#1)+#3\expandafter\relax
2251 \number\dimexpr #4 - 32 -\ifcase#3 0\else 8\fi\expandafter\relax
2252 \csname\number\dimexpr #5-4*#4\relax\expandafter\endcsname
2253 \number\dimexpr #6-16\expandafter\relax
2254 \number\dimexpr #7-8*#6\relax
2255 }%

```

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

```

```

2256 \def\HyPsd@UTFviii@four#1#2{%
2257 \expandafter\HyPsd@@UTFviii@four\dimexpr
2258 \dimexpr-1+('#1-240)*4+\dimexpr.0625\dimexpr'#2sp-128sp%
2259 \expandafter|\dimexpr
2260 \dimexpr'#2-16*\dimexpr.0625\dimexpr'#2sp| %
2261 }%
2262 \def\HyPsd@@UTFviii@four#1|#2|#3{%
2263 \933\dimexpr.25\dimexpr#1sp\relax\relax
2264 \csname\dimexpr\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2265 \ifodd#2 %
2266 \number\dimexpr(#2-1)/2\relax
2267 \else
2268 \number\dimexpr#2/2\relax
2269 \fi
2270 \number\dimexpr\ifodd#2 4+\fi
2271 \dimexpr.0625\dimexpr'#3sp-128sp\relax\relax\relax
2272 \933%
2273 \expandafter\HyPsd@@@UTFviii@four\dimexpr
2274 \dimexpr'#3-16*\dimexpr.0625\dimexpr'#3sp| %
2275 }%
2276 \def\HyPsd@@@UTFviii@four#1|#2{%
2277 \number\dimexpr4+\dimexpr.25\dimexpr#1sp\relax\relax\relax
2278 \csname\dimexpr\dimexpr#1-4*\dimexpr.25\dimexpr#1sp\endcsname
2279 \number\dimexpr.125\dimexpr'#2sp-128sp\relax\relax
2280 \number\dimexpr'#2-8*\dimexpr.125\dimexpr'#2sp\relax\relax\relax
2281 }%

```


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

```

2282 \def\HyPsd@unichar#1{%
2283   \ifHy@unicode
2284     \ifnum#1>"10FFFF %
2285       \HyPsd@UnicodeReplacementCharacter % illegal
2286     \else
2287       \ifnum#1>"FFFF %

```

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

```

2288   \expandafter\HyPsd@unichar\expandafter{%
2289     \number\numexpr 55296+%
2290     \dimexpr.0009765625\dimexpr\number#1sp-\p@
2291     \relax\relax\relax
2292   }%

```

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

```

2293   \expandafter\HyPsd@unichar\expandafter{%
2294     \number\numexpr#1-9216%
2295     -1024*\dimexpr.0009765625\dimexpr\number#1sp-\p@
2296     \relax\relax\relax
2297   }%
2298   \else
2299     \ifnum#1>"7FF %
2300       \9%
2301       \expandafter\HyPsd@unichar@first@byte\expandafter{%
2302         \number
2303         \dimexpr.00390625\dimexpr\number#1sp\relax\relax
2304       }%
2305     \else
2306       \8%
2307       \number\dimexpr.00390625\dimexpr\number#1sp\relax\relax
2308     \fi
2309     \expandafter\HyPsd@unichar@second@byte\expandafter{%
2310       \number
2311       \numexpr#1-256*\number
2312       \dimexpr.00390625\dimexpr\number#1sp\relax\relax\relax
2313     }%
2314     \fi
2315   \fi
2316   \else
2317     .% unsupported (Unicode -> PDF Doc Encoding)
2318     \fi
2319   }%
2320 \def\HyPsd@UnicodeReplacementCharacter{\9377\375}%
2321 \def\HyPsd@unichar@first@byte#1{%
2322   \number\dimexpr.015625\dimexpr#1sp\relax\relax
2323   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2324     \number
2325     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%
2326     \relax\relax\relax
2327   }%
2328 }%
2329 \def\HyPsd@unichar@second@byte#1{%
2330   \csname\number\dimexpr.015625\dimexpr#1sp\relax\relax\endcsname
2331   \expandafter\HyPsd@unichar@octtwo\expandafter{%
2332     \number
2333     \numexpr#1-64*\number\dimexpr.015625\dimexpr#1sp%

```

```

2334 \relax\relax\relax
2335 }%
2336 }%
2337 \def\HyPsd@unichar@octtwo#1{%
2338 \number\dimexpr.125\dimexpr#1sp\relax\relax
2339 \number\dimexpr#1-8*\number\dimexpr.125\dimexpr#1sp%
2340 \relax\relax\relax
2341 }%
2342 \fi

```

\HyPsd@utf@viii@undeferr \utf@viii@undeferr comes from file utf8x.def from package ucs.

```

2343 \def\HyPsd@utf@viii@undeferr#1#2#3#4#5#6{%
2344 \ifx\@gobble#1%
2345 \else
2346 [Please insert \textbackslash PrerenderUnicode%
2347 \textbraceleft#1\textbraceright\space
2348 into preamble]%
2349 \fi
2350 }%

```

7 Support of other packages

7.1 Class memoir

```

2351 \@ifclassloaded{memoir}{%
2352 \Hy@AtEndOfPackage{\RequirePackage{memhfixc}}%
2353 }{}

```

7.2 Package subfigure

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

```

2354 \@ifpackageloaded{subfigure}{%
2355 \ltx@ifundefined{sub@label}{%
2356 \Hy@hypertexnamesfalse
2357 }{%
2358 \renewcommand*{\sub@label}[1]{%
2359 \@bsphack
2360 \subfig@oldlabel{#1}%
2361 \if@filesw
2362 \begingroup
2363 \edef\@currentlabstr{%
2364 \expandafter\strip@prefix\meaning\@currentlabelname
2365 }%
2366 \protected@write\@auxout{}{%
2367 \string\newlabel{sub@#1}{%
2368 {\@nameuse{@@thesub\@capttype}}%
2369 {\thepage}%
2370 }%
2371 \expandafter\strip@period\@currentlabstr
2372 \relax.\relax\@@@%
2373 }%
2374 {\@currentHref}%
2375 }%
2376 }%
2377 }%
2378 \endgroup

```

```

2379 \fi
2380 \@esphack
2381 }%
2382 \@ifpackagelater{subfigure}{2002/03/26}{\}%
2383 \providecommand*{\toclevel@subfigure}{1}%
2384 \providecommand*{\toclevel@subtable}{1}%
2385 }%
2386 }%
2387 }{}

```

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:

```

2388 \ltx@ifundefined{XR@addURL}{\}%
2389 }{\%

```

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.

```

2390 \def\XR@addURL#1{\XR@dURL#1{}{}{}\\}%
2391 \def\XR@dURL#1#2#3#4#5\\{\%
2392   {#1}{#2}%
2393   \if!#4!%
2394   \else
2395     {#3}{#4}{\XR@URL}%
2396   \fi
2397 }%
2398 }

2399 \def\Hy@true{true}
2400 \def\Hy@false{false}

```

Providing dummy definitions.

```

2401 \let\literalps@out\@gobble
2402 \newcommand\pdfbookmark[3]{}{}
2403 \def\Acrobatmenu#1#2{\leavevmode#2}
2404 \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

```

2405 \let\HyperRaiseLinkHook\@empty
2406 \def\HyperRaiseLinkDefault{\baselineskip}

```

\HyperRaiseLinkHook allows the user to reassign \HyperRaiseLinkLength.

```

2407 \newcount\Hy@SavedSpaceFactor

```

```

2408 \def\Hy@SaveSpaceFactor{%
2409   \global\Hy@SavedSpaceFactor=\ifhmode\spacefactor\else\z@\fi
2410 }
2411 \def\Hy@RestoreSpaceFactor{%
2412   \relax
2413   \ifhmode
2414     \ifnum\Hy@SavedSpaceFactor>\z@
2415       \spacefactor=\Hy@SavedSpaceFactor
2416     \fi
2417   \fi
2418 }
2419 \def\Hy@SaveSavedSpaceFactor{%
2420   \edef\Hy@RestoreSavedSpaceFactor{%
2421     \global\Hy@SavedSpaceFactor=\the\Hy@SavedSpaceFactor\relax
2422   }%
2423 }
2424 \def\Hy@raisedlink#1{%
2425   \ifvmode
2426     #1%
2427   \else
2428     \Hy@SaveSpaceFactor
2429     \penalty\@M
2430     \smash{%
2431       \begingroup
2432         \let\HyperRaiseLinkLength\@tempdima
2433         \setlength\HyperRaiseLinkLength\HyperRaiseLinkDefault
2434         \HyperRaiseLinkHook
2435       \expandafter\endgroup
2436       \expandafter\raise\the\HyperRaiseLinkLength\hbox{%
2437         \Hy@RestoreSpaceFactor
2438         #1%
2439       \Hy@SaveSpaceFactor
2440     }%
2441   }%
2442   \Hy@RestoreSpaceFactor
2443 \fi
2444 }

```

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

```

2445 \def\Hy@SaveLastskip{%
2446   \let\Hy@RestoreLastskip\relax
2447   \ifvmode
2448     \ifdim\lastskip=\z@
2449       \let\Hy@RestoreLastskip\nobreak
2450     \else
2451       \begingroup
2452         \skip@=-\lastskip
2453       \edef\x{%
2454         \endgroup
2455         \def\noexpand\Hy@RestoreLastskip{%
2456           \noexpand\ifvmode
2457             \noexpand\nobreak
2458             \vskip\the\skip@
2459           \vskip\the\lastskip\relax
2460         \noexpand\fi
2461       }%
2462     }%

```

```

2463 \x
2464 \fi
2465 \else
2466 \ifhmode
2467 \ifdim\lastskip=\z@
2468 \let\Hy@RestoreLastskip\nobreak
2469 \else
2470 \begingroup
2471 \skip@=-\lastskip
2472 \edef\x{%
2473 \endgroup
2474 \def\noexpand\Hy@RestoreLastskip{%
2475 \noexpand\ifhmode
2476 \noexpand\nobreak
2477 \hskip\the\skip@
2478 \hskip\the\lastskip\relax
2479 \noexpand\fi
2480 }%
2481 }%
2482 \x
2483 \fi
2484 \fi
2485 \fi
2486 }%

```

9 Options

```

2487 \SetupKeyvalOptions{%
2488 family=Hyp,%
2489 prefix=HyOpt%
2490 }

```

9.1 Help macros

\Hy@boolkey

```

2491 \def\Hy@boolkey{\@dblarg\Hy@@boolkey}
2492 \def\Hy@@boolkey[#1]#2#3{%
2493 \edef\Hy@tempa{#3}%
2494 \lowercase\expandafter{%
2495 \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
2496 }%
2497 \ifx\Hy@tempa\@empty
2498 \let\Hy@tempa\Hy@true
2499 \fi
2500 \ifx\Hy@tempa\Hy@true
2501 \else
2502 \ifx\Hy@tempa\Hy@false
2503 \else
2504 \let\Hy@tempa\relax
2505 \fi
2506 \fi
2507 \ifx\Hy@tempa\relax
2508 \Hy@WarnOptionValue{#3}{#1}{‘true’ or ‘false’}%
2509 \else
2510 \Hy@Info{Option ‘#1’ set ‘\Hy@tempa’}%
2511 \csname Hy@#2\Hy@tempa\endcsname
2512 \fi

```

2513 }

\Hy@WarnOptionValue

```
2514 \def\Hy@WarnOptionValue#1#2#3{%
2515   \Hy@Warning{%
2516     Unexpected value '#1'\MessageBreak
2517     of option '#2' instead of\MessageBreak
2518     #3%
2519   }%
2520 }
```

\Hy@DisableOption

```
2521 \def\Hy@DisableOption#1{%
2522   \@ifundefined{KV@Hyp@#1@default}{%
2523     \define@key{Hyp}{#1}%
2524   }{%
2525     \define@key{Hyp}{#1}[]%
2526   }%
2527   {\Hy@WarnOptionDisabled{#1}}%
2528 }
```

\Hy@WarnOptionDisabled

```
2529 \def\Hy@WarnOptionDisabled#1{%
2530   \Hy@Warning{%
2531     Option '#1' has already been used,\MessageBreak
2532     setting the option has no effect%
2533   }%
2534 }
```

\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.

```
2535 \def\Hy@CheckOptionValue#1#2#3{%
2536   \begingroup
2537   \edef\x{#1}%
2538   \@onelevel@sanitize\x
2539   \let\y=y%
2540   \def\do##1##2{%
2541     \def\z{##1}%
2542     \@onelevel@sanitize\z
2543     \ifx\x\z
2544       \let\y=n%
2545     \let\do\@gobbletwo
2546   }%
2547   \y%
2548   #3%
2549   \ifx\y y%
2550     \def\do##1##2{%
2551       * '#1'%
2552       \ifx\##2\\\else\space(##2)\fi
2553     }%
2554     \Hy@Warning{%
2555       Values of option '#2':\MessageBreak
2556       #3%
2557       * An empty value disables the option.\MessageBreak
2558       Unknown value '\x'%
2559     }%
2560   }
```

```

2561 \fi
2562 \endgroup
2563 }

```

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

```

2564 \def\Hy@DefNameKey#1{%
2565 \expandafter\Hy@@@DefNameKey\csname @#1\endcsname{#1}%
2566 }

```

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

```

2567 \def\Hy@@@DefNameKey#1#2#3{%
2568 \define@key{Hyp}{#2}{%
2569 \edef#1{##1}%
2570 \ifx#1\@empty
2571 \else
2572 \Hy@CheckOptionValue{##1}{#2}{#3}%
2573 \fi
2574 }%
2575 \let#1\@empty
2576 }

```

`\Hy@UseNameKey`

```

2577 \def\Hy@UseNameKey#1#2{%
2578 \ifx#2\@empty
2579 \else
2580 /#1/#2%
2581 \fi
2582 }

```

9.2 Defining the options

```

2583 \define@key{Hyp}{implicit}[true]{%
2584 \Hy@boolkey{implicit}{#1}%
2585 }
2586 \define@key{Hyp}{draft}[true]{%
2587 \Hy@boolkey{draft}{#1}%
2588 }
2589 \define@key{Hyp}{final}[true]{%
2590 \Hy@boolkey{final}{#1}%
2591 }
2592 \let\KV@Hyp@nolinks\KV@Hyp@draft
2593 \def\Hy@ObsoletePaperOption#1{%
2594 \Hy@WarningNoLine{%
2595 Option ‘#1’ is no longer used%
2596 }%
2597 \define@key{Hyp}{#1}[true]{}%
2598 }
2599 \def\Hy@temp#1{%
2600 \define@key{Hyp}{#1}[true]{%
2601 \Hy@ObsoletePaperOption{#1}%
2602 }%
2603 }

```

```

2604 \Hy@temp{a4paper}
2605 \Hy@temp{a5paper}
2606 \Hy@temp{b5paper}
2607 \Hy@temp{letterpaper}
2608 \Hy@temp{legalpaper}
2609 \Hy@temp{executivepaper}

2610 \define@key{Hyp}{setpagesize}[true]{%
2611   \Hy@boolkey{setpagesize}{#1}%
2612 }
2613 \define@key{Hyp}{debug}[true]{%
2614   \Hy@boolkey{debug}{verbose}{#1}%
2615 }
2616 \define@key{Hyp}{linktocpage}[true]{%
2617   \Hy@boolkey{linktocpage}{#1}%
2618   \ifHy@linktocpage
2619     \let\Hy@linktoc\Hy@linktoc@page
2620   \else
2621     \let\Hy@linktoc\Hy@linktoc@section
2622   \fi
2623 }
2624 \chardef\Hy@linktoc@none=0 %
2625 \chardef\Hy@linktoc@section=1 %
2626 \chardef\Hy@linktoc@page=2 %
2627 \chardef\Hy@linktoc@all=3 %
2628 \ifHy@linktocpage
2629   \let\Hy@linktoc\Hy@linktoc@page
2630 \else
2631   \let\Hy@linktoc\Hy@linktoc@section
2632 \fi
2633 \define@key{Hyp}{linktoc}{%
2634   \@ifundefined{Hy@linktoc@#1}{%
2635     \Hy@Warning{%
2636       Unexpected value ‘#1’ of\MessageBreak
2637       option ‘linktoc’ instead of ‘none’,\MessageBreak
2638       ‘section’, ‘page’ or ‘all’%
2639     }%
2640   }{%
2641     \expandafter\let\expandafter\Hy@linktoc
2642     \csname Hy@linktoc@#1\endcsname
2643   }%
2644 }
2645 \define@key{Hyp}{extension}{\def\XR@ext{#1}}
2646 \let\XR@ext\relax
2647 \define@key{Hyp}{verbose}[true]{%
2648   \Hy@boolkey{verbose}{#1}%
2649 }
2650 \define@key{Hyp}{typexml}[true]{%
2651   \Hy@boolkey{typexml}{#1}%
2652 }

```

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.

```

2653 \define@key{Hyp}{raiselinks}[true]{%
2654   \Hy@boolkey{raiselinks}{#1}%
2655 }

```


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

```
2656 \def\Hy@setbreaklinks#1{%
2657   \csname breaklinks#1\endcsname
2658 }

2659 \def\Hy@breaklinks@unsupported{%
2660   \ifx\Hy@setbreaklinks\@gobble
2661     \ifHy@breaklinks
2662       \Hy@WarningNoLine{%
2663         You have enabled option 'breaklinks'.\MessageBreak
2664         But driver '\Hy@driver.def' does not support this.\MessageBreak
2665         Expect trouble with the link areas of broken links%
2666       }%
2667     \fi
2668   \fi
2669 }

2670 \define@key{Hyp}{breaklinks}[true]{%
2671   \Hy@boolkey{breaklinks}{#1}%
2672   \let\Hy@setbreaklinks\@gobble
2673 }

2674 \define@key{Hyp}{localanchorname}[true]{%
2675   \Hy@boolkey{localanchorname}{#1}%
2676 }
```

Determines whether an automatic anchor is put on each page

```
2677 \define@key{Hyp}{pageanchor}[true]{%
2678   \Hy@boolkey{pageanchor}{#1}%
2679 }
```

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.

```
2680 \define@key{Hyp}{plainpages}[true]{%
2681   \Hy@boolkey{plainpages}{#1}%
2682 }
```

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

```
2683 \define@key{Hyp}{naturalnames}[true]{%
2684   \Hy@boolkey{naturalnames}{#1}%
2685 }
```

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

```
2686 \define@key{Hyp}{hypertexnames}[true]{%
2687   \Hy@boolkey{hypertexnames}{#1}%
2688 }
```

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

```
2689 \define@key{Hyp}{nesting}[true]{%
2690   \Hy@boolkey{nesting}{#1}%
2691 }

2692 \define@key{Hyp}{unicode}[true]{%
2693   \Hy@boolkey{unicode}{#1}%
2694   \ifHy@unicode
2695     \def\HyPsd@pdfencoding{unicode}%
2696     \HyPsd@LoadUnicode
2697   \else
2698     \def\HyPsd@pdfencoding{pdfdoc}%
2699   \fi
2700 }
```

```

2701 \def\HyPsd@LoadUnicode{%
2702   \@ifundefined{T@PU}{%
2703     \input{puenc.def}%
2704     \HyLinguex@Restore
2705   }{}%
2706   \DeclareFontFamily{PU}{pdf}{}%
2707   \DeclareFontShape{PU}{pdf}{m}{n}{<-> cmr10 }{}%
2708   \DeclareFontSubstitution{PU}{pdf}{m}{n}%
2709   \global\let\HyPsd@LoadUnicode\relax
2710 }
2711 \Hy@AtBeginDocument{%
2712   \ifx\HyPsd@LoadUnicode\relax
2713   \else
2714     \def\HyPsd@LoadUnicode{%
2715       \Hy@Error{%
2716         Unicode support for bookmarks is not available.\MessageBreak
2717         Activate unicode support by using one of the options\MessageBreak
2718         'unicode', 'pdfencoding=unicode', 'pdfencoding=auto'\MessageBreak
2719         in the preamble%
2720       }\@ehc
2721       \global\let\HyPsd@LoadUnicode\relax
2722       \global\Hy@unicodedefalse
2723       \global\let\Hy@unicodetrue\Hy@unicodedefalse
2724     }%
2725   \fi
2726 }
2727 \define@key{Hyp}{pdfencoding}{%
2728   \edef\HyPsd@temp{#1}%
2729   \ifx\HyPsd@temp\HyPsd@pdfencoding@pdfdoc
2730     \let\HyPsd@pdfencoding\HyPsd@temp
2731     \Hy@unicodedefalse
2732   \else
2733     \ifcase\ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
2734       \z@
2735     \else
2736       \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
2737         \z@
2738       \else
2739         \@ne
2740       \fi
2741     \fi
2742     \let\HyPsd@pdfencoding\HyPsd@temp
2743     \hypersetup{unicode}%
2744     \ifHy@unicode
2745       \def\HyPsd@pdfencoding{#1}%
2746       \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
2747         \HyPsd@LoadStringEnc
2748       \fi
2749     \else
2750       \Hy@Warning{Cannot switch to unicode bookmarks}%
2751       \let\HyPsd@pdfencoding\HyPsd@pdfencoding@pdfdoc
2752     \fi
2753   \else
2754     \@onelevel@sanitize\HyPsd@temp
2755     \Hy@Warning{%
2756       Values of option 'pdfencoding':\MessageBreak
2757       'pdfdoc', 'unicode', 'auto'.\MessageBreak

```

```

2758      Ignoring unknown value '\HyPsd@temp'%
2759    }%
2760  \fi
2761 \fi
2762 }
2763 \def\HyPsd@pdfencoding@auto{auto}
2764 \def\HyPsd@pdfencoding@pdfdoc{pdfdoc}
2765 \def\HyPsd@pdfencoding@unicode{unicode}
2766 \let\HyPsd@pdfencoding\Hy@pdfencoding@pdfdoc
2767 \def\HyPsd@LoadStringEnc{%
2768   \RequirePackage{stringenc}[2009/12/15]%
2769   \let\HyPsd@LoadStringEnc\relax
2770 }
2771 \Hy@AtBeginDocument{%
2772   \@ifpackageloaded{stringenc}{%
2773     \let\HyPsd@LoadStringEnc\relax
2774   }{%
2775     \def\HyPsd@LoadStringEnc{%
2776       \Hy@WarningNoLine{%
2777         Missing package 'stringenc'. Use 'pdfencoding=auto'\MessageBreak
2778         in the preamble or load the package there%
2779       }%
2780     }%
2781   }%
2782 }
2783 \def\hypersetup{\kvsetkeys{Hyp}}
2784 \newif\ifHy@setpdfversion
2785 \define@key{Hyp}{pdfversion}{%
2786   \@ifundefined{Hy@pdfversion@#1}{%
2787     \PackageWarning{hyperref}{%
2788       Unsupported PDF version '#1'.\MessageBreak
2789       Valid values: 1.2 until 1.9%
2790     }%
2791   }{%
2792     \Hy@setpdfversiontrue
2793     \edef\Hy@pdfversion{\@nameuse{Hy@pdfversion@#1}}%
2794   }%
2795 }
2796 \@namedef{Hy@pdfversion@1.2}{2}%
2797 \@namedef{Hy@pdfversion@1.3}{3}%
2798 \@namedef{Hy@pdfversion@1.4}{4}%
2799 \@namedef{Hy@pdfversion@1.5}{5}%
2800 \@namedef{Hy@pdfversion@1.6}{6}%
2801 \@namedef{Hy@pdfversion@1.7}{7}%
2802 \@namedef{Hy@pdfversion@1.8}{8}%
2803 \@namedef{Hy@pdfversion@1.9}{9}%
2804 \def\Hy@pdfversion{2}

```

10 Options for different drivers

```

2805 \newif\ifHy@DviMode
2806 \let\Hy@DviErrMsg\ltx@empty
2807 \ifpdf
2808   \def\Hy@DviErrMsg{pdfTeX or LuaTeX is running in PDF mode}%
2809 \else
2810   \ifxetex
2811     \def\Hy@DviErrMsg{XeTeX is running}%

```

```

2812 \else
2813 \ifvtex
2814 \ifvtexdvi
2815 \Hy@DviModetrue
2816 \else
2817 \def\Hy@DviErrMsg{VTeX is running, but not in DVI mode}%
2818 \fi
2819 \else
2820 \Hy@DviModetrue
2821 \fi
2822 \fi
2823 \fi
2824 \def\HyOpt@CheckDvi#1{%
2825 \ifHy@DviMode
2826 \expandafter\ltx@firstofone
2827 \else
2828 \Hy@Error{%
2829 Wrong DVI mode driver option '#1',\MessageBreak
2830 because \Hy@DviErrMsg
2831 }\@ehc
2832 \expandafter\ltx@gobble
2833 \fi
2834 }

2835 \DeclareVoidOption{tex4ht}{%
2836 \Hy@texhttrue
2837 \kvsetkeys{Hyp}{colorlinks=true}%
2838 \def\BeforeTeXIVht{\RequirePackage{color}}}%
2839 \def\Hy@driver{htex4ht}%
2840 \def\MaybeStopEarly{%
2841 \Hy@Message{Stopped early}%
2842 \Hy@AtBeginDocument{%
2843 \PDF@FinishDoc
2844 \gdef\PDF@FinishDoc{}%
2845 }%
2846 \endinput
2847 }%
2848 }

2849 \DeclareVoidOption{pdftex}{%
2850 \ifpdf
2851 \def\Hy@driver{hpdftex}%
2852 \else
2853 \Hy@Error{%
2854 Wrong driver option 'pdftex',\MessageBreak
2855 because pdfTeX in PDF mode is not detected%
2856 }\@ehc
2857 \fi
2858 }

2859 \DeclareVoidOption{nativepdf}{%
2860 \HyOpt@CheckDvi{nativepdf}{%
2861 \def\Hy@driver{hdvips}%
2862 }%
2863 }

2864 \DeclareVoidOption{dvipdfm}{%
2865 \HyOpt@CheckDvi{dvipdfm}{%
2866 \def\Hy@driver{hdvipdfm}%
2867 }%
2868 }

```

```

2869 \DeclareVoidOption{dvipdfmx}{%
2870   \HyOpt@CheckDvi{dvipdfmx}{%
2871     \def\Hy@driver{hdvipdfm}%
2872   }%
2873 }
2874 \define@key{Hyp}{dvipdfmx-outline-open}[true]{%
2875   \expandafter\ifx\csname if#1\expandafter\endcsname
2876     \csname iftrue\endcsname
2877   \chardef\SpecialDvipdfmxOutlineOpen\@ne
2878   \else
2879     \chardef\SpecialDvipdfmxOutlineOpen\z@
2880   \fi
2881 }
2882 \DeclareVoidOption{xetex}{%
2883   \ifxetex
2884     \def\Hy@driver{hxetex}%
2885   \else
2886     \Hy@Error{%
2887       Wrong driver option 'xetex',\MessageBreak
2888       because XeTeX is not detected%
2889     }\@ehc
2890   \fi
2891 }
2892 \DeclareVoidOption{pdfmark}{%
2893   \HyOpt@CheckDvi{pdfmark}{%
2894     \def\Hy@driver{hdvips}%
2895   }%
2896 }
2897 \DeclareVoidOption{dvips}{%
2898   \HyOpt@CheckDvi{dvips}{%
2899     \def\Hy@driver{hdvips}%
2900   }%
2901 }
2902 \DeclareVoidOption{hypertex}{%
2903   \HyOpt@CheckDvi{hypertex}{%
2904     \def\Hy@driver{hypertex}%
2905   }%
2906 }
2907 \let\Hy@MaybeStopNow\relax
2908 \DeclareVoidOption{vtex}{%
2909   \ifvtex
2910     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2911     \def\Hy@driver{hvtex}%
2912   \else
2913     \ifnum\OpMode=10\relax
2914       \def\Hy@driver{hvtexhtm}%
2915       \def\MaybeStopEarly{%
2916         \Hy@Message{Stopped early}%
2917         \Hy@AtBeginDocument{%
2918           \PDF@FinishDoc
2919           \gdef\PDF@FinishDoc{}}%
2920       }%
2921       \endinput
2922     }%
2923   \else
2924     \Hy@Error{%
2925       Wrong driver option 'vtex',\MessageBreak

```

```

2926         because of wrong OpMode (\the\OpMode)%
2927     }\@ehc
2928 \fi
2929 \fi
2930 \else
2931 \Hy@Error{%
2932     Wrong driver option 'vtex',\MessageBreak
2933     because VTeX is not running%
2934 }\@ehc
2935 \fi
2936 }
2937 \DeclareVoidOption{vtexpdfmark}{%
2938 \ifvtex
2939     \ifnum 0\ifnum\OpMode<1 1\fi \ifnum\OpMode>3 1\fi =0 %
2940     \def\Hy@driver{hvtexmrk}%
2941 \else
2942     \Hy@Error{%
2943         Wrong driver option 'vtexpdfmark',\MessageBreak
2944         because of wrong OpMode (\the\OpMode)%
2945     }\@ehc
2946 \fi
2947 \else
2948     \Hy@Error{%
2949         Wrong driver option 'vtexpdfmark',\MessageBreak
2950         because VTeX is not running%
2951     }\@ehc
2952 \fi
2953 }
2954 \DeclareVoidOption{dviwindo}{%
2955 \HyOpt@CheckDvi{dviwindo}{%
2956     \def\Hy@driver{hdviwind}%
2957     \kvsetkeys{Hyp}{colorlinks}%
2958     \PassOptionsToPackage{dviwindo}{color}%
2959 }%
2960 }
2961 \DeclareVoidOption{dvipsone}{%
2962 \HyOpt@CheckDvi{dvipsone}{%
2963     \def\Hy@driver{hdvipson}%
2964 }%
2965 }
2966 \DeclareVoidOption{textures}{%
2967 \HyOpt@CheckDvi{textures}{%
2968     \def\Hy@driver{htexture}%
2969 }%
2970 }
2971 \DeclareVoidOption{latex2html}{%
2972 \HyOpt@CheckDvi{latex2html}{%
2973     \Hy@AtBeginDocument{\@@@latextohtmlX}%
2974 }%
2975 }

```

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

```

2976 \DeclareVoidOption{ps2pdf}{%
2977 \HyOpt@CheckDvi{ps2pdf}{%
2978     \def\Hy@driver{hdvips}%
2979 }%
2980 }
2981 \let\HyOpt@DriverFallback\ltx@empty

```

```

2982 \define@key{Hyp}{driverfallback}{%
2983   \ifHy@DviMode
2984     \def\HyOpt@DriverFallback{#1}%
2985     \Hy@Match\HyOpt@DriverFallback{%
2986       ^(|dvipdfm|dvipdfmx|dvips|dvipsone|dviwindo|hypertex|ps2pdf|
2987       latex2html|tex4ht)$%
2988     }{}{%
2989       \let\HyOpt@DriverFallback\ltx@empty
2990     }%
2991   \fi
2992 }

```

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.

```

2993 \define@key{Hyp}{hyperfigures}[true]{%
2994   \Hy@boolkey[hyperfigures]{figures}{#1}%
2995 }

```

The automatic footnote linking can be disabled by option hyperfootnotes.

```

2996 \define@key{Hyp}{hyperfootnotes}[true]{%
2997   \Hy@boolkey[hyperfootnotes]{#1}%
2998 }

```

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

```

2999 \def\back@none{none}
3000 \def\back@section{section}
3001 \def\back@page{page}
3002 \def\back@slide{slide}
3003 \define@key{Hyp}{backref}[section]{%
3004   \lowercase{\def\Hy@tempa{#1}}%
3005   \ifx\Hy@tempa\@empty
3006     \let\Hy@tempa\back@section
3007   \fi
3008   \ifx\Hy@tempa\Hy@false
3009     \let\Hy@tempa\back@none
3010   \fi
3011   \ifx\Hy@tempa\back@slide
3012     \let\Hy@tempa\back@section
3013   \fi
3014   \ifx\Hy@tempa\back@page
3015     \PassOptionsToPackage{hyperpageref}{backref}%
3016     \Hy@backreftrue
3017   \else
3018     \ifx\Hy@tempa\back@section
3019       \PassOptionsToPackage{hyperref}{backref}%
3020       \Hy@backreftrue
3021     \else
3022       \ifx\Hy@tempa\back@none
3023         \Hy@backreffalse
3024       \else
3025         \Hy@WarnOptionValue{#1}{backref}{%
3026           'section', 'slide', 'page', 'none',\MessageBreak
3027           or 'false'}%
3028       \fi
3029     \fi
3030   \fi

```

```

3031 }
3032 \define@key{Hyp}{pagebackref}[true]{%
3033   \edef\Hy@tempa{#1}%
3034   \lowercase\expandafter{%
3035     \expandafter\def\expandafter\Hy@tempa\expandafter{\Hy@tempa}%
3036   }%
3037   \ifx\Hy@tempa\@empty
3038     \let\Hy@tempa\Hy@true
3039   \fi
3040   \ifx\Hy@tempa\Hy@true
3041     \PassOptionsToPackage{hyperpageref}{backref}%
3042     \Hy@backreftrue
3043   \else
3044     \ifx\Hy@tempa\Hy@false
3045       \Hy@backreffalse
3046     \else
3047       \Hy@WarnOptionValue{#1}{pagebackref}{‘true’ or ‘false’}%
3048     \fi
3049   \fi
3050 }

```

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

```

3051 \define@key{Hyp}{hyperindex}[true]{%
3052   \Hy@boolkey{hyperindex}{#1}%
3053 }

```

Configuration of encap char.

```

3054 \define@key{Hyp}{encap}[|]{%
3055   \def\HyInd@EncapChar{#1}%
3056 }

```

12 Language options

The \autoref feature depends on the language.

```

3057 \def\HyLang@afrikaans{%
3058   \def\equationautorefname{Vergelyking}%
3059   \def\footnoteautorefname{Voetnota}%
3060   \def\itemautorefname{Item}%
3061   \def\figureautorefname{Figuur}%
3062   \def\tableautorefname{Tabel}%
3063   \def\partautorefname{Deel}%
3064   \def\appendixautorefname{Bylae}%
3065   \def\chapterautorefname{Hoofstuk}%
3066   \def\sectionautorefname{Afdeling}%
3067   \def\subsectionautorefname{Subafdeling}%
3068   \def\subsubsectionautorefname{Subsubafdeling}%
3069   \def\paragraphautorefname{Paragraaf}%
3070   \def\subparagraphautorefname{Subparagraaf}%
3071   \def\FancyVerbLineautorefname{Lyn}%
3072   \def\theoremautorefname{Teorema}%
3073   \def\pageautorefname{Bladsy}%
3074 }
3075 \def\HyLang@english{%
3076   \def\equationautorefname{Equation}%
3077   \def\footnoteautorefname{footnote}%
3078   \def\itemautorefname{item}%

```



```

3079 \def\figureautorefname{Figure}%
3080 \def\tableautorefname{Table}%
3081 \def\partautorefname{Part}%
3082 \def\appendixautorefname{Appendix}%
3083 \def\chapterautorefname{chapter}%
3084 \def\sectionautorefname{section}%
3085 \def\subsectionautorefname{subsection}%
3086 \def\subsubsectionautorefname{subsubsection}%
3087 \def\paragraphautorefname{paragraph}%
3088 \def\subparagraphautorefname{subparagraph}%
3089 \def\FancyVerbLineautorefname{line}%
3090 \def\theoremautorefname{Theorem}%
3091 \def\pageautorefname{page}%
3092 }
3093 \def\HyLang@french{%
3094 \def\equationautorefname{'Equation}%
3095 \def\footnoteautorefname{note}%
3096 \def\itemautorefname{item}%
3097 \def\figureautorefname{Figure}%
3098 \def\tableautorefname{Tableau}%
3099 \def\partautorefname{Partie}%
3100 \def\appendixautorefname{Appendice}%
3101 \def\chapterautorefname{chapitre}%
3102 \def\sectionautorefname{section}%
3103 \def\subsectionautorefname{sous-section}%
3104 \def\subsubsectionautorefname{sous-sous-section}%
3105 \def\paragraphautorefname{paragraphe}%
3106 \def\subparagraphautorefname{sous-paragraphe}%
3107 \def\FancyVerbLineautorefname{ligne}%
3108 \def\theoremautorefname{Th\'eor\`eme}%
3109 \def\pageautorefname{page}%
3110 }
3111 \def\HyLang@german{%
3112 \def\equationautorefname{Gleichung}%
3113 \def\footnoteautorefname{Fu\ss note}%
3114 \def\itemautorefname{Punkt}%
3115 \def\figureautorefname{Abbildung}%
3116 \def\tableautorefname{Tabelle}%
3117 \def\partautorefname{Teil}%
3118 \def\appendixautorefname{Anhang}%
3119 \def\chapterautorefname{Kapitel}%
3120 \def\sectionautorefname{Abschnitt}%
3121 \def\subsectionautorefname{Unterabschnitt}%
3122 \def\subsubsectionautorefname{Unterunterabschnitt}%
3123 \def\paragraphautorefname{Absatz}%
3124 \def\subparagraphautorefname{Unterabsatz}%
3125 \def\FancyVerbLineautorefname{Zeile}%
3126 \def\theoremautorefname{Theorem}%
3127 \def\pageautorefname{Seite}%
3128 }
3129 \def\HyLang@italian{%
3130 \def\equationautorefname{Equazione}%
3131 \def\footnoteautorefname{nota}%
3132 \def\itemautorefname{punto}%
3133 \def\figureautorefname{Figura}%
3134 \def\tableautorefname{Tabella}%
3135 \def\partautorefname{Parte}%

```

```

3136 \def\appendixautorefname{Appendice}%
3137 \def\chapterautorefname{Capitolo}%
3138 \def\sectionautorefname{sezione}%
3139 \def\subsectionautorefname{sottosezione}%
3140 \def\subsubsectionautorefname{sottosottosezione}%
3141 \def\paragraphautorefname{paragrafo}%
3142 \def\subparagraphautorefname{sottoparagrafo}%
3143 \def\FancyVerbLineautorefname{linea}%
3144 \def\theoremautorefname{Teorema}%
3145 \def\pageautorefname{Pag.\@}%
3146 }
3147 \def\HyLang@magyar{%
3148 \def\equationautorefname{Egyenlet}%
3149 \def\footnoteautorefname{l\'abjegyzet}%
3150 \def\itemautorefname{Elem}%
3151 \def\figureautorefname{'Abra}%
3152 \def\tableautorefname{T\'abl\'azat}%
3153 \def\partautorefname{R\'esz}%
3154 \def\appendixautorefname{F\'uggel\'ek}%
3155 \def\chapterautorefname{fejezet}%
3156 \def\sectionautorefname{szakasz}%
3157 \def\subsectionautorefname{alszakasz}%
3158 \def\subsubsectionautorefname{alalszakasz}%
3159 \def\paragraphautorefname{bekezd\'es}%
3160 \def\subparagraphautorefname{albekezd\'es}%
3161 \def\FancyVerbLineautorefname{sor}%
3162 \def\theoremautorefname{T\'etel}%
3163 \def\pageautorefname{oldal}%
3164 }
3165 \def\HyLang@portuges{%
3166 \def\equationautorefname{Equa\c c\~ao}%
3167 \def\footnoteautorefname{Nota de rodap\'e}%
3168 \def\itemautorefname{Item}%
3169 \def\figureautorefname{Figura}%
3170 \def\tableautorefname{Tabela}%
3171 \def\partautorefname{Parte}%
3172 \def\appendixautorefname{Ap\~endice}%
3173 \def\chapterautorefname{Cap\'itulo}%
3174 \def\sectionautorefname{Se\c c\~ao}%
3175 \def\subsectionautorefname{Subse\c c\~ao}%
3176 \def\subsubsectionautorefname{Subsubse\c c\~ao}%
3177 \def\paragraphautorefname{par\'agrafo}%
3178 \def\subparagraphautorefname{subpar\'agrafo}%
3179 \def\FancyVerbLineautorefname{linha}%
3180 \def\theoremautorefname{Teorema}%
3181 \def\pageautorefname{P\'agina}%
3182 }

```

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`.

```

3183 \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`?

```
3184 \def\equationautorefname{\cyr\cyrv\cyrry\cyrr.}%
```

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`.

```
3185 % \def\equationautorefname{%
3186 %   \cyr\cyrv\cyrry\cyrr\cyra\cyrrh\cyre\cyrn\cyri\cyre
3187 % }%
```

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

```
3188 \def\footnoteautorefname{%
3189   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr.\ \cyrp\cyrr\cyri\cyrm.%
3190 }%
```

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}`”

```
3191 % \def\footnoteautorefname{%
3192 %   \cyr\cyrp\cyro\cyrd\cyrs\cyrt\cyrr\cyro\cyrrh\cyrn\cyro\cyre\ %
3193 %   \cyrp\cyrr\cyri\cyrm\cyre\cyrrh\cyra\cyrn\cyri\cyre
3194 % }%
```

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

```
3195 % \def\Nomfootnoteautorefname{\cyr\cyrs\cyrn\cyro\cyrs\cyrk\cyra}%
3196 % \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.

```
3197 \def\itemautorefname{\cyr\cyrp.}%
3198 % \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.

```
3199 \def\figureautorefname{\cyr\cyrr\cyri\cyrs.}%
3200 \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.

```
3201 \def\partautorefname{\cyr\cyrrh.}%
3202 \def\chapterautorefname{\cyr\cyrg\cyrl.}%
3203 \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.

```
3204 \def\appendixautorefname{\cyr\cyrp\cyrr\cyri\cyrl.}%
3205 % \def\appendixautorefname{%
3206 %   \cyr\cyrp\cyrr\cyri\cyrl\cyro\cyrrh\cyre\cyrn\cyri\cyre
3207 % }%
```

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.

```
3208 \def\subsectionautorefname{\cyr\cyrr\cyra\cyrz\cyrd.}%
3209 \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.

```
3210 \def\paragraphautorefname{\cyr\cyrp.}%
3211 \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.

```
3212 % \def\paragraphautorefname{\cyr\cyrp\cyru\cyrn\cyrk\cyrt}%
3213 % \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.

```
3214 \def\FancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr.}%
```

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

```
3215 % \def\NomFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyra}%
3216 % \def\AccFancyVerbLineautorefname{\cyr\cyrs\cyrt\cyrr\cyro\cyrk\cyru}%
```

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

```
3217 % \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 ...

```
3218 \def\theoremautorefname{\cyr\cyrt\cyre\cyro\cyrr.}%
```

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

```
3219 % \def\Nomtheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyra}%
3220 % \def\Acctheoremautorefname{\cyr\cyrt\cyre\cyro\cyrr\cyre\cyrm\cyru}%
```

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

```
3221 \def\pageautorefname{\cyr\cyrs.}%
3222 }
```

```
3223 \def\HyLang@spanish{%
3224 \def\equationautorefname{Ecuaci'on}%
3225 \def\footnoteautorefname{Nota a pie de p'agina}%
3226 \def\itemautorefname{Elemento}%
3227 \def\figureautorefname{Figura}%
3228 \def\tableautorefname{Tabla}%
3229 \def\partautorefname{Parte}%
3230 \def\appendixautorefname{Ap'endice}%
3231 \def\chapterautorefname{Cap'itulo}%
3232 \def\sectionautorefname{Secci'on}%
3233 \def\subsectionautorefname{Subsecci'on}%
3234 \def\subsubsectionautorefname{Subsubsecci'on}%
3235 \def\paragraphautorefname{P'arrafo}%
3236 \def\subparagraphautorefname{Subp'arrafo}%
3237 \def\FancyVerbLineautorefname{L'inea}%
3238 \def\theoremautorefname{Teorema}%
3239 \def\pageautorefname{P'agina}%
3240 }
3241 \def\HyLang@vietnamese{%
3242 \def\equationautorefname{Ph\uhorn{}}\ohorn{}ng tr'inh}%
3243 \def\footnoteautorefname{Ch'u th'ich}%
```

```

3244 \def\itemautorefname{m\d{u}c}%
3245 \def\figureautorefname{H\`inh}%
3246 \def\tableautorefname{B\h{a}ng}%
3247 \def\partautorefname{Ph\`acircumflex{}n}%
3248 \def\appendixautorefname{Ph\d{u} l\d{u}c}%
3249 \def\chapterautorefname{ch\uhorn{}ohorn{}ng}%
3250 \def\sectionautorefname{m\d{u}c}%
3251 \def\subsectionautorefname{m\d{u}c}%
3252 \def\subsubsectionautorefname{m\d{u}c}%
3253 \def\paragraphautorefname{\dj{}o\d{a}n}%
3254 \def\subparagraphautorefname{\dj{}o\d{a}n}%
3255 \def\FancyVerbLineautorefname{d\`ong}%
3256 \def\theoremautorefname{DJ{}\d{i}nh l\`y}%
3257 \def\pageautorefname{Trang}%
3258 }

```

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

```

3259 \def\HyLang@addto#1#2{%
3260   #2%
3261   \@temptokena{#2}%
3262   \ifx#1\relax
3263     \let#1\@empty
3264   \fi
3265   \ifx#1\@undefined
3266     \edef#1{\the\@temptokena}%
3267   \else
3268     \toks@\expandafter{#1}%
3269     \edef#1{\the\toks@\the\@temptokena}%
3270   \fi
3271   \@temptokena{}\toks@\@temptokena
3272 }

3273 \def\HyLang@DeclareLang#1#2#3{%
3274   \@ifpackagewith{babel}{#1}{%
3275     \expandafter\HyLang@addto
3276     \csname extras#1\expandafter\endcsname
3277     \csname HyLang@#2\endcsname
3278     \begingroup
3279     \edef\x{\endgroup
3280       #3%
3281     }%
3282     \x
3283     \@namedef{HyLang@#1@done}{}%
3284   }{%
3285     \begingroup
3286     \edef\x##1##2{%
3287       \noexpand\ifx##2\relax
3288         \errmessage{No definitions for language #2' found!}%
3289       \noexpand\fi
3290     \endgroup
3291     \noexpand\define@key{Hyp}{#1}[]{%
3292       \noexpand\@ifundefined{HyLang@#1@done}{%
3293         \noexpand\HyLang@addto{\noexpand##1}{\noexpand##2}%
3294         #3%
3295       \noexpand\@namedef{HyLang@#1@done}{}%
3296     }{%
3297     }%

```

```

3298 }%
3299 \expandafter\x\csname extras#1\expandafter\endcsname
3300 \csname HyLang@#2\endcsname
3301 }
3302 \HyLang@DeclareLang{english}{english}{}
3303 \HyLang@DeclareLang{UKenglish}{english}{}
3304 \HyLang@DeclareLang{british}{english}{}
3305 \HyLang@DeclareLang{USenglish}{english}{}
3306 \HyLang@DeclareLang{american}{english}{}
3307 \HyLang@DeclareLang{german}{german}{}
3308 \HyLang@DeclareLang{austrian}{german}{}
3309 \HyLang@DeclareLang{ngerman}{german}{}
3310 \HyLang@DeclareLang{naustrian}{german}{}
3311 \HyLang@DeclareLang{russian}{russian}{\noexpand\hypersetup{unicode}}
3312 \HyLang@DeclareLang{brazil}{portuges}{}
3313 \HyLang@DeclareLang{brazilian}{portuges}{}
3314 \HyLang@DeclareLang{portuguese}{portuges}{}
3315 \HyLang@DeclareLang{spanish}{spanish}{}
3316 \HyLang@DeclareLang{afrikaans}{afrikaans}{}
3317 \HyLang@DeclareLang{french}{french}{}
3318 \HyLang@DeclareLang{frenchb}{french}{}
3319 \HyLang@DeclareLang{français}{french}{}
3320 \HyLang@DeclareLang{acadian}{french}{}
3321 \HyLang@DeclareLang{canadien}{french}{}
3322 \HyLang@DeclareLang{italian}{italian}{}
3323 \HyLang@DeclareLang{magyar}{magyar}{}
3324 \HyLang@DeclareLang{hungarian}{magyar}{}

```

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

```

3325 \DeclareVoidOption{vietnamese}{%
3326 \HyLang@addto\extravietnamese\HyLang@vietnamese
3327 \Hy@AtEndOfPackage{%
3328 \ifundefined{T@PU}{}{}%
3329 \input{puvnenc.def}%
3330 }%
3331 }%
3332 }
3333 \DeclareVoidOption{vietnam}{%
3334 \HyLang@addto\extravietnam\HyLang@vietnamese
3335 \Hy@AtEndOfPackage{%
3336 \ifundefined{T@PU}{}{}%
3337 \input{puvnenc.def}%
3338 }%
3339 }%
3340 }

```

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

```

3341 \DeclareVoidOption{arabic}{%
3342 \Hy@AtEndOfPackage{%
3343 \ifundefined{T@PU}{}{}%
3344 \input{puarenc.def}%
3345 }%
3346 }%
3347 }

```

13 Options to change appearance of links

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

```
3348 \define@key{Hyp}{colorlinks}[true]{%
3349   \Hy@boolkey{colorlinks}{#1}%
3350 }
3351 \define@key{Hyp}{ocgcolorlinks}[true]{%
3352   \Hy@boolkey{ocgcolorlinks}{#1}%
3353 }
3354 \Hy@AtBeginDocument{%
3355   \begingroup
3356     \ifundefined{OBJ@OCG@view}{%
3357       \ifHy@ocgcolorlinks
3358         \Hy@Warning{%
3359           Driver does not support 'ocgcolorlinks',\MessageBreak
3360           using 'colorlinks' instead%
3361         }%
3362       \fi
3363     }{}%
3364   \endgroup
3365 }
3366 \define@key{Hyp}{frenchlinks}[true]{%
3367   \Hy@boolkey{frenchlinks}{#1}%
3368 }
```

14 Bookmarking

```
3369 \begingroup\expandafter\expandafter\expandafter\endgroup
3370 \expandafter\ifx\csname chapter\endcsname\relax
3371   \def\toclevel@part{0}%
3372 \else
3373   \def\toclevel@part{-1}%
3374 \fi
3375 \def\toclevel@chapter{0}
3376 \def\toclevel@section{1}
3377 \def\toclevel@subsection{2}
3378 \def\toclevel@subsubsection{3}
3379 \def\toclevel@paragraph{4}
3380 \def\toclevel@subparagraph{5}
3381 \def\toclevel@figure{0}
3382 \def\toclevel@table{0}
3383 \ifpackageloaded{listings}{%
3384   \providecommand*\theHlstlisting{\thelstlisting}%
3385   \providecommand*\toclevel@lstlisting{0}%
3386 }{}
3387 \ifpackageloaded{listing}{%
3388   \providecommand*\theHlisting{\thelisting}%
3389   \providecommand*\toclevel@listing{0}%
3390 }{}
3391 \define@key{Hyp}{bookmarks}[true]{%
3392   \Hy@boolkey{bookmarks}{#1}%
3393 }
3394 \define@key{Hyp}{bookmarksopen}[true]{%
3395   \Hy@boolkey{bookmarksopen}{#1}%
3396 }
```

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.

```

3397 \let\Hy@bookmarksdepth\c@tocdepth
3398 \define@key{Hyp}{bookmarksdepth}[]{%
3399   \begingroup
3400     \edef\x{#1}%
3401     \ifx\x\empty
3402       \global\let\Hy@bookmarksdepth\c@tocdepth
3403     \else
3404       \ifundefined{toclevel@\x}{%
3405         \@onelevel@sanitize\x
3406         \edef\y{\expandafter\@car\x\@nil}%
3407         \ifcase 0\expandafter\ifx\y-1\fi
3408           \expandafter\ifnum\expandafter'\y>47 %
3409             \expandafter\ifnum\expandafter'\y<58 1\fi\fi\relax
3410           \Hy@Warning{Unknown document division name (\x)}%
3411         \else
3412           \setbox\z@=\hbox{%
3413             \count@=\x
3414             \xdef\Hy@bookmarksdepth{\the\count@}%
3415           }%
3416         \fi
3417       }{%
3418         \setbox\z@=\hbox{%
3419           \count@=\csname toclevel@\x\endcsname
3420           \xdef\Hy@bookmarksdepth{\the\count@}%
3421         }%
3422       }%
3423     \fi
3424   \endgroup
3425 }

```

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

```

3426 \define@key{Hyp}{bookmarksopenlevel}{%
3427   \def\@bookmarksopenlevel{#1}%
3428 }
3429 \def\@bookmarksopenlevel{\maxdimen}
3430 % ‘bookmarkstype’ to specify which ‘toc’ file to mimic
3431 \define@key{Hyp}{bookmarkstype}{%
3432   \def\Hy@bookmarkstype{#1}%
3433 }
3434 \def\Hy@bookmarkstype{toc}

```

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

```

3435 \define@key{Hyp}{bookmarksnumbered}[true]{%
3436   \Hy@boolkey{bookmarksnumbered}{#1}%
3437 }

```


Option CJKbookmarks enables the patch for CJK bookmarks.

```

3438 \define@key{Hyp}{CJKbookmarks}[true]{%
3439   \Hy@boolkey{CJKbookmarks}{#1}%
3440 }

3441 \def\Hy@temp#1{%
3442   \expandafter\Hy@@temp\csname @#1color\endcsname{#1}%
3443 }
3444 \def\Hy@@temp#1#2#3{%
3445   \define@key{Hyp}{#2color}{%
3446     \HyColor@HyperrefColor{##1}#1%
3447   }%
3448   \def#1{#3}%
3449 }
3450 \Hy@temp{link}{red}
3451 \Hy@temp{anchor}{black}
3452 \Hy@temp{cite}{green}
3453 \Hy@temp{file}{cyan}
3454 \Hy@temp{url}{magenta}
3455 \Hy@temp{menu}{red}
3456 \Hy@temp{run}{\@filecolor}
3457 \define@key{Hyp}{pagecolor}{%
3458   \Hy@WarningPageColor
3459 }
3460 \def\Hy@WarningPageColor{%
3461   \Hy@WarningNoLine{Option 'pagecolor' is not available anymore}%
3462   \global\let\Hy@WarningPageColor\relax
3463 }

3464 \def\hyperbaseurl#1{\def\@baseurl{#1}}
3465 \define@key{Hyp}{baseurl}{\hyperbaseurl{#1}}
3466 \let\@baseurl\@empty
3467 \def\hyperlinkfileprefix#1{\def\Hy@linkfileprefix{#1}}
3468 \define@key{Hyp}{linkfileprefix}{\hyperlinkfileprefix{#1}}
3469 \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.

```

3470 \let\@pdfpagetransition\relax
3471 \define@key{Hyp}{pdfpagetransition}{%
3472   \def\@pdfpagetransition{#1}%
3473 }

```

`\@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.

```

3474 \let\@pdfpageduration\relax
3475 \define@key{Hyp}{pdfpageduration}{%
3476   \def\@pdfpageduration{#1}%
3477   \Hy@Match\@pdfpageduration{%
3478     ^([0-9]+\.[0-9]*|[0-9]*\.[0-9]+)$%
3479   }{ }{%
3480     \Hy@Warning{%
3481       Invalid value '\@pdfpageduration'\MessageBreak

```

```

3482   of option 'pdfpageduration'\MessageBreak
3483   is replaced by an empty value%
3484 }%
3485 \let\@pdfpageduration\ltx@empty
3486 }%
3487 }

```

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.

```

3488 \newif\ifHy@useHidKey
3489 \Hy@useHidKeyfalse
3490 \define@key{Hyp}{pdfpagehidden}[true]{%
3491   \Hy@boolkey{pdfpagehidden}{#1}%
3492   \ifHy@pdfpagehidden
3493     \global\Hy@useHidKeytrue
3494   \fi
3495 }

```

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).

```

3496 \def\Hy@ColorList{cite,file,link,menu,run,url}
3497 \@for\Hy@temp:=\Hy@ColorList\do{%
3498   \edef\Hy@temp{%
3499     \noexpand\define@key{Hyp}{\Hy@temp bordercolor}{%
3500       \noexpand\Hy@Color@HyperrefBorderColor
3501       {##1}%
3502       \expandafter\noexpand\csname @\Hy@temp bordercolor\endcsname
3503       {hyperref}%
3504       {\Hy@temp bordercolor}%
3505     }%
3506   }%
3507   \Hy@temp
3508 }
3509 \define@key{Hyp}{pagebordercolor}{%
3510   \Hy@WarningPageBorderColor
3511 }
3512 \def\Hy@WarningPageBorderColor{%
3513   \Hy@WarningNoLine{Option 'pagebordercolor' is not available anymore}%
3514   \global\let\Hy@WarningPageBorderColor\relax
3515 }
3516 \define@key{Hyp}{pdfhighlight}{\def\@pdfhighlight{#1}}
3517 \Hy@DefNameKey{pdfhighlight}{%
3518   \do{/I}{Invert}%
3519   \do{/N}{None}%
3520   \do{/O}{Outline}%
3521   \do{/P}{Push}%
3522 }
3523 \define@key{Hyp}{pdfborder}{%
3524   \let\Hy@temp\@pdfborder
3525   \def\@pdfborder{#1}%
3526   \Hy@Match\@pdfborder{%

```

```

3527 ^\HyPat@NonNegativeReal/ %
3528 \HyPat@NonNegativeReal/ %
3529 \HyPat@NonNegativeReal/%
3530 ( ?\[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/))*]?$%
3531 }{}{%
3532 \Hy@Warning{%
3533   Invalid value '\@pdfborder'\MessageBreak
3534   for option 'pdfborder'\MessageBreak
3535   Option setting is ignored%
3536 }%
3537 \let\@pdfborder\Hy@temp
3538 }%
3539 }
3540 \define@key{Hyp}{pdfborderstyle}{%
3541 \let\Hy@temp\@pdfborderstyle
3542 \def\@pdfborderstyle{#1}%
3543 \Hy@Match\@pdfborderstyle{%
3544   ^%
3545   ( */Type */Border%
3546   | */W +\HyPat@NonNegativeReal/%
3547   | */S */[SDBIU]%
3548   | */D *[ \HyPat@NonNegativeReal/( \HyPat@NonNegativeReal/)?]?}%
3549   )* *$%
3550 }{}{%
3551 \Hy@Warning{%
3552   Invalid value '\@pdfborderstyle'\MessageBreak
3553   for option 'pdfborderstyle'\MessageBreak
3554   Option setting is ignored%
3555 }%
3556 \let\@pdfborderstyle\Hy@temp
3557 }%
3558 }
3559 \def\Hy@setpdfborder{%
3560 \ifx\@pdfborder\@empty
3561 \else
3562 /Border[\@pdfborder]%
3563 \fi
3564 \ifx\@pdfborderstyle\@empty
3565 \else
3566 /BS<<\@pdfborderstyle>>%
3567 \fi
3568 }
3569 \Hy@DefNameKey{pdfpagemode}{%
3570 \do{UseNone}{}%
3571 \do{UseOutlines}{}%
3572 \do{UseThumbs}{}%
3573 \do{FullScreen}{}%
3574 \do{UseOC}{PDF 1.5}%
3575 \do{UseAttachments}{PDF 1.6}%
3576 }
3577 \Hy@DefNameKey{pdfnonfullscreenpagemode}{%
3578 \do{UseNone}{}%
3579 \do{UseOutlines}{}%
3580 \do{UseThumbs}{}%
3581 \do{FullScreen}{}%
3582 \do{UseOC}{PDF 1.5}%
3583 \do{UseAttachments}{PDF 1.6}%

```

```

3584 }
3585 \Hy@DefNameKey{pdfdirection}{%
3586   \do{L2R}{Left to right}%
3587   \do{R2L}{Right to left}%
3588 }
3589 \Hy@DefNameKey{pdfviewarea}{%
3590   \do{MediaBox}{}%
3591   \do{CropBox}{}%
3592   \do{BleedBox}{}%
3593   \do{TrimBox}{}%
3594   \do{ArtBox}{}%
3595 }
3596 \Hy@DefNameKey{pdfviewclip}{%
3597   \do{MediaBox}{}%
3598   \do{CropBox}{}%
3599   \do{BleedBox}{}%
3600   \do{TrimBox}{}%
3601   \do{ArtBox}{}%
3602 }
3603 \Hy@DefNameKey{pdfprintarea}{%
3604   \do{MediaBox}{}%
3605   \do{CropBox}{}%
3606   \do{BleedBox}{}%
3607   \do{TrimBox}{}%
3608   \do{ArtBox}{}%
3609 }
3610 \Hy@DefNameKey{pdfprintclip}{%
3611   \do{MediaBox}{}%
3612   \do{CropBox}{}%
3613   \do{BleedBox}{}%
3614   \do{TrimBox}{}%
3615   \do{ArtBox}{}%
3616 }
3617 \Hy@DefNameKey{pdfprintscaling}{%
3618   \do{AppDefault}{}%
3619   \do{None}{}%
3620 }
3621 \Hy@DefNameKey{pdfduplex}{%
3622   \do{Simplex}{}%
3623   \do{DuplexFlipShortEdge}{}%
3624   \do{DuplexFlipLongEdge}{}%
3625 }
3626 \Hy@DefNameKey{pdfpicktraybypdfsize}{%
3627   \do{true}{}%
3628   \do{false}{}%
3629 }
3630 \define@key{Hyp}{pdfprintpagerange}{%
3631   \def\@pdfprintpagerange{#1}%
3632 }
3633 \Hy@DefNameKey{pdfnumcopies}{%
3634   \do{2}{two copies}%
3635   \do{3}{three copies}%
3636   \do{4}{four copies}%
3637   \do{5}{five copies}%
3638 }
3639 \define@key{Hyp}{pdfusetitle}[true]{%
3640   \Hy@boolkey[pdfusetitle]{usetitle}{#1}%

```

```

3641 }
3642 \def\HyXeTeX@CheckUnicode{%
3643   \ifxetex
3644     \ifHy@unicode
3645     \else
3646       \Hy@WarningNoLine{%
3647         XeTeX driver only supports unicode.\MessageBreak
3648         Enabling option 'unicode'%
3649       }%
3650       \kvsetkeys{Hyp}{unicode}%
3651     \fi
3652   \else
3653     \let\HyXeTeX@CheckUnicode\relax
3654   \fi
3655 }
3656 \def\HyPsd@PrerenderUnicode#1{%
3657   \begingroup
3658     \expandafter\ifx\csname PrerenderUnicode\endcsname\relax
3659     \else
3660       \sbox0{%
3661         \let\GenericInfo\@gobbletwo
3662         \let\GenericWarning\@gobbletwo
3663         \let\GenericError\@gobblefour
3664         \PrerenderUnicode{#1}%
3665       }%
3666     \fi
3667   \endgroup
3668 }
3669 \define@key{Hyp}{pdftitle}{%
3670   \HyXeTeX@CheckUnicode
3671   \HyPsd@XeTeXBigCharstrue
3672   \HyPsd@PrerenderUnicode{#1}%
3673   \pdfstringdef\@pdftitle{#1}%
3674 }
3675 \define@key{Hyp}{pdfauthor}{%
3676   \HyXeTeX@CheckUnicode
3677   \HyPsd@XeTeXBigCharstrue
3678   \HyPsd@PrerenderUnicode{#1}%
3679   \pdfstringdef\@pdfauthor{#1}%
3680 }
3681 \define@key{Hyp}{pdfproducer}{%
3682   \HyXeTeX@CheckUnicode
3683   \HyPsd@XeTeXBigCharstrue
3684   \HyPsd@PrerenderUnicode{#1}%
3685   \pdfstringdef\@pdfproducer{#1}%
3686 }
3687 \define@key{Hyp}{pdfcreator}{%
3688   \HyXeTeX@CheckUnicode
3689   \HyPsd@XeTeXBigCharstrue
3690   \HyPsd@PrerenderUnicode{#1}%
3691   \pdfstringdef\@pdfcreator{#1}%
3692 }
3693 \define@key{Hyp}{pdfcreationdate}{%
3694   \begingroup
3695     \Hy@unicodefalse
3696     \pdfstringdef\@pdfcreationdate{#1}%
3697   \endgroup

```

```

3698 }
3699 \define@key{Hyp}{pdfmoddate}{%
3700   \begingroup
3701     \Hy@unicodedefalse
3702     \pdfstringdef\@pdfmoddate{#1}%
3703   \endgroup
3704 }
3705 \define@key{Hyp}{pdfsubject}{%
3706   \HyXeTeX@CheckUnicode
3707   \HyPsd@XeTeXBigCharstrue
3708   \HyPsd@PrerenderUnicode{#1}%
3709   \pdfstringdef\@pdfsubject{#1}%
3710 }
3711 \define@key{Hyp}{pdfkeywords}{%
3712   \HyXeTeX@CheckUnicode
3713   \HyPsd@XeTeXBigCharstrue
3714   \HyPsd@PrerenderUnicode{#1}%
3715   \pdfstringdef\@pdfkeywords{#1}%
3716 }
3717 \define@key{Hyp}{pdftrapped}{%
3718   \lowercase{\edef\Hy@temp{#1}}%
3719   \ifx\Hy@temp\HyInfo@trapped@true
3720     \def\@pdftrapped{True}%
3721   \else
3722     \ifx\Hy@temp\HyInfo@trapped@false
3723       \def\@pdftrapped{False}%
3724     \else
3725       \ifx\Hy@temp\HyInfo@trapped@unknown
3726         \def\@pdftrapped{Unknown}%
3727       \else
3728         \ifx\Hy@temp\@empty
3729           \else
3730             \Hy@Warning{%
3731               Unsupported value '#1'\MessageBreak
3732               for option 'pdftrapped'%
3733             }%
3734           \fi
3735         \def\@pdftrapped{}%
3736       \fi
3737     \fi
3738   \fi
3739 }
3740 \def\HyInfo@trapped@true{true}
3741 \def\HyInfo@trapped@false{false}
3742 \def\HyInfo@trapped@unknown{unknown}
3743 \def\HyInfo@TrappedUnsupported{%
3744   \ifx\@pdftrapped\@empty
3745     \else
3746       \Hy@WarningNoLine{'pdftrapped' is not supported by this driver}%
3747       \gdef\HyInfo@TrappedUnsupported{}%
3748     \fi
3749 }
3750 \define@key{Hyp}{pdffinfo}{%
3751   \kvsetkeys{pdffinfo}{#1}%
3752 }
3753 \def\Hy@temp#1{%
3754   \lowercase{\Hy@temp@A{#1}}{#1}%

```

```

3755 }
3756 \def\Hy@temp@A#1#2{%
3757   \define@key{pdfinfo}{#2}{%
3758     \hypersetup{pdf#1={##1}}}%
3759   }%
3760 }
3761 \Hy@temp{Title}
3762 \Hy@temp{Author}
3763 \Hy@temp{Keywords}
3764 \Hy@temp{Subject}
3765 \Hy@temp{Creator}
3766 \Hy@temp{Producer}
3767 \Hy@temp{CreationDate}
3768 \Hy@temp{ModDate}
3769 \Hy@temp{Trapped}
3770 \newif\ifHyInfo@AddonUnsupported
3771 \kv@set@family@handler{pdfinfo}{%
3772   \HyInfo@AddonHandler{#1}{#2}%
3773 }
3774 \let\HyInfo@do\relax
3775 \def\HyInfo@AddonHandler#1#2{%
3776   \ifx\kv@value\relax
3777     \Hy@Warning{%
3778       Option 'pdfinfo': ignoring key '\kv@key' without value%
3779     }%
3780   \else
3781     \EdefEscapeName\HyInfo@KeyEscaped{\kv@key}%
3782     \EdefUnescapeName\HyInfo@Key{\HyInfo@KeyEscaped}%
3783     \expandafter\ifx\csname KV@pdfinfo@\HyInfo@Key\endcsname\relax
3784       \ifHyInfo@AddonUnsupported
3785         \Hy@Warning{%
3786           This driver does not support additional\MessageBreak
3787           information entries, therefore\MessageBreak
3788           '\kv@key' is ignored%
3789         }%
3790       \else
3791         \define@key{pdfinfo}{\HyInfo@Key}{%
3792           \HyXeTeX@CheckUnicode
3793           \HyPsd@XeTeXBigCharstrue
3794           \HyPsd@PrerenderUnicode{##1}%
3795           \pdfstringdef\HyInfo@Value{##1}%
3796           \expandafter\let\csname HyInfo@Value@\HyInfo@Key\endcsname
3797             \HyInfo@Value
3798         }%
3799         \edef\HyInfo@AddonList{%
3800           \HyInfo@AddonList
3801           \HyInfo@do{\HyInfo@Key}%
3802         }%
3803         \kv@parse@normalized{%
3804           \HyInfo@Key={#2}%
3805         }{%
3806           \kv@processor@default{pdfinfo}%
3807         }%
3808         \fi
3809       \else
3810         \kv@parse@normalized{%
3811           \HyInfo@Key={#2}%

```

```

3812     }{%
3813         \kv@processor@default{pdfinfo}%
3814     }%
3815     \fi
3816 \fi
3817 }
3818 \def\HyInfo@GenerateAddons{%
3819     \ifHyInfo@AddonUnsupported
3820         \def\HyInfo@Addons{}%
3821     \else
3822         \begingroup
3823             \toks@{}%
3824             \def\HyInfo@do##1{%
3825                 \EdefEscapeName\HyInfo@Key{##1}%
3826                 \edef\x{%
3827                     \toks@{%
3828                         \the\toks@
3829                         /\HyInfo@Key(\csname HyInfo@Value@##1\endcsname)%
3830                     }%
3831                 }%
3832                 \x
3833             }%
3834             \HyInfo@AddonList
3835             \edef\x{\endgroup
3836                 \def\noexpand\HyInfo@Addons{\the\toks@}%
3837             }%
3838             \x
3839         \fi
3840     }
3841 \def\HyInfo@AddonList{}
3842 \define@key{Hyp}{pdfview}{\calculate@pdfview#1 \}
3843 \define@key{Hyp}{pdfinkmargin}{\setpdfinkmargin{#1}}
3844 \let\setpdfinkmargin\@gobble
3845 \def\calculate@pdfview#1 #2\{%
3846     \def\@pdfview{#1}%
3847     \ifx\#2\%
3848         \def\@pdfviewparams{-32768}%
3849     \else
3850         \def\@pdfviewparams{#2}%
3851     \fi
3852 }
3853 \begingroup\expandafter\expandafter\expandafter\endgroup
3854 \expandafter\ifx\csname numexpr\endcsname\relax
3855     \def\Hy@number#1{%
3856         \expandafter\@firstofone\expandafter{\number#1}%
3857     }%
3858 \else
3859     \def\Hy@number#1{%
3860         \the\numexpr#1\relax
3861     }%
3862 \fi
3863 \define@key{Hyp}{pdfstartpage}{%
3864     \ifx\#1\%
3865         \def\@pdfstartpage{}%
3866     \else
3867         \edef\@pdfstartpage{\Hy@number{#1}}%
3868     \fi

```



```

3869 }%
3870 \define@key{Hyp}{pdfstartview}{%
3871   \ifx\#1\%
3872     \def\@pdfstartview{%
3873       \else
3874         \hypercalcbpdef\@pdfstartview{/#1}%
3875       \fi
3876 }
3877 \def\HyPat@NonNegativeReal/{%
3878   \ *([0-9]+\.[0-9]*|[0-9]*\.[0-9]+) *%
3879 }
3880 \define@key{Hyp}{pdfremotestartview}{%
3881   \ifx\#1\%
3882     \def\@pdfremotestartview{/Fit}%
3883   \else
3884     \hypercalcbpdef\@pdfremotestartview{#1}%
3885     \edef\@pdfremotestartview{\@pdfremotestartview}%
3886     \Hy@Match\@pdfremotestartview{%
3887       ^{XYZ}-(null|\HyPat@NonNegativeReal/) %
3888       -(null|\HyPat@NonNegativeReal/) %
3889       (null|\HyPat@NonNegativeReal/)|%
3890       Fit(|B|%
3891         (H|V|BH|BV) (null|\HyPat@NonNegativeReal/)|%
3892         R \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/ %
3893         \HyPat@NonNegativeReal/ \HyPat@NonNegativeReal/%
3894       )$%
3895     }{}{%
3896       \Hy@Warning{%
3897         Invalid value '@pdfremotestartview'\MessageBreak
3898         of 'pdfremotestartview'\MessageBreak
3899         is replaced by 'Fit'%
3900       }%
3901       \let\@pdfremotestartview\@empty
3902     }%
3903     \ifx\@pdfremotestartview\@empty
3904       \def\@pdfremotestartview{/Fit}%
3905     \else
3906       \edef\@pdfremotestartview{/ \@pdfremotestartview}%
3907     \fi
3908   \fi
3909 }
3910 \define@key{Hyp}{pdfpagescrop}{\edef\@pdfpagescrop{#1}}
3911 \define@key{Hyp}{pdftoolbar}[true]{%
3912   \Hy@boolkey[pdftoolbar]{toolbar}{#1}%
3913 }
3914 \define@key{Hyp}{pdfmenubar}[true]{%
3915   \Hy@boolkey[pdfmenubar]{menubar}{#1}%
3916 }
3917 \define@key{Hyp}{pdfwindowui}[true]{%
3918   \Hy@boolkey[pdfwindowui]{windowui}{#1}%
3919 }
3920 \define@key{Hyp}{pdffitwindow}[true]{%
3921   \Hy@boolkey[pdffitwindow]{fitwindow}{#1}%
3922 }
3923 \define@key{Hyp}{pdfcenterwindow}[true]{%
3924   \Hy@boolkey[pdfcenterwindow]{centerwindow}{#1}%
3925 }

```

```

3926 \define@key{Hyp}{pdfdisplaydoctitle}[true]{%
3927   \Hy@boolkey[pdfdisplaydoctitle]{displaydoctitle}{#1}%
3928 }
3929 \define@key{Hyp}{pdfa}[true]{%
3930   \Hy@boolkey[pdfa]{#1}%
3931 }
3932 \define@key{Hyp}{pdfnewwindow}[true]{%
3933   \def\Hy@temp{#1}%
3934   \ifx\Hy@temp\@empty
3935     \Hy@newwindowsetfalse
3936   \else
3937     \Hy@newwindowsettrue
3938   \Hy@boolkey[pdfnewwindow]{newwindow}{#1}%
3939   \fi
3940 }
3941 \def\Hy@SetNewWindow{%
3942   \ifHy@newwindowset
3943     /NewWindow %
3944   \ifHy@newwindow true\else false\fi
3945   \fi
3946 }
3947 \Hy@DefNameKey{pdfpagelayout}{%
3948   \do{SinglePage}{}%
3949   \do{OneColumn}{}%
3950   \do{TwoColumnLeft}{}%
3951   \do{TwoColumnRight}{}%
3952   \do{TwoPageLeft}{PDF 1.5}%
3953   \do{TwoPageRight}{PDF 1.5}%
3954 }
3955 \define@key{Hyp}{pdflang}{%
3956   \def\@pdflang{#1}%
3957 }
3958 \define@key{Hyp}{pdfpagelabels}[true]{%
3959   \Hy@boolkey[pdfpagelabels]{pagelabels}{#1}%
3960 }
3961 \define@key{Hyp}{pdfescapeform}[true]{%
3962   \Hy@boolkey[pdfescapeform]{escapeform}{#1}%
3963 }

```

Default values:

```

3964 \def\@linkbordercolor{1 0 0}
3965 \def\@urlbordercolor{0 1 1}
3966 \def\@menubordercolor{1 0 0}
3967 \def\@filebordercolor{0 .5 .5}
3968 \def\@runbordercolor{0 .7 .7}
3969 \def\@citebordercolor{0 1 0}
3970 \def\@pdfhighlight{/I}
3971 \def\@pdftitle{}
3972 \def\@pdfauthor{}
3973 \let\@pdfproducer\relax
3974 \def\@pdfcreator{LaTeX with hyperref package}
3975 \def\@pdfcreationdate{}
3976 \def\@pdfmoddate{}
3977 \def\@pdfsubject{}
3978 \def\@pdfkeywords{}
3979 \def\@pdftrapped{}
3980 \def\@pdfpagescrop{}
3981 \def\@pdfstartview{/Fit}

```

```

3982 \def\@pdfremotestartview{/Fit}
3983 \def\@pdfstartpage{1}
3984 \def\@pdfprintpagerange{}
3985 \def\@pdflang{}
3986 \let\PDF@SetupDoc\@empty
3987 \let\PDF@FinishDoc\@empty
3988 \let\phantomsection\@empty
3989 \let\special@paper\@empty
3990 \def\HyperDestNameFilter#1{#1}
3991 \Hy@AtBeginDocument{%
3992   \begingroup
3993     \edef\x{\@ifundefined{stockheight}\paperheight\stockheight}%
3994     \dimen@=\x\relax
3995     \ifdim\dimen@>\z@
3996     \else
3997       \dimen@=11in\relax
3998       \Hy@WarningNoLine{%
3999         Height of page (\expandafter\string\x) %
4000         is invalid (\the\x),\MessageBreak
4001         using 11in%
4002       }%
4003     \fi
4004     \dimen@=0.99626401\dimen@
4005     \xdef\Hy@pageheight{\strip@pt\dimen@}%
4006   \endgroup
4007 }
4008 \def\HyInd@EncapChar{\|}

```

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.

```

4009 \let\hyper@normalise\ExecuteOptions
4010 \let\ExecuteOptions\hypersetup
4011 \Hy@RestoreCatcodes
4012 \InputIfFileExists{hyperref.cfg}{-}{-}
4013 \Hy@SetCatcodes
4014 \let\ExecuteOptions\hyper@normalise
4015 \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.

```

4016 \SetupKeyvalOptions{family=Hyp}
4017 \DeclareLocalOptions{%
4018   a4paper,a5paper,b5paper,letterpaper,legalpaper,executivepaper%
4019 }

```

Add option tex4ht if package tex4ht is loaded.

```

4020 \@ifpackageloaded{tex4ht}{%
4021   \ifpackagewith{hyperref}{tex4ht}{-}{-}%
4022   \PassOptionsToPackage{tex4ht}{hyperref}%
4023 }%
4024 }{-}

4025 \let\ReadBookmarks\relax
4026 \ProcessKeyvalOptions{Hyp}

```

After processing options.

```

4027 \Hy@AtBeginDocument{%
4028   \ifHy@draft

```

```

4029 \let\hyper@@anchor\@gobble
4030 \gdef\hyper@link#1#2#3{#3}%
4031 \let\hyper@anchorstart\@gobble
4032 \let\hyper@anchorend\@empty
4033 \let\hyper@linkstart\@gobbletwo
4034 \let\hyper@linkend\@empty
4035 \def\hyper@linkurl#1#2{#1}%
4036 \def\hyper@linkfile#1#2#3{#1}%
4037 \def\hyper@link@{#1}#2#3{}%
4038 \def\Acrobatmenu#1#2{\leavevmode#2}%
4039 \let\PDF@SetupDoc\@empty
4040 \let\PDF@FinishDoc\@empty
4041 \let\@fifthoffive\@secondoftwo
4042 \let\@secondoffive\@secondoftwo
4043 \let\ReadBookmarks\relax
4044 \let\WriteBookmarks\relax
4045 \Hy@WarningNoLine{Draft mode on}%
4046 \fi
4047 \Hy@DisableOption{draft}%
4048 \Hy@DisableOption{nolinks}%
4049 \Hy@DisableOption{final}%
4050 }

```

15.1 PDF/A

```

4051 \Hy@DisableOption{pdfa}
4052 \ifHy@pdfa
4053 \kvsetkeys{Hyp}{pdfversion=1.4}%
4054 \def\Hy@Acrobatmenu#1#2{%
4055   \leavevmode
4056   \begingroup
4057     \edef\x{#1}%
4058     \@onelevel@sanitize\x
4059     \ifx\x\Hy@NextPage
4060       \let\y=Y%
4061     \else
4062       \ifx\x\Hy@PrevPage
4063         \let\y=Y%
4064       \else
4065         \ifx\x\Hy@FirstPage
4066           \let\y=Y%
4067         \else
4068           \ifx\x\Hy@LastPage
4069             \let\y=Y%
4070           \else
4071             \let\y=N%
4072           \fi
4073         \fi
4074       \fi
4075     \fi
4076   \expandafter\endgroup
4077   \ifx\y Y%
4078   \else
4079     \Hy@Error{%
4080       PDF/A: Named action ‘#1’ is not permitted%
4081     }\@ehc
4082   {#2}%

```

```

4083 \expandafter\@gobble
4084 \fi
4085 }%
4086 \def\Hy@temp#1{%
4087 \expandafter\def\csname Hy@#1\endcsname{#1}%
4088 \expandafter\@onelevel@sanitize\csname Hy@#1\endcsname
4089 }%
4090 \Hy@temp{NextPage}%
4091 \Hy@temp{PrevPage}%
4092 \Hy@temp{FirstPage}%
4093 \Hy@temp{LastPage}%
4094 \else
4095 \def\Hy@Acrobatmenu#1#2{\leavevmode}%
4096 \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.

```

4097 \Hy@nextfalse
4098 \ltx@ifundefined{spanish@sh@"@sel}{\Hy@nexttrue}
4099 \ltx@ifundefined{galician@sh@"@sel}{\Hy@nexttrue}
4100 \ltx@ifundefined{estonian@sh@"@sel}{\Hy@nexttrue}
4101 \ifHy@next
4102 \let\texttilde\~%
4103 \fi

4104 \def\Hy@wrapper@babel#1#2{%
4105 \begingroup
4106 \Hy@safe@activetrue
4107 \set@display@protect
4108 \edef\x{#2}%
4109 \@onelevel@sanitize\x
4110 \toks@{#1}%
4111 \edef\x{\endgroup\the\toks@{x}}%
4112 \x
4113 }
4114 \def\Hy@WrapperDef#1{%
4115 \begingroup
4116 \escapechar=\m@ne
4117 \xdef\Hy@gtemp{%
4118 \expandafter\noexpand\csname HyWrap@\string#1\endcsname
4119 }%
4120 \endgroup
4121 \edef#1{%
4122 \noexpand\Hy@wrapper@babel
4123 \expandafter\noexpand\Hy@gtemp
4124 }%
4125 \expandafter\def\Hy@gtemp
4126 }

4127 \ifHy@figures
4128 \Hy@Info{Hyper figures ON}%
4129 \else
4130 \Hy@Info{Hyper figures OFF}%
4131 \fi
4132 \ifHy@nesting
4133 \Hy@Info{Link nesting ON}%
4134 \else

```

```

4135 \Hy@Info{Link nesting OFF}%
4136 \fi
4137 \ifHy@hyperindex
4138 \Hy@Info{Hyper index ON}%
4139 \else
4140 \Hy@Info{Hyper index OFF}%
4141 \fi
4142 \ifHy@plainpages
4143 \Hy@Info{Plain pages ON}%
4144 \else
4145 \Hy@Info{Plain pages OFF}%
4146 \fi
4147 \ifHy@backref
4148 \Hy@Info{Backreferencing ON}%
4149 \else
4150 \Hy@Info{Backreferencing OFF}%
4151 \fi
4152 \ifHy@typexml
4153 \Hy@AtEndOfPackage{%
4154 \RequirePackage{color}%
4155 \RequirePackage{nameref}%
4156 }%
4157 \fi
4158 \Hy@DisableOption{typexml}
4159 \ifHy@implicit
4160 \Hy@InfoNoLine{Implicit mode ON; LaTeX internals redefined}%
4161 \else
4162 \Hy@InfoNoLine{Implicit mode OFF; no redefinition of LaTeX internals}%
4163 \def\MaybeStopEarly{%
4164 \Hy@Message{Stopped early}%
4165 \Hy@AtBeginDocument{%
4166 \PDF@FinishDoc
4167 \gdef\PDF@FinishDoc{}%
4168 }%
4169 \endinput
4170 }%
4171 \Hy@AtBeginDocument{%
4172 \let\autoref\ref
4173 \let\autopageref\pageref
4174 \ifx\@pdfpagemode\@empty
4175 \gdef\@pdfpagemode{UseNone}%
4176 \fi
4177 \global\Hy@backreffalse
4178 }%
4179 \Hy@AtEndOfPackage{%
4180 \global\let\ReadBookmarks\relax
4181 \global\let\WriteBookmarks\relax
4182 }%
4183 \fi
4184 \Hy@DisableOption{implicit}

```

15.2.1 Driver loading

```

4185 \Hy@AtEndOfPackage{%
4186 \@ifpackageloaded{tex4ht}{%
4187 \def\Hy@driver{htex4ht}%
4188 \Hy@texhttrue

```

4189 }{}%

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.

```

4190 \ifx\Hy@driver\@empty
4191 \else
4192 \def\Hy@temp{hpdftex}%
4193 \ifpdf
4194 \ifx\Hy@driver\Hy@temp
4195 \else
4196 \Hy@WarningNoLine{%
4197   Wrong driver '\Hy@driver.def';\MessageBreak
4198   pdfTeX is running in PDF mode.\MessageBreak
4199   Forcing driver '\Hy@temp.def'%
4200 }%
4201 \let\Hy@driver\Hy@temp
4202 \fi
4203 \else
4204 \ifx\Hy@driver\Hy@temp
4205 \Hy@WarningNoLine{%
4206   Wrong driver '\Hy@driver.def';\MessageBreak
4207   pdfTeX is not running in PDF mode.\MessageBreak
4208   Using default driver%
4209 }%
4210 \let\Hy@driver\@empty
4211 \fi
4212 \fi
4213 \fi
4214 \ifx\Hy@driver\@empty
4215 \else
4216 \def\Hy@temp{hxdetex}%
4217 \ifxdetex
4218 \ifx\Hy@driver\Hy@temp
4219 \else
4220 \Hy@WarningNoLine{%
4221   Wrong driver '\Hy@driver.def';\MessageBreak
4222   XeTeX is running.\MessageBreak
4223   Forcing driver '\Hy@temp.def' for XeTeX%
4224 }%
4225 \let\Hy@driver\Hy@temp
4226 \fi
4227 \fi
4228 \fi
4229 \ifx\Hy@driver\@empty
4230 \else
4231 \def\Hy@temp{hvtexhtm}%
4232 \ifvtexhtml
4233 \ifx\Hy@driver\Hy@temp
4234 \else
4235 \Hy@WarningNoLine{%
4236   Wrong driver '\Hy@driver.def';\MessageBreak
4237   VTeX is running in HTML mode.\MessageBreak
4238   Forcing driver '\Hy@temp.def'%
4239 }%
4240 \let\Hy@driver\Hy@temp
4241 \fi
4242 \else
4243 \ifx\Hy@driver\Hy@temp

```

```

4244 \Hy@WarningNoLine{%
4245   Wrong driver '\Hy@driver.def';\MessageBreak
4246   VTeX is not running in HTML mode.\MessageBreak
4247   Using default driver%
4248 }%
4249 \let\Hy@driver\@empty
4250 \fi
4251 \fi
4252 \fi

```

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

```

4253 \def\HyOpt@DriverType{%
4254 \ifx\Hy@driver\@empty
4255   \def\HyOpt@DriverType{ (autodetected)}%
4256   \providecommand*{\Hy@defaultdriver}{hypertex}%
4257   \ifpdf
4258     \def\Hy@driver{hpdfTeX}%
4259   \else
4260     \ifxetex
4261       \def\Hy@driver{hxetex}%
4262     \else
4263       \ifvtexhtml
4264         \def\Hy@driver{hvtexhtm}%
4265       \def\MaybeStopEarly{%
4266         \Hy@Message{Stopped early}%
4267         \Hy@AtBeginDocument{%
4268           \PDF@FinishDoc
4269           \gdef\PDF@FinishDoc{}%
4270         }%
4271         \endinput
4272       }%
4273     \else
4274       \ifvtexpdf
4275         \def\Hy@driver{hvtex}%
4276       \else
4277         \ifvtexps
4278           \def\Hy@driver{hvtex}%
4279         \else
4280           \ifx\HyOpt@DriverFallback\ltx@empty
4281             \let\Hy@driver\Hy@defaultdriver
4282             \def\HyOpt@DriverType{ (default)}%
4283           \else
4284             \begingroup
4285               \toks@\expandafter{\HyOpt@DriverFallback}%
4286               \edef\x{\endgroup
4287                 \noexpand\kvsetkeys{Hyp}{\the\toks@}%
4288               }%
4289             \x
4290             \ifx\Hy@driver\ltx@empty
4291               \let\Hy@driver\Hy@defaultdriver
4292             \def\HyOpt@DriverType{ (default)}%
4293           \else
4294             \def\HyOpt@DriverType{ (fallback)}%
4295           \fi
4296         \fi
4297       \fi
4298     \fi
4299   \fi

```



```

4300 \fi
4301 \fi
4302 \ifx\Hy@driver\Hy@defaultdriver
4303 \def\Hy@temp{hdvwind}%
4304 \ifx\Hy@temp\Hy@driver
4305 \kvsetkeys{Hyp}{colorlinks}%
4306 \PassOptionsToPackage{dviwindo}{color}%
4307 \fi
4308 \fi
4309 \fi
4310 \Hy@Message{Driver\HyOpt@DriverType: \Hy@driver}%
4311 \chardef\Hy@VersionChecked=0 %
4312 \input{\Hy@driver.def}%
4313 \ifcase\Hy@VersionChecked
4314 \Hy@VersionCheck{\Hy@driver.def}%
4315 \fi
4316 \let\@unprocessedoptions\relax
4317 \Hy@RestoreCatcodes
4318 \Hy@DisableOption{tex4ht}%
4319 \Hy@DisableOption{pdftex}%
4320 \Hy@DisableOption{nativpdf}%
4321 \Hy@DisableOption{dvipdfm}%
4322 \Hy@DisableOption{dvipdfmx}%
4323 \Hy@DisableOption{dvipdfmx-outline-open}%
4324 \Hy@DisableOption{pdfmark}%
4325 \Hy@DisableOption{dvips}%
4326 \Hy@DisableOption{hypertex}%
4327 \Hy@DisableOption{vtex}%
4328 \Hy@DisableOption{vtexpdfmark}%
4329 \Hy@DisableOption{dviwindo}%
4330 \Hy@DisableOption{dvipsone}%
4331 \Hy@DisableOption{textures}%
4332 \Hy@DisableOption{latex2html}%
4333 \Hy@DisableOption{ps2pdf}%
4334 \Hy@DisableOption{xetex}%
4335 \Hy@DisableOption{pdfversion}%
4336 }

```

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

```

4337 \newif\ifHy@DvipdfmxOutlineOpen
4338 \ifxetex
4339 \ifdim\number\XeTeXversion\XeTeXrevision in<0.9995in %
4340 \else
4341 \chardef\SpecialDvipdfmxOutlineOpen\@ne
4342 \Hy@DvipdfmxOutlineOpentruer
4343 \fi
4344 \fi
4345 \begingroup\expandafter\expandafter\expandafter\endgroup
4346 \expandafter\ifx\csname SpecialDvipdfmxOutlineOpen\endcsname\relax
4347 \else
4348 \ifnum\SpecialDvipdfmxOutlineOpen>\z@
4349 \Hy@DvipdfmxOutlineOpentruer
4350 \fi
4351 \fi

```

15.2.2 Bookmarks

```

4352 \def\WriteBookmarks{0}
4353 \def\@bookmarkopenstatus#1{%
4354   \ifHy@bookmarksopen

```

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

```

4355   \ifnum#1<\expandafter\@firstofone\expandafter
4356     {\number\@bookmarksopenlevel} % explicit space
4357   \else
4358     -%
4359   \fi
4360 \else
4361   -%
4362 \fi
4363 }
4364 \ifHy@bookmarks
4365   \Hy@Info{Bookmarks ON}%
4366   \ifx\@pdfpagemode\@empty
4367     \def\@pdfpagemode{UseOutlines}%
4368   \fi
4369 \else
4370   \def\@bookmarkopenstatus#1{%
4371     \Hy@Info{Bookmarks OFF}%
4372     \Hy@AtEndOfPackage{%
4373       \global\let\ReadBookmarks\relax
4374       \global\let\WriteBookmarks\relax
4375     }%
4376     \ifx\@pdfpagemode\@empty
4377       \def\@pdfpagemode{UseNone}%
4378     \fi
4379   \fi
4380 \Hy@DisableOption{bookmarks}

```

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

```

4381 \def\Hy@CatcodeWrapper#1{%
4382   \def\Hy@EndWrap{}%
4383   \def\TMP@EnsureCode##1##2{%
4384     \edef\Hy@EndWrap{%
4385       \Hy@EndWrap
4386       \catcode##1 \the\catcode##1\relax
4387     }%
4388     \catcode##1 ##2\relax
4389   }%
4390   \TMP@EnsureCode{10}{12}% ^^J
4391   \TMP@EnsureCode{33}{12}% !
4392   \TMP@EnsureCode{34}{12}% "
4393   \TMP@EnsureCode{36}{3}% $ (math)
4394   \TMP@EnsureCode{38}{4}% & (alignment)
4395   \TMP@EnsureCode{39}{12}% '
4396   \TMP@EnsureCode{40}{12}% (
4397   \TMP@EnsureCode{41}{12}% )
4398   \TMP@EnsureCode{42}{12}% *
4399   \TMP@EnsureCode{43}{12}% +
4400   \TMP@EnsureCode{44}{12}% ,
4401   \TMP@EnsureCode{45}{12}% -
4402   \TMP@EnsureCode{46}{12}% .
4403   \TMP@EnsureCode{47}{12}% /
4404   \TMP@EnsureCode{58}{12}% :
4405   \TMP@EnsureCode{59}{12}% ;

```

```

4406 \TMP@EnsureCode{60}{12}% <
4407 \TMP@EnsureCode{61}{12}% =
4408 \TMP@EnsureCode{62}{12}% >
4409 \TMP@EnsureCode{63}{12}% ?
4410 \TMP@EnsureCode{91}{12}% [
4411 \TMP@EnsureCode{93}{12}% ]
4412 \TMP@EnsureCode{94}{7}% ^ (superscript)
4413 \TMP@EnsureCode{95}{8}% _ (subscript)
4414 \TMP@EnsureCode{96}{12}% '
4415 \TMP@EnsureCode{124}{12}% |
4416 \TMP@EnsureCode{126}{13}% ~ (active)
4417 #1\relax
4418 \Hy@endWrap
4419 }

```

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

```

4420 \Hy@AtBeginDocument{%
4421   \ifHy@ocgcolorlinks
4422     \kvsetkeys{Hyp}{colorlinks}%
4423     \ifHy@pdfa
4424       \Hy@Warning{%
4425         PDF/A: Optional Content Groups are prohibited,\MessageBreak
4426         using 'colorlinks' instead of 'ocgcolorlinks'%
4427       }%
4428       \Hy@ocgcolorlinksfalse
4429     \fi
4430   \fi
4431   \ifHy@ocgcolorlinks
4432   \else
4433     \Hy@DisableOption{ocgcolorlinks}%
4434   \fi
4435   \ifHy@colorlinks
4436     \def\@pdfborder{0 0 0}%
4437     \let\@pdfborderstyle\@empty
4438     \ifHy@typexml
4439     \else
4440       \Hy@CatcodeWrapper{%
4441         \RequirePackage{color}%
4442       }%
4443     \fi
4444     \def\Hy@colorlink#1{%
4445       \begingroup
4446       \HyColor@UseColor#1%
4447     }%
4448     \def\Hy@endcolorlink{\endgroup}%
4449     \Hy@Info{Link coloring ON}%
4450   \else
4451     \ifHy@frenchlinks
4452       \def\Hy@colorlink#1{\begingroup\fontshape{sc}\selectfont}%
4453       \def\Hy@endcolorlink{\endgroup}%
4454       \Hy@Info{French linking ON}%
4455     \else

```

for grouping consistency:

```

4456   \def\Hy@colorlink#1{\begingroup}%
4457   \def\Hy@endcolorlink{\endgroup}%
4458   \Hy@Info{Link coloring OFF}%
4459 \fi

```

```

4460 \fi
4461 \Hy@DisableOption{colorlinks}%
4462 \Hy@DisableOption{frenchlinks}%
4463 \ifHy@texht
4464 \long\def\@firstoffive#1#2#3#4#5{#1}%
4465 \long\def\@secondoffive#1#2#3#4#5{#2}%
4466 \long\def\@thirdoffive#1#2#3#4#5{#3}%
4467 \long\def\@fourthoffive#1#2#3#4#5{#4}%
4468 \long\def\@fifthoffive#1#2#3#4#5{#5}%
4469 \providecommand*\@safe@activestruet{}%
4470 \providecommand*\@safe@activesfalse{}%
4471 \def\T@ref#1{%
4472   \Hy@safe@activestruet
4473   \expandafter\@setref\csname r@#1\endcsname\@firstoffive{#1}%
4474   \Hy@safe@activesfalse
4475 }%
4476 \def\T@pageref#1{%
4477   \Hy@safe@activestruet
4478   \expandafter\@setref\csname r@#1\endcsname\@secondoffive{#1}%
4479   \Hy@safe@activesfalse
4480 }%
4481 \else
4482 \ifHy@typexml
4483 \else
4484   \Hy@CatcodeWrapper{%
4485     \RequirePackage{nameref}%
4486   }%
4487 \fi
4488 \fi
4489 \DeclareRobustCommand\ref{%
4490   \@ifstar\@refstar\T@ref
4491 }%
4492 \DeclareRobustCommand\pageref{%
4493   \@ifstar\@pagerefstar\T@pageref
4494 }%
4495 % \ifclassloaded{memoir}{%
4496 %   \ltx@ifundefined{@mem@titlerefno link}\ltx@secondoftwo{%
4497 %     \ltx@ifundefined{@mem@titleref}\ltx@secondoftwo\ltx@firstoftwo
4498 %   }%
4499 % } \ltx@secondoftwo
4500 % {%
4501 %   \DeclareRobustCommand*{\nameref}{%
4502 %     \@ifstar\@mem@titlerefno link\@mem@titleref
4503 %   }%
4504 % }{%
4505   \DeclareRobustCommand*{\nameref}{%
4506     \@ifstar\@namerefstar\T@nameref
4507   }%
4508 % }%
4509 }
4510 \Hy@AtBeginDocument{%
4511 \ifHy@texht
4512 \else
4513   \Hy@CatcodeWrapper{%
4514     \ReadBookmarks
4515   }%
4516 \fi

```

```

4517 }
4518 \ifHy@backref
4519   \RequirePackage{backref}%
4520 \else
4521   \let\Hy@backout\@gobble
4522 \fi
4523 \Hy@DisableOption{backref}
4524 \Hy@DisableOption{pagebackref}
4525 \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.

```

4526 \begingroup
4527   \endlinechar=-1 %
4528   \catcode'\^^A=14 %
4529   \catcode'\^^M\active
4530   \catcode'\%\active
4531   \catcode'\#\active
4532   \catcode'\_\active
4533   \catcode'\$\active
4534   \catcode'\&\active
4535   \gdef\hyper@normalise{^^A
4536     \begingroup
4537       \catcode'\^^M\active
4538       \def^^M{ }^^A
4539       \catcode'\%\active
4540       \let%\@percentchar
4541       \let\%\@percentchar
4542       \catcode'\#\active
4543       \def#{\hyper@hash}^^A
4544       \def\#{\hyper@hash}^^A
4545       \@makeother\&^^A
4546       \edef&{\string&}^^A
4547       \edef\&{\string&}^^A
4548       \edef\textunderscore{\string_}^^A
4549       \let_\textunderscore
4550       \catcode'\_\active
4551       \let_\textunderscore
4552       \let~\hyper@tilde
4553       \let\~\hyper@tilde
4554       \let\textasciitilde\hyper@tilde
4555       \let\\ \@backslashchar
4556       \edef$\string$}^^A
4557       \Hy@safe@activetrue
4558       \hyper@n@rmalise
4559     }^^A
4560     \catcode'\#=6 ^^A
4561     \gdef\Hy@ActiveCarriageReturn{^^M}^^A
4562     \gdef\hyper@n@rmalise#1#2{^^A
4563       \def\Hy@tempa{#2}^^A

```

```

4564 \ifx\Hy@tempa\Hy@ActiveCarriageReturn
4565 \Hy@ReturnAfterElseFi{^^A
4566 \hyper@@normalise{#1}^^A
4567 }^^A
4568 \else
4569 \Hy@ReturnAfterFi{^^A
4570 \hyper@@normalise{#1}{#2}^^A
4571 }^^A
4572 \fi
4573 }^^A
4574 \gdef\hyper@@normalise#1#2{^^A
4575 \edef\Hy@tempa{^^A
4576 \endgroup
4577 \noexpand#1{\Hy@RemovePercentCr#2%^^M\@nil}^^A
4578 }^^A
4579 \Hy@tempa
4580 }^^A
4581 \gdef\Hy@RemovePercentCr#1%^^M#2\@nil{^^A
4582 #1^^A
4583 \ifx\limits#2\limits
4584 \else
4585 \Hy@ReturnAfterFi{^^A
4586 \Hy@RemovePercentCr #2\@nil
4587 }^^A
4588 \fi
4589 }^^A
4590 \endgroup
4591 \providecommand*\hyper@chars{%
4592 \let\#\hyper@hash
4593 \let\%\@percentchar
4594 \Hy@safe@activetrue
4595 }

4596 \def\hyperlink#1#2{%
4597 \hyper@@link{#1}{#2}%
4598 }

4599 \def\Hy@VerboseLinkStart#1#2{%
4600 \ifHy@verbose
4601 \begingroup
4602 \Hy@safe@activetrue
4603 \xdef\Hy@VerboseGlobalTemp{(#1) '#2'}%
4604 \Hy@Info{Reference \Hy@VerboseGlobalTemp}%
4605 \xdef\Hy@VerboseGlobalTemp{%
4606 \Hy@VerboseGlobalTemp, %
4607 line \the\inputlineno
4608 }%
4609 \endgroup
4610 \let\Hy@VerboseLinkInfo\Hy@VerboseGlobalTemp
4611 \@onelevel@sanitize\Hy@VerboseLinkInfo
4612 \fi
4613 }

4614 \def\Hy@VerboseLinkInfo{<VerboseLinkInfo>}
4615 \def\Hy@VerboseLinkStop{%
4616 \ifHy@verbose
4617 \begingroup
4618 \edef\x{\endgroup
4619 \write\m@ne{%

```

```

4620      Package 'hyperref' Info: %
4621      End of reference \Hy@VerboseLinkInfo.%
4622    }%
4623  }%
4624  \x
4625  \fi
4626 }

4627 \def\Hy@VerboseAnchor#1{%
4628   \ifHy@verbose
4629     \begingroup
4630     \Hy@safe@activetrue
4631     \Hy@Info{Anchor '\HyperDestNameFilter{#1}'}%
4632   \endgroup
4633   \fi
4634 }

4635 \def\Hy@AllowHyphens{%
4636   \relax
4637   \ifhmode
4638     \penalty\@M
4639     \hskip\z@skip
4640   \fi
4641 }

4642 \DeclareRobustCommand*\href{[1][]{%
4643   \begingroup
4644   \setkeys{href}{#1}%
4645   \@ifnextchar\bgroup\Hy@href{\hyper@normalise\href@}%
4646 }

4647 \def\Hy@href#1{%
4648   \hyper@normalise\href@
4649 }

4650 \begingroup
4651   \catcode'\$=6 %
4652   \catcode'\#=12 %
4653   \gdef\href@#1{\expandafter\href@split$1##\}%
4654   \gdef\href@split$1#$2#$3\\$4{%
4655     \hyper@@link{#1}{#2}{#3}{#4}%
4656   \endgroup
4657 }%
4658 \endgroup

```

Option 'page'.

```

4659 \define@key{href}{page}{%
4660   \def\Hy@href@page{#1}%
4661 }

4662 \let\Hy@href@page\@empty
4663 \newcount\c@Hy@tempcnt
4664 \def\theHy@tempcnt{\the\c@Hy@tempcnt}
4665 \def\Hy@MakeRemoteAction{%
4666   \ifx\Hy@href@page\@empty
4667     \def\Hy@href@page{0}%
4668   \else
4669     \setcounter{Hy@tempcnt}{\Hy@href@page}%
4670     \ifnum\c@Hy@tempcnt<\@ne
4671       \Hy@Warning{%
4672         Invalid page number (\theHy@tempcnt)\MessageBreak
4673         for remote PDF file.\MessageBreak
4674       Using page 1%

```

```

4675 }%
4676 \def\Hy@href@page{0}%
4677 \else
4678 \global\advance\c@Hy@tempcnt\m@ne
4679 \edef\Hy@href@page{\theHy@tempcnt}%
4680 \fi
4681 \fi

```

If a next action is set, then also a new window should be opened. Otherwise AR reclaims that it closes the current file with discarding the next actions.

```

4682 \ifx\Hy@href@nextactionraw\@empty
4683 \else
4684 \Hy@newwindowsettrue
4685 \Hy@newwindowtrue
4686 \fi
4687 }

```

Option ‘pdfremotestartview’.

```

4688 \define@key{href}{pdfremotestartview}{%
4689 \setkeys{Hyp}{pdfremotestartview={#1}}}%
4690 }

```

Option ‘pdfnewwindow’.

```

4691 \let\KV@href@pdfnewwindow\KV@Hyp@pdfnewwindow
4692 \let\KV@href@pdfnewwindow@default\KV@Hyp@pdfnewwindow@default

```

Option ‘ismap’.

```

4693 \newif\ifHy@href@ismap
4694 \define@key{href}{ismap}[true]{%
4695 \ltx@ifundefined{Hy@href@ismap#1}{%
4696 \Hy@Error{%
4697 Invalid value (#1) for key ‘ismap’.\MessageBreak
4698 Permitted values are ‘true’ or ‘false’.\MessageBreak
4699 Ignoring ‘ismap’%
4700 }\@ehc
4701 }{%
4702 \csname Hy@href@ismap#1\endcsname
4703 }%
4704 }

```

Option ‘nextactionraw’.

```

4705 \let\Hy@href@nextactionraw\@empty
4706 \define@key{href}{nextactionraw}{%
4707 \edef\Hy@href@nextactionraw{#1}%
4708 \ifx\Hy@href@nextactionraw\@empty
4709 \else
4710 \Hy@Match\Hy@href@nextactionraw{%
4711 ^(\HyPat@ObjRef/|<<.*[/S[/].+>>|%
4712 \[( ?\HyPat@ObjRef/|<<.*[/S[/].+>>)+ ?)]$%
4713 }-}{%
4714 \Hy@Warning{Invalid value for ‘nextactionraw’:\MessageBreak
4715 \Hy@href@nextactionraw\MessageBreak
4716 The action is discarded%
4717 }%
4718 }%
4719 \ifx\Hy@href@nextactionraw\@empty
4720 \else
4721 \edef\Hy@href@nextactionraw{/Next \Hy@href@nextactionraw}%
4722 \fi

```



```

4723 \fi
4724 }
4725 \def\HyPat@ObjRef/{.+}

```

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

```

4726 \RequirePackage{url}
4727 \let\HyOrg@url\url
4728 \def\Hurl{\begingroup \Url}
4729 \DeclareRobustCommand*\nolinkurl{\hyper@normalise\nolinkurl@}
4730 \def\nolinkurl@#1{\Hurl{#1}}
4731 \DeclareRobustCommand*\url{\hyper@normalise\url@}
4732 \def\url@#1{\hyper@linkurl{\Hurl{#1}}{#1}}
4733 \DeclareRobustCommand*\hyperimage{\hyper@normalise\hyper@image}
4734 \providecommand\hyper@image[2]{#2}
4735 \def\hypertarget#1#2{%
4736   \ifHy@nesting
4737     \hyper@@anchor{#1}{#2}%
4738   \else
4739     \hyper@@anchor{#1}{\relax}#2%
4740   \fi
4741 }

```

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

```

4742 \DeclareRobustCommand*\hyperref{%
4743   \@ifnextchar[\Hy@babelnormalise\label@hyperref]\@hyperref
4744 }
4745 \def\Hy@babelnormalise#1[#2]{%
4746   \begingroup
4747     \Hy@safe@activetrue
4748     \edef\Hy@tempa{%
4749       \endgroup
4750       \noexpand#1[#2]}%
4751   }%
4752   \Hy@tempa
4753 }
4754 \def\@hyperref{\hyper@normalise\@hyperref}
4755 \def\@hyperref#1#2#3{%
4756   \edef\ref@one{\ifx\#2\\\else#2.\fi#3}%
4757   \expandafter\tryhyper@link\ref@one\{#1}%
4758 }
4759 \def\tryhyper@link#1\#2{%
4760   \hyper@@link{#2}{#1}%
4761 }
4762 \def\hyperdef{\@ifnextchar[\label@hyperdef]\@hyperdef}
4763 \def\@hyperdef#1#2#3{%, category, name, text
4764   \ifx\#1\%
4765     \def\Hy@AnchorName{#2}%
4766   \else
4767     \def\Hy@AnchorName{#1.#2}%
4768   \fi
4769   \ifHy@nesting

```

```

4770 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#3}%
4771 \else
4772 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#3%
4773 \fi
4774 }

```

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

```

4775 \def\label@hyperref[#1]{%
4776 \expandafter\label@@hyperref\csname r@#1\endcsname{#1}%
4777 }%
4778 \def\label@@hyperref#1#2#3{%
4779 \ifx#1\relax
4780 \protect\G@refundefinedtrue
4781 \@latex@warning{%
4782 Hyper reference ‘#2’ on page \thepage \space undefined%
4783 }%
4784 \hyper@@link{}{??}{#3}%
4785 \else
4786 \hyper@@link{\expandafter\@fifthoffive#1}%
4787 {\expandafter\@fourthoffive#1\@empty\@empty}{#3}%
4788 \fi
4789 }
4790 \def\label@hyperdef[#1]#2#3#4{% label name, category, name,
4791 % anchor text
4792 \@bsphack
4793 \ifx\#2\%
4794 \def\Hy@AnchorName{#3}%
4795 \else
4796 \def\Hy@AnchorName{#2.#3}%
4797 \fi
4798 \if@filesw
4799 \protected@write\@auxout{}{%
4800 \string\newlabel{#1}{\{ }\{ }\{ \Hy@AnchorName\} }%
4801 }%
4802 \fi
4803 \@esphack
4804 \ifHy@nesting
4805 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{#4}%
4806 \else
4807 \expandafter\hyper@@anchor\expandafter{\Hy@AnchorName}{\relax}#4%
4808 \fi
4809 }

```

17 Underlying basic hypertext macros

Links have an optional type, a filename (possibly a URL), an internal name, and some marked text. (Caution: the internal name may contain babel shorthand characters.) If the second parameter is empty, its an internal link, otherwise we need to open another file or a URL. A link start has a type, and a URL.

```

4810 \def\hyper@@link{\let\Hy@reserved@a\relax
4811 \@ifnextchar{\hyper@link@}{\hyper@link@[link]}%
4812 }
4813 \def\hyper@link@[#1]#2#3#4{%
4814 \begingroup
4815 \protected@edef\Hy@tempa{#2}%

```

```

4816 \Hy@safe@activetrue
4817 \edef\x{#3}%
4818 \ifx\Hy@tempa\@empty
4819 \toks0{\hyper@link{#1}}%
4820 \else
4821 \toks0{\expandafter\hyper@readexternallink#2\{#1}}%
4822 \fi
4823 \toks2{%
4824 \Hy@safe@activesfalse
4825 #4%
4826 }%
4827 \edef\Hy@tempa{\the\toks2}%
4828 \edef\x{\endgroup
4829 \ifx\Hy@tempa\@empty
4830 \noexpand\Hy@Warning{Suppressing empty link}%
4831 \else
4832 \the\toks0 {\x}{\the\toks2}}%
4833 \fi
4834 }%
4835 \x
4836 }

```

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.

```

4837 \def\hyper@readexternallink#1\{#2#3#4{%
4838 \begingroup
4839 \let\relax
4840 \expandafter\endgroup
4841 \expandafter\@hyper@@readexternallink#1\{#2}{#3}{#4}%
4842 }
4843 \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.

```

4844 \@hyper@readexternallink{#2}{#3}{#4}#1::\{#1}%
4845 }

```

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

```

4846 \def\@pdftempwordfile{file}%
4847 \def\@pdftempwordrun{run}%
4848 \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:

```

4849 \ifx\#6\%
4850 \@hyper@linkfile file:#7\#{#3}{#2}{#7}%
4851 \else
4852 \ifx\#4\%
4853 \@hyper@linkfile file:#7\#{#3}{#2}{#7}%
4854 \else

```

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

```

4855 \def\@pdftempa{#4}%
4856 \ifx\@pdftempa\@pdftempwordfile
4857 \@hyper@linkfile#7\#{#3}{#2}{#7}%
4858 \else

```

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

```

4859 \ifx\@pdftempa\@pdftempwordrun
4860 \ifHy@pdfa
4861 \Hy@Error{%
4862 PDF/A: Launch action is prohibited%
4863 }\@ehc
4864 \begingroup
4865 \leavevmode
4866 #2%
4867 \endgroup
4868 \else
4869 \@hyper@launch#7\#{#3}{#2}%
4870 \fi
4871 \else

```

otherwise its a URL

```

4872 \hyper@linkurl{#3}{#7\ifx\#2\%}\else\hyper@hash#2\fi}%
4873 \fi
4874 \fi
4875 \fi
4876 \fi
4877 }

```

By default, turn run: into file:

```

4878 \def\@hyper@launch run:#1\#2#3{% filename, anchor text, linkname
4879 \hyper@linkurl{#2}{%
4880 \Hy@linkfileprefix
4881 #1%
4882 \ifx\#3\%
4883 \else
4884 \hyper@hash
4885 #3%
4886 \fi
4887 }%
4888 }

```

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

```

4889 \def\@hyper@linkfile file:#1\#2#3#4{%
4890 %file url,link string, name, original uri
4891 \filename@parse{#1}%
4892 \ifx\filename@ext\relax
4893 \edef\filename@ext{\XR@ext}%
4894 \fi

```

```

4895 \def\use@file{\filename@area\filename@base.\filename@ext}%
4896 \Hy@ifStringEndsWith\filename@ext\XR@ext{%
4897   \hyper@linkfile{#2}{\use@file}{#3}%
4898 }{%
4899   \ifx\@baseurl\@empty
4900     \hyper@linkurl{#2}{%
4901       #4\ifx\@#3\@else\hyper@hash#3\fi
4902     }%
4903   \else
4904     \hyper@linkurl{#2}{\use@file\ifx\@#3\@else\hyper@hash#3\fi}%
4905   \fi
4906 }%
4907 }

4908 \def\Hy@ifStringEndsWith#1#2{%
4909   \begingroup
4910     \edef\x{#1}%
4911     \@onelevel@sanitize\x
4912     \edef\x{.\x$}%
4913     \edef\y{#2}%
4914     \@onelevel@sanitize\y
4915     \edef\y{.\y$}%
4916     \expandafter\def\expandafter\z\expandafter##\expandafter1\y##2\@nil{%
4917       \endgroup
4918       \ifx\relax##2\relax
4919         \expandafter\ltx@secondoftwo
4920       \else
4921         \expandafter\ltx@firstoftwo
4922       \fi
4923     }%
4924     \expandafter\expandafter\expandafter\z\expandafter\x\y\@nil
4925 }

4926 \def\Hy@StringLocalhost{localhost}
4927 \@onelevel@sanitize\Hy@StringLocalhost
4928 \def\Hy@CleanupFile#1{%
4929   \edef#1{#1}%
4930   \expandafter\Hy@@CleanupFile#1\hbox{//\hbox\@nil{#1}%
4931 }
4932 \def\Hy@@CleanupFile#1//#2/#3\hbox#4\@nil#5{%
4933   \begingroup
4934     \toks@{\endgroup}%
4935     \def\x{#1}%
4936     \ifx\x\@empty
4937       \def\x{#2}%
4938     \ifx\x\@empty
4939       \toks@{\endgroup\def#5{/#3}}%
4940     \else
4941       \@onelevel@sanitize\x
4942       \ifx\x\Hy@StringLocalhost
4943         \toks@{\endgroup\def#5{/#3}}%
4944       \fi
4945     \fi
4946     \fi
4947     \the\toks@
4948 }

```

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.

```

4949 \long\def\hyper@@anchor#1#2{\@hyper@@anchor#1\relax#2\relax}
4950 \long\def\@hyper@@anchor#1\relax#2#3\relax{%
4951   \ifx\#1\%
4952     #2\Hy@Warning{Ignoring empty anchor}%
4953   \else
4954     \def\anchor@spot{#2#3}%
4955     \let\put@me@back\@empty
4956     \ifx\relax#2\relax
4957     \else
4958       \ifHy@nesting
4959       \else
4960         \ifcat a\noexpand#2\relax
4961         \else
4962           \ifcat 0\noexpand#2 \relax
4963           \else
4964             \typeout{Anchor start is not alphanumeric %
4965             on input line\the\inputlineno%
4966             }%
4967             \let\anchor@spot\@empty
4968             \def\put@me@back{#2#3}%
4969           \fi
4970         \fi
4971       \fi
4972     \fi
4973     \ifHy@activeanchor
4974       \anchor@spot
4975     \else
4976       \hyper@anchor{#1}%
4977     \fi
4978     \expandafter\put@me@back
4979   \fi
4980   \let\anchor@spot\@empty
4981 }
4982 \def\anchor@spot{}
```

18 Compatibility with the *LT_εX2html* package

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

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

```

4983 \let\htmladdimg\hyperimage
4984 \def\htmladdnormallink#1#2{\href{#2}{#1}}
4985 \def\htmladdnormallinkfoot#1#2{\href{#2}{#1}\footnote{#2}}
4986 \def\htmlref#1#2{% anchor text, label
4987   \label@hyperref[{#2}]{#1}%
4988 }
```

This is really too much. The \LaTeX 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.

```

4989 \def\@latex2htmlX{%
4990   \let\hhyperref\hyperref
4991   \def\hyperref##1##2##3##4{% anchor text for HTML
4992     % text to print before label in print
4993     % label
4994     % post-label text in print
4995     ##2\ref{##4}##3%
4996   }%
4997 }
```

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.

```

4998 \RequirePackage{bitset}
```

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

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

```

\HyField@NewFlag #1: type: F annot flags, Ff field flags
#2: PDF name
#3: PDF position
4999 \def\HyField@NewFlag#1#2{%
5000   \lowercase{\HyField@NewOption{#2}}%
5001   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5002 }
```

```

\HyField@NewFlagOnly
5003 \def\HyField@NewFlagOnly#1#2{%
5004   \lowercase{\HyField@NewBitsetFlag{#2}}{#2}{#1}%
5005 }
```

```

\HyField@NewOption #1: option name
5006 \def\HyField@NewOption#1{%
5007   \expandafter\newif\csname ifFld@#1\endcsname
5008   \define@key{Field}{#1}[true]{%
5009     \lowercase{\Field@boolkey{##1}}{#1}%
5010   }%
5011 }
```

```

\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

```
5012 \def\HyField@NewBitsetFlag#1#2#3#4{%
5013   \begingroup
5014   \count@=#4\relax
5015   \advance\count@\m@ne
5016   \def\x###1{%
5017     \endgroup
5018     \expandafter\def\csname HyField@#3@#1\endcsname{##1}%
5019     \expandafter\ifx\csname HyField@#3@##1\endcsname\relax
5020       \expandafter\edef\csname HyField@#3@##1\endcsname{%
5021         (\number#4) #2%
5022       }%
5023     \else
5024       \expandafter\edef\csname HyField@#3@##1\endcsname{%
5025         \csname HyField@#3@##1\endcsname
5026         /#2%
5027       }%
5028     \fi
5029   }%
5030   \expandafter\x\expandafter{\the\count@}%
5031 }
```

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

```
5032 \def\HyField@UseFlag#1#2{%
5033   \lowercase{\HyField@@UseFlag{#2}}{#1}%
5034 }
```

\HyField@@UseFlag

```
5035 \def\HyField@@UseFlag#1#2{%
5036   \bitsetSetValue{HyField@#2}{%
5037     \csname HyField@#2@#1\endcsname
5038   }{%
5039     \csname ifFld@#1\endcsname 1\else 0\fi
5040   }%
5041 }
```

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

```
5042 \def\HyField@SetFlag#1#2{%
5043   \lowercase{\HyField@@SetFlag{#2}}{#1}%
5044 }
```

\HyField@@SetFlag

```
5045 \def\HyField@@SetFlag#1#2{%
5046   \bitsetSetValue{HyField@#2}{%
5047     \csname HyField@#2@#1\endcsname
5048   }{1}%
5049 }
```

\HyField@PrintFlags

```
5050 \def\HyField@PrintFlags#1#2{%
5051   \ifHy@verbose
5052     \begingroup
5053     \let\Hy@temp\@empty
5054     \let\MessageBreak\relax
5055     \expandafter\@for\expandafter\x\expandafter:\expandafter=
```



```

5056 \bitsetGetSetBitList{HyField@#1}\do{%
5057 \edef\Hy@temp{%
5058 \Hy@temp
5059 \csname HyField@#1@\x\endcsname\MessageBreak
5060 }%
5061 }%
5062 \edef\x{\endgroup
5063 \noexpand\Hy@Info{%
5064 Field flags: %
5065 \expandafter\ifx\@car#1\@nil S\else/\fi
5066 #1 %
5067 \bitsetGetDec{HyField@#1} %
5068 (0x\bitsetGetHex{HyField@#1}{32})\MessageBreak
5069 \Hy@temp
5070 for #2%
5071 }%
5072 }\x
5073 \fi
5074 }

```

19.1.1 Declarations of field flags

“Table 8.70 Field flags common to all field types”

```

5075 \HyField@NewFlag{Ff}{ReadOnly}{1}
5076 \HyField@NewFlag{Ff}{Required}{2}
5077 \HyField@NewFlag{Ff}{NoExport}{3}

```

“Table 8.75 Field flags specific to button fields”

```

5078 \HyField@NewFlag{Ff}{NoToggleToOff}{15}
5079 \HyField@NewFlag{Ff}{Radio}{16}
5080 \HyField@NewFlag{Ff}{Pushbutton}{17}
5081 \HyField@NewFlag{Ff}{RadiosInUnison}{26}

```

“Table 8.77 Field flags specific to text fields”

```

5082 \HyField@NewFlag{Ff}{Multiline}{13}
5083 \HyField@NewFlag{Ff}{Password}{14}
5084 \HyField@NewFlag{Ff}{FileSelect}{21}% PDF 1.4
5085 \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5086 \HyField@NewFlag{Ff}{DoNotScroll}{24}% PDF 1.4
5087 \HyField@NewFlag{Ff}{Comb}{25}% PDF 1.4
5088 \HyField@NewFlag{Ff}{RichText}{26}% PDF 1.5

```

“Table 8.79 field flags specific to choice fields”

```

5089 \HyField@NewFlag{Ff}{Combo}{18}
5090 \HyField@NewFlag{Ff}{Edit}{19}
5091 \HyField@NewFlag{Ff}{Sort}{20}
5092 \HyField@NewFlag{Ff}{MultiSelect}{22}% PDF 1.4
5093 % \HyField@NewFlag{Ff}{DoNotSpellCheck}{23}% PDF 1.4
5094 \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.

```

5095 \newif\ifFld@popdown
5096 \define@key{Field}{popdown}[true]{%
5097 \lowercase{\Field@boolkey{#1}}{popdown}%
5098 }

```

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.

```

5099 \HyField@NewFlag{F}{Invisible}{1}
5100 \HyField@NewFlag{F}{Hidden}{2}% PDF 1.2
5101 \HyField@NewFlag{F}{Print}{3}% PDF 1.2
5102 \HyField@NewFlag{F}{NoZoom}{4}% PDF 1.2
5103 \HyField@NewFlag{F}{NoRotate}{5}% PDF 1.3
5104 \HyField@NewFlag{F}{NoView}{6}% PDF 1.3
5105 \HyField@NewFlag{F}{Locked}{8}% PDF 1.4
5106 \HyField@NewFlag{F}{ToggleNoView}{9}% PDF 1.5
5107 \HyField@NewFlag{F}{LockedContents}{10}% PDF 1.7

5108 \ifHy@pdfa
5109 \def\HyField@PDFAFflagWarning#1#2{%
5110 \Hy@Warning{%
5111 PDF/A: Annotation flag '#1' must\MessageBreak
5112 be set to '#2'%
5113 }%
5114 }%
5115 \Fld@invisiblefalse
5116 \def\Fld@invisibletrue{%
5117 \HyField@PDFAFflagWarning{invisible}{false}%
5118 }%
5119 \Fld@hiddenfalse
5120 \def\Fld@hiddenttrue{%
5121 \HyField@PDFAFflagWarning{hidden}{false}%
5122 }%
5123 \Fld@printtrue
5124 \def\Fld@printfalse{%
5125 \HyField@PDFAFflagWarning{print}{true}%
5126 }%
5127 \Fld@nozoomtrue
5128 \def\Fld@nozoomfalse{%
5129 \HyField@PDFAFflagWarning{nozoom}{true}%
5130 }%
5131 \Fld@norotatetrue
5132 \def\Fld@norotatefalse{%
5133 \HyField@PDFAFflagWarning{norotate}{true}%
5134 }%
5135 \Fld@noviewfalse
5136 \def\Fld@noviewtrue{%
5137 \HyField@PDFAFflagWarning{noview}{false}%
5138 }%
5139 \fi

```

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

```

5140 \HyField@NewFlag{Submit}{IncludeNoValueFields}{2}
5141 \HyField@NewFlagOnly{Submit}{ExportFormat}{3}
5142 \HyField@NewFlag{Submit}{GetMethod}{4}
5143 \HyField@NewFlag{Submit}{SubmitCoordinates}{5}
5144 \HyField@NewFlagOnly{Submit}{XFDF}{6}
5145 \HyField@NewFlag{Submit}{IncludeAppendSaves}{7}
5146 \HyField@NewFlag{Submit}{IncludeAnnotations}{8}
5147 \HyField@NewFlagOnly{Submit}{SubmitPDF}{9}
5148 \HyField@NewFlag{Submit}{CanonicalFormat}{10}

```

```

5149 \HyField@NewFlag{Submit}{ExclNonUserAnnots}{11}
5150 \HyField@NewFlag{Submit}{ExclFKey}{12}
5151 \HyField@NewFlag{Submit}{EmbedForm}{14}

5152 \define@key{Field}{export}{%
5153   \lowercase{\def\Hy@temp{#1}}%
5154   \@ifundefined{Fld@export@\Hy@temp}{%
5155     \@onelevel@sanitize\Hy@temp
5156     \Hy@Error{%
5157       Unknown export format '\Hy@temp'.\MessageBreak
5158       Known formats are 'FDF', 'HTML', 'XFDF', and 'PDF'%
5159     }\@ehc
5160   }{%
5161     \let\Fld@export\Hy@temp
5162   }%
5163 }
5164 \def\Fld@export{fdf}
5165 \@namedef{Fld@export@fdf}{0}%
5166 \@namedef{Fld@export@html}{1}%
5167 \@namedef{Fld@export@xfdf}{2}%
5168 \@namedef{Fld@export@pdf}{3}%

```

19.1.2 Set submit flags

\HyField@FlagsSubmit

```

5169 \def\HyField@FlagsSubmit{%
5170   \bitsetReset{HyField@Submit}%
5171   \ifcase\@nameuse{Fld@export@\Fld@export} %
5172     % FDF
5173     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5174     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5175     \HyField@UseFlag{Submit}{IncludeAppendSaves}%
5176     \HyField@UseFlag{Submit}{IncludeAnnotations}%
5177     \HyField@UseFlag{Submit}{CanonicalFormat}%
5178     \HyField@UseFlag{Submit}{ExclNonUserAnnots}%
5179     \HyField@UseFlag{Submit}{ExclFKey}%
5180     \HyField@UseFlag{Submit}{EmbedForm}%
5181   \or % HTML
5182     \HyField@SetFlag{Submit}{ExportFormat}%
5183     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5184     \HyField@UseFlag{Submit}{GetMethod}%
5185     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5186     \HyField@UseFlag{Submit}{CanonicalFormat}%
5187   \or % XFDF
5188     \HyField@SetFlag{Submit}{XFDF}%
5189     \HyField@UseFlag{Submit}{IncludeNoValueFields}%
5190     \HyField@UseFlag{Submit}{SubmitCoordinates}%
5191     \HyField@UseFlag{Submit}{CanonicalFormat}%
5192   \or % PDF
5193     \HyField@SetFlag{Submit}{SubmitPDF}%
5194     \HyField@UseFlag{Submit}{GetMethod}%
5195   \fi
5196   \HyField@PrintFlags{Submit}{submit button field}%
5197   \bitsetIsEmpty{HyField@Submit}{%
5198     \def\Fld@submitflags{%
5199     }{%
5200       \edef\Fld@submitflags{/Flags \bitsetGetDec{HyField@Submit}}%
5201     }%

```

5202 }

19.1.3 Set annot flags in fields

\HyField@FlagsAnnot

```
5203 \def\HyField@FlagsAnnot#1{%
5204   \bitsetReset{HyField@F}%
5205   \HyField@UseFlag{F}{Invisible}%
5206   \HyField@UseFlag{F}{Hidden}%
5207   \HyField@UseFlag{F}{Print}%
5208   \HyField@UseFlag{F}{NoZoom}%
5209   \HyField@UseFlag{F}{NoRotate}%
5210   \HyField@UseFlag{F}{NoView}%
5211   \HyField@UseFlag{F}{Locked}%
5212   \HyField@UseFlag{F}{ToggleNoView}%
5213   \HyField@UseFlag{F}{LockedContents}%
5214   \HyField@PrintFlags{F}{#1}%
5215   \bitsetIsEmpty{HyField@F}{%
5216     \def\Fld@annotflags{%
5217     }{%
5218       \edef\Fld@annotflags{/F \bitsetGetDec{HyField@F}}}%
5219   }%
5220 }
```

19.1.4 Pushbutton field

\HyField@FlagsPushButton

```
5221 \def\HyField@FlagsPushButton{%
5222   \HyField@FlagsAnnot{push button field}%
5223   \bitsetReset{HyField@Ff}%
5224   \HyField@UseFlag{Ff}{ReadOnly}%
5225   \HyField@UseFlag{Ff}{Required}%
5226   \HyField@UseFlag{Ff}{NoExport}%
5227   \HyField@SetFlag{Ff}{Pushbutton}%
5228   \HyField@PrintFlags{Ff}{push button field}%
5229   \bitsetIsEmpty{HyField@Ff}{%
5230     \def\Fld@flags{%
5231     }{%
5232       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5233   }%
5234 }
```

19.1.5 Check box field

\HyField@FlagsCheckBox

```
5235 \def\HyField@FlagsCheckBox{%
5236   \HyField@FlagsAnnot{check box field}%
5237   \bitsetReset{HyField@Ff}%
5238   \HyField@UseFlag{Ff}{ReadOnly}%
5239   \HyField@UseFlag{Ff}{Required}%
5240   \HyField@UseFlag{Ff}{NoExport}%
5241   \HyField@PrintFlags{Ff}{check box field}%
5242   \bitsetIsEmpty{HyField@Ff}{%
5243     \def\Fld@flags{%
5244     }{%
5245       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5246   }%
5247 }
```

```

5246 }%
5247 }

```

19.1.6 Radio button field

\HyField@FlagsRadioButton

```

5248 \def\HyField@FlagsRadioButton{%
5249 \HyField@FlagsAnnot{radio button field}%
5250 \bitsetReset{HyField@Ff}%
5251 \HyField@UseFlag{Ff}{ReadOnly}%
5252 \HyField@UseFlag{Ff}{Required}%
5253 \HyField@UseFlag{Ff}{NoExport}%
5254 \HyField@UseFlag{Ff}{NoToggleToOff}%
5255 \HyField@SetFlag{Ff}{Radio}%
5256 \HyField@UseFlag{Ff}{RadiosInUnison}%
5257 \HyField@PrintFlags{Ff}{radio button field}%
5258 \bitsetIsEmpty{HyField@Ff}{%
5259 \def\Fld@flags{}}%
5260 }{%
5261 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%
5262 }%
5263 }

```

19.1.7 Text fields

\HyField@FlagsText

```

5264 \def\HyField@FlagsText{%
5265 \HyField@FlagsAnnot{text field}%
5266 \bitsetReset{HyField@Ff}%
5267 \HyField@UseFlag{Ff}{ReadOnly}%
5268 \HyField@UseFlag{Ff}{Required}%
5269 \HyField@UseFlag{Ff}{NoExport}%
5270 \HyField@UseFlag{Ff}{Multiline}%
5271 \HyField@UseFlag{Ff}{Password}%
5272 \HyField@UseFlag{Ff}{FileSelect}%
5273 \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5274 \HyField@UseFlag{Ff}{DoNotScroll}%
5275 \ifFld@comb
5276 \ifcase0\ifFld@multiline
5277 \else\ifFld@password
5278 \else\ifFld@fileselect
5279 \else 1\fi\fi\fi\relax
5280 \Hy@Error{%
5281 Field option ‘comb’ cannot used together with\MessageBreak
5282 ‘multiline’, ‘password’, or ‘fileselect’%
5283 }\@ehc
5284 \else
5285 \HyField@UseFlag{Ff}{Comb}%
5286 \fi
5287 \fi
5288 \HyField@UseFlag{Ff}{RichText}%
5289 \HyField@PrintFlags{Ff}{text field}%
5290 \bitsetIsEmpty{HyField@Ff}{%
5291 \def\Fld@flags{}}%
5292 }{%
5293 \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}}%

```

```

5294 }%
5295 }

```

19.1.8 Choice fields

\HyField@FlagsChoice

```

5296 \def\HyField@FlagsChoice{%
5297   \HyField@FlagsAnnot{choice field}%
5298   \bitsetReset{HyField@Ff}%
5299   \HyField@UseFlag{Ff}{ReadOnly}%
5300   \HyField@UseFlag{Ff}{Required}%
5301   \HyField@UseFlag{Ff}{NoExport}%
5302   \HyField@UseFlag{Ff}{Combo}%
5303   \ifFld@combo
5304     \HyField@UseFlag{Ff}{Edit}%
5305   \fi
5306   \HyField@UseFlag{Ff}{Sort}%
5307   \HyField@UseFlag{Ff}{MultiSelect}%
5308   \ifFld@combo
5309     \ifFld@edit
5310       \HyField@UseFlag{Ff}{DoNotSpellCheck}%
5311     \fi
5312   \fi
5313   \HyField@UseFlag{Ff}{CommitOnSelChange}%
5314   \HyField@PrintFlags{Ff}{choice field}%
5315   \bitsetIsEmpty{HyField@Ff}{%
5316     \def\Fld@flags{%
5317     }{%
5318       \edef\Fld@flags{/Ff \bitsetGetDec{HyField@Ff}}%
5319     }%
5320 }

```

19.2 Choice field

\HyField@PDFChoices #1: list of choices in key value syntax, key = exported name, value = displayed text.

Input: \Fld@default, \Fld@value, \ifFld@multiselect

Result: \Fld@choices with entries: /Opt, /DV, /V, /I.

```

5321 \def\HyField@PDFChoices#1{%
5322   \begingroup
5323   \gdef\Fld@choices{%
5324     \def\HyTmp@optlist{%
5325       \let\HyTmp@optitem\relax
5326       \count@=0 %
5327       \kv@parse{#1}{%
5328         \Hy@pdfstringdef\kv@key\kv@key
5329         \ifx\kv@value\relax
5330           \ifnum\Hy@pdfversion<3 % implementation note 122, PDF spec 1.7
5331             \xdef\Fld@choices{\Fld@choices[(\kv@key)(\kv@key)]}%
5332           \else
5333             \xdef\Fld@choices{\Fld@choices(\kv@key)}%
5334           \fi
5335         \else
5336           \Hy@pdfstringdef\kv@value\kv@value
5337           \xdef\Fld@choices{\Fld@choices[(\kv@value)(\kv@key)]}%
5338         \fi
5339       \edef\HyTmp@optlist{%

```

```

5340 \HyTmp@optlist
5341 \HyTmp@optitem{\the\count@}{\kv@key}0%
5342 }%
5343 \advance\count@ by 1 %
5344 \@gobbletwo
5345 }%
5346 \xdef\Fld@choices{/Opt[\Fld@choices]}%
5347 \ifFld@multiselect
5348 \HyField@@PDFChoices{DV}\Fld@default
5349 \HyField@@PDFChoices{V}\Fld@value
5350 \else
5351 \ifx\Fld@default\relax
5352 \else
5353 \pdfstringdef\Hy@gtmp\Fld@default
5354 \xdef\Fld@choices{\Fld@choices/DV(\Hy@gtmp)}%
5355 \fi
5356 \ifx\Fld@value\relax
5357 \else
5358 \pdfstringdef\Hy@gtmp\Fld@value
5359 \xdef\Fld@choices{\Fld@choices/V(\Hy@gtmp)}%
5360 \fi
5361 \fi
5362 \endgroup
5363 }

```

\HyField@@PDFChoices

```

5364 \def\HyField@@PDFChoices#1#2{%
5365 \ifx#2\relax
5366 \else
5367 \count@=0 %
5368 \def\HyTmp@optitem##1##2##3{%
5369 \def\HyTmp@key{##2}%
5370 \ifx\HyTmp@key\Hy@gtmp
5371 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5372 \HyTmp@optlist
5373 \HyTmp@optitem{##1}{##2}1%
5374 }%
5375 \let\HyTmp@found=Y%
5376 \else
5377 \expandafter\def\expandafter\HyTmp@optlist\expandafter{%
5378 \HyTmp@optlist
5379 \HyTmp@optitem{##1}{##2}##3%
5380 }%
5381 \fi
5382 }%
5383 \expandafter\comma@parse\expandafter{#2}{%
5384 \pdfstringdef\Hy@gtmp\comma@entry
5385 \let\HyTmp@found=N %
5386 \expandafter\let\expandafter\HyTmp@optlist\expandafter\@empty
5387 \HyTmp@optlist
5388 \ifx\HyTmp@found Y%
5389 \advance\count@ by 1 %
5390 \else
5391 \@onelevel@sanitize\comma@entry
5392 \PackageWarning{hyperref}{%
5393 \string\ChoiceBox: Ignoring value '\comma@entry',%
5394 \MessageBreak

```

```

5395         it cannot be found in the choices%
5396     }%
5397 \fi
5398 \@gobble
5399 }%
5400 \def\HyTmp@optitem##1##2##3{%
5401     \ifnum##3=1 %
5402         (##2)%
5403     \fi
5404 }%
5405 \ifcase\count@
5406 \or
5407     \xdef\Fld@choices{\Fld@choices/#1\HyTmp@optlist}%
5408 \else
5409     \xdef\Fld@choices{\Fld@choices/#1[\HyTmp@optlist]}%
5410 \ifx#1V%
5411     \def\HyTmp@optitem##1##2##3{%
5412         \ifnum##3=1 %
5413             \@firstofone{ ##1}%
5414         \fi
5415     }%
5416     \edef\HyTmp@optlist{\HyTmp@optlist}%
5417     \xdef\Fld@choices{%
5418         \Fld@choices
5419         /I[\expandafter\@firstofone\HyTmp@optlist]%
5420     }%
5421 \fi
5422 \fi
5423 \fi
5424 }

```

19.3 Forms

\HyField@SetKeys

```

5425 \def\HyField@SetKeys{%
5426     \kvsetkeys{Field}%
5427 }

5428 \newif\ifFld@checked
5429 \newif\ifFld@disabled
5430 \Fld@checkedfalse
5431 \Fld@disabledfalse
5432 \newcount\Fld@menulength
5433 \newdimen\Fld@Width
5434 \newdimen\Fld@charsize
5435 \Fld@charsize=10\p@
5436 \def\Fld@maxlen{0}
5437 \def\Fld@align{0}
5438 \def\Fld@color{0 0 0 rg}
5439 \def\Fld@bcolor{1 1 1}
5440 \def\Fld@bordercolor{1 0 0}
5441 \def\Fld@bordersep{1\p@}
5442 \def\Fld@borderwidth{1}
5443 \def\Fld@borderstyle{S}
5444 \def\Fld@cbsymbol{4}
5445 \def\Fld@radiosymbol{H}
5446 \def\Fld@rotation{0}

```



```

5447 \def\Form{\@ifnextchar[{\@Form}{\@Form[]}}
5448 \def\endForm{\@endForm}
5449 \newif\ifForm@html
5450 \Form@htmlfalse
5451 \def\Form@boolkey#1#2{%
5452   \csname Form@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5453 }
5454 \define@key{Form}{action}{%
5455   \hyper@normalise\Hy@DefFormAction{#1}%
5456 }
5457 \def\Hy@DefFormAction{\def\Form@action}
5458 \def\enc@html{html}
5459 \define@key{Form}{encoding}{%
5460   \def\Hy@tempa{#1}%
5461   \ifx\Hy@tempa\enc@html
5462     \Form@htmltrue
5463     \def\Fld@export{html}%
5464   \else
5465     \Hy@Warning{%
5466       Form 'encoding' key with \MessageBreak
5467       unknown value '#1'%
5468     }%
5469     \Form@htmlfalse
5470   \fi
5471 }
5472 \define@key{Form}{method}{%
5473   \lowercase{\def\Hy@temp{#1}}%
5474   \@ifundefined{Form@method@\Hy@temp}{%
5475     \@onelevel@sanitize\Hy@temp
5476     \Hy@Error{%
5477       Unknown method '\Hy@temp'.\MessageBreak
5478       Known values are 'post' and 'get'%
5479     }\@ehc
5480   }{%
5481     \let\Form@method\Hy@temp
5482     \ifcase\@nameuse{Form@method@\Hy@temp} %
5483       \Fld@getmethodfalse
5484     \else
5485       \Fld@getmethodtrue
5486     \fi
5487   }%
5488 }
5489 \def\Form@method{}
5490 \@namedef{Form@method@post}{0}
5491 \@namedef{Form@method@get}{1}
5492 \def\Fld@boolkey#1#2{%
5493   \csname Fld@#2\ifx\relax#1\relax true\else#1\fi\endcsname
5494 }
5495 \ifHy@texht
5496   \newtoks\Fld@toks
5497   \Fld@toks={ }%
5498   \def\Fld@addtoks#1#2{%
5499     \edef\@processme{\Fld@toks{\the\Fld@toks\space #1="#2"}}%
5500     \@processme
5501   }%
5502 \else
5503   \def\Hy@WarnHTMLFieldOption#1{%

```

```

5504 \Hy@Warning{%
5505 HTML field option '#1'\MessageBreak
5506 is ignored%
5507 }%
5508 }%
5509 \fi
5510 \def\Fld@checkequals#1=#2=#3\\{%
5511 \def\@currDisplay{#1}%
5512 \ifx\\#2\\%
5513 \def\@currValue{#1}%
5514 \else
5515 \def\@currValue{#2}%
5516 \fi
5517 }
5518 \define@key{Field}{loc}{%
5519 \def\Fld@loc{#1}%
5520 }
5521 \define@key{Field}{checked}[true]{%
5522 \lowercase{\Field@boolkey{#1}}{checked}%
5523 }
5524 \define@key{Field}{disabled}[true]{%
5525 \lowercase{\Field@boolkey{#1}}{disabled}%
5526 }
5527 \ifHy@texht
5528 \define@key{Field}{accesskey}{%
5529 \Field@addtoks{accesskey}{#1}%
5530 }%
5531 \define@key{Field}{tabkey}{%
5532 \Field@addtoks{tabkey}{#1}%
5533 }%
5534 \else
5535 \define@key{Field}{accesskey}{%
5536 \Hy@WarnHTMLFieldOption{accesskey}%
5537 }%
5538 \define@key{Field}{tabkey}{%
5539 \Hy@WarnHTMLFieldOption{tabkey}%
5540 }%
5541 \fi
5542 \define@key{Field}{name}{%
5543 \def\Fld@name{#1}%
5544 }
5545 \let\Fld@altname\relax
5546 \define@key{Field}{altname}{%
5547 \def\Fld@altname{#1}%
5548 }
5549 \let\Fld@mappingname\relax
5550 \define@key{Field}{mappingname}{%
5551 \def\Fld@mappingname{#1}%
5552 }
5553 \define@key{Field}{width}{%
5554 \def\Fld@width{#1}%
5555 \Field@Width#1\setbox0=\hbox{m}%
5556 }
5557 \define@key{Field}{maxlen}{%
5558 \def\Fld@maxlen{#1}%
5559 }
5560 \define@key{Field}{menulength}{%

```

```

5561 \Fld@menulength=#1\relax
5562 }
5563 \define@key{Field}{height}{%
5564 \def\Fld@height{#1}%
5565 }
5566 \define@key{Field}{charsize}{%
5567 \Fld@charsize#1%
5568 }
5569 \define@key{Field}{borderwidth}{%
5570 \def\Fld@borderwidth{#1}%
5571 }
5572 \define@key{Field}{borderstyle}{%
5573 \let\Hy@temp\Fld@borderstyle
5574 \def\Fld@borderstyle{#1}%
5575 \Hy@Match\Fld@borderstyle{%
5576 ^[SDBIU]$%
5577 }{}{%
5578 \Hy@Warning{%
5579 Invalid value '\@pdfborderstyle'\MessageBreak
5580 for option 'pdfborderstyle'. Valid values:\MessageBreak
5581 \space\space S (Solid), D (Dashed), B (Beveled),\MessageBreak
5582 \space\space I (Inset), U (Underline)\MessageBreak
5583 Option setting is ignored%
5584 }%
5585 \let\Fld@borderstyle\Hy@temp
5586 }%
5587 }
5588 \define@key{Field}{bordersep}{%
5589 \def\Fld@bordersep{#1}%
5590 }
5591 \define@key{Field}{default}{%
5592 \def\Fld@default{#1}%
5593 }
5594 \define@key{Field}{align}{%
5595 \def\Fld@align{#1}%
5596 }
5597 \define@key{Field}{value}{%
5598 \def\Fld@value{#1}%
5599 }
5600 \define@key{Field}{checkboxsymbol}{%
5601 \Fld@DingDef\Fld@cbsymbol{#1}%
5602 }
5603 \define@key{Field}{radiosymbol}{%
5604 \Fld@DingDef\Fld@radiosymbol{#1}%
5605 }
5606 \def\Fld@DingDef#1#2{%
5607 \def\Fld@temp{}%
5608 \Fld@@DingDef#2\ding{}\@nil
5609 \let#1\Fld@temp
5610 }
5611 \def\Fld@@DingDef#1\ding#2#3\@nil{%
5612 \expandafter\def\expandafter\Fld@temp\expandafter{%
5613 \Fld@temp
5614 #1%
5615 }%
5616 \ifx\\#3\\%
5617 \expandafter\@gobble

```

```

5618 \else
5619 \begingroup
5620 \lccode'0=#2\relax
5621 \lowercase{\endgroup
5622 \expandafter\def\expandafter\Fld@temp\expandafter{%
5623 \Fld@temp
5624 0%
5625 }%
5626 }%
5627 \expandafter\@firstofone
5628 \fi
5629 {%
5630 \Fld@@DingDef#3\@nil
5631 }%
5632 }

5633 \define@key{Field}{rotation}{%
5634 \def\Fld@rotation{#1}%
5635 }

5636 \define@key{Field}{backgroundcolor}{%
5637 \HyColor@FieldBColor{#1}\Fld@bcolor{hyperref}{backgroundcolor}%
5638 }
5639 \define@key{Field}{bordercolor}{%
5640 \HyColor@FieldBColor{#1}\Fld@bordercolor{hyperref}{bordercolor}%
5641 }
5642 \define@key{Field}{color}{%
5643 \HyColor@FieldColor{#1}\Fld@color{hyperref}{color}%
5644 }

5645 \def\Fld@onclick@code{}
5646 \def\Fld@format@code{}
5647 \def\Fld@validate@code{}
5648 \def\Fld@calculate@code{}
5649 \def\Fld@keystroke@code{}
5650 \def\Fld@onfocus@code{}
5651 \def\Fld@onblur@code{}
5652 \def\Fld@onmousedown@code{}
5653 \def\Fld@onmouseup@code{}
5654 \def\Fld@onenter@code{}
5655 \def\Fld@onexit@code{}
5656 \def\Hy@temp#1{%
5657 \expandafter\Hy@@temp\csname Fld@#1@code\endcsname{#1}%
5658 }
5659 \def\Hy@@temp#1#2{%
5660 \ifHy@pdfa
5661 \define@key{Field}{#2}{%
5662 \Hy@Error{%
5663 PDF/A: Additional action ‘#2’ is prohibited%
5664 }\@ehc
5665 }%
5666 \else
5667 \define@key{Field}{#2}{%
5668 \def#1{##1}%
5669 }%
5670 \fi
5671 }
5672 \Hy@temp{keystroke}
5673 \Hy@temp{format}

```

```

5674 \Hy@temp{validate}
5675 \Hy@temp{calculate}
5676 \Hy@temp{onfocus}
5677 \Hy@temp{onblur}
5678 \Hy@temp{onenter}
5679 \Hy@temp{onexit}
5680 \ifHy@texht
5681   \def\Hy@temp#1{%
5682     \define@key{Field}{#1}{%
5683       \Field@addtoks{#1}{##1}%
5684     }%
5685   }%
5686 \else
5687   \def\Hy@temp#1{%
5688     \define@key{Field}{#1}{%
5689       \Hy@WarnHTMLFieldOption{#1}%
5690     }%
5691   }%
5692 \fi
5693 \Hy@temp{ondblclick}
5694 \Hy@temp{onmousedown}
5695 \Hy@temp{onmouseup}
5696 \Hy@temp{onmouseover}
5697 \Hy@temp{onmousemove}
5698 \Hy@temp{onmouseout}
5699 \Hy@temp{onkeydown}
5700 \Hy@temp{onkeyup}
5701 \Hy@temp{onselect}
5702 \Hy@temp{onchange}
5703 \Hy@temp{onkeypress}
5704 \ifHy@texht
5705   \define@key{Field}{onclick}{%
5706     \Field@addtoks{onclick}{#1}%
5707   }%
5708 \else
5709   \ifHy@pdfa
5710     \define@key{Field}{onclick}{%
5711       \Hy@Error{%
5712         PDF/A: Action 'onclick' is prohibited%
5713       }\@ehc
5714     }%
5715   \else
5716     \define@key{Field}{onclick}{%
5717       \def\Fld@onclick@code{#1}%
5718     }%
5719   \fi
5720 \fi
5721 \DeclareRobustCommand\TextField{%
5722   \@ifnextchar[{\@TextField}{\@TextField[]}%
5723 }
5724 \DeclareRobustCommand\ChoiceMenu{%
5725   \@ifnextchar[{\@ChoiceMenu}{\@ChoiceMenu[]}%
5726 }
5727 \DeclareRobustCommand\CheckBox{%
5728   \@ifnextchar[{\@CheckBox}{\@CheckBox[]}%
5729 }
5730 \DeclareRobustCommand\PushButton{%

```

```

5731 \@ifnextchar[{\@PushButton}{\@PushButton[]}%
5732 }
5733 \DeclareRobustCommand\Gauge{%
5734 \@ifnextchar[{\@Gauge}{\@Gauge[]}%
5735 }
5736 \DeclareRobustCommand\Submit{%
5737 \@ifnextchar[{\@Submit}{\@Submit[]}%
5738 }
5739 \DeclareRobustCommand\Reset{%
5740 \@ifnextchar[{\@Reset}{\@Reset[]}%
5741 }
5742 \def\LayoutTextField#1#2{% label, field
5743 #1 #2%
5744 }
5745 \def\LayoutChoiceField#1#2{% label, field
5746 #1 #2%
5747 }
5748 \def\LayoutCheckField#1#2{% label, field
5749 #1 #2%
5750 }
5751 \def\LayoutPushButtonField#1{% button
5752 #1%
5753 }
5754 \def\MakeRadioField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5755 \def\MakeCheckField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5756 \def\MakeTextField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5757 \def\MakeChoiceField#1#2{\vbox to #2{\hbox to #1{\hfill}\vfill}}
5758 \def\MakeButtonField#1{%
5759 \sbox0{%
5760 \hskip\Fld@borderwidth bp#1\hskip\Fld@borderwidth bp%
5761 }%
5762 \@tempdima\ht0 %
5763 \advance\@tempdima by \Fld@borderwidth bp %
5764 \advance\@tempdima by \Fld@borderwidth bp %
5765 \ht0\@tempdima
5766 \@tempdima\dp0 %
5767 \advance\@tempdima by \Fld@borderwidth bp %
5768 \advance\@tempdima by \Fld@borderwidth bp %
5769 \dp0\@tempdima
5770 \box0\relax
5771 }
5772 \def\DefaultHeightofSubmit{14pt}
5773 \def\DefaultWidthofSubmit{2cm}
5774 \def\DefaultHeightofReset{14pt}
5775 \def\DefaultWidthofReset{2cm}
5776 \def\DefaultHeightofCheckBox{\baselineskip}
5777 \def\DefaultWidthofCheckBox{\baselineskip}
5778 \def\DefaultHeightofChoiceMenu{\baselineskip}
5779 \def\DefaultWidthofChoiceMenu{\baselineskip}
5780 \def\DefaultHeightofText{\baselineskip}
5781 \def\DefaultHeightofTextMultiline{4\baselineskip}
5782 \def\DefaultWidthofText{3cm}
5783 \def\DefaultOptionsofSubmit{print,name=Submit,noexport}
5784 \def\DefaultOptionsofReset{print,name=Reset,noexport}
5785 \def\DefaultOptionsofPushButton{print}
5786 \def\DefaultOptionsofCheckBox{print}
5787 \def\DefaultOptionsofText{print}

```

Default options for the types of `\ChoiceMenu`.

```
5788 \def\DefaultOptionsofListBox{print}
5789 \def\DefaultOptionsofComboBox{print,edit,sort}
5790 \def\DefaultOptionsofPopdownBox{print}
5791 \def\DefaultOptionsofRadio{print,notoggletooff}
```

20 Setup

```
5792 \ifHy@figures
5793   \Hy@Info{Hyper figures ON}%
5794 \else
5795   \Hy@Info{Hyper figures OFF}%
5796 \fi
5797 \ifHy@nesting
5798   \Hy@Info{Link nesting ON}%
5799 \else
5800   \Hy@Info{Link nesting OFF}%
5801 \fi
5802 \ifHy@hyperindex
5803   \Hy@Info{Hyper index ON}%
5804 \else
5805   \Hy@Info{Hyper index OFF}%
5806 \fi
5807 \ifHy@backref
5808   \Hy@Info{backreferencing ON}%
5809 \else
5810   \Hy@Info{backreferencing OFF}%
5811 \fi
5812 \ifHy@colorlinks
5813   \Hy@Info{Link coloring ON}%
5814 \else
5815   \Hy@Info{Link coloring OFF}%
5816 \fi
5817 \ifHy@ocgcolorlinks
5818   \Hy@Info{Link coloring with OCG ON}%
5819 \else
5820   \Hy@Info{Link coloring with OCG OFF}%
5821 \fi
5822 \ifHy@pdfa
5823   \Hy@Info{PDF/A mode ON}%
5824 \else
5825   \Hy@Info{PDF/A mode OFF}%
5826 \fi
```

21 Low-level utility macros

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

```
5827 \edef\hyper@hash{\string#}
5828 \edef\hyper@tilde{\string~}
5829 \edef\hyper@quote{\string"}
```

Support `\label` before `\begin{document}`.

```
5830 \def\@currentHref{Doc-Start}
5831 \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.

```

5832 \Hy@AtBeginDocument{%
5833   \Hy@pdfstringtrue
5834   \PDF@SetupDoc
5835   \let\PDF@SetupDoc\@empty
5836   \Hy@DisableOption{pdfpagescrop}%
5837   \Hy@DisableOption{pdfpagemode}%
5838   \Hy@DisableOption{pdfnonfullscreenpagemode}%
5839   \Hy@DisableOption{pdfdirection}%
5840   \Hy@DisableOption{pdfviewarea}%
5841   \Hy@DisableOption{pdfviewclip}%
5842   \Hy@DisableOption{pdfprintarea}%
5843   \Hy@DisableOption{pdfprintclip}%
5844   \Hy@DisableOption{pdfprintscaling}%
5845   \Hy@DisableOption{pdfduplex}%
5846   \Hy@DisableOption{pdfpicktraybypdfsize}%
5847   \Hy@DisableOption{pdfprintpagerange}%
5848   \Hy@DisableOption{pdfnumcopies}%
5849   \Hy@DisableOption{pdfstartview}%
5850   \Hy@DisableOption{pdfstartpage}%
5851   \Hy@DisableOption{pdftoolbar}%
5852   \Hy@DisableOption{pdfmenubar}%
5853   \Hy@DisableOption{pdfwindowui}%
5854   \Hy@DisableOption{pdfitwindow}%
5855   \Hy@DisableOption{pdfcenterwindow}%
5856   \Hy@DisableOption{pdfdisplaydoctitle}%
5857   \Hy@DisableOption{pdfpagelayout}%
5858   \Hy@DisableOption{pdflang}%
5859   \Hy@DisableOption{baseurl}%
5860   \ifHy@texht\else\hyper@anchorstart{Doc-Start}\hyper@anchorend\fi
5861   \Hy@pdfstringfalse
5862 }

```

Ignore star from referencing macros:

```

5863 \LetLtxMacro\NoHy@OrgRef\ref
5864 \DeclareRobustCommand*\ref{%
5865   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5866 }
5867 \LetLtxMacro\NoHy@OrgPageRef\pageref
5868 \DeclareRobustCommand*\pageref{%
5869   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5870 }

```

22 Localized nullifying of package

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

```

5871 \def\NoHyper{%
5872   \def\hyper@link@[##1]##2##3##4{##4}%
5873   \def\hyper@@anchor##1{}%
5874   \global\let\hyper@livelink\hyper@link
5875   \gdef\hyper@link##1##2##3{##3}%
5876   \def\hyper@anchor##1{}%
5877   \def\hyper@anchorstart##1{}%
5878   \let\hyper@anchorend\@empty

```



```

5879 \def\hyper@linkstart##1##2{%
5880 \let\hyper@linkend\@empty
5881 \def\hyper@linkurl##1##2{##1}%
5882 \def\hyper@linkfile##1##2##3{##1}%
5883 \def\hyper@link@{##1}##2##3{%
5884 \let\Hy@backout\@gobble
5885 }
5886 \def\stop@hyper{%
5887 \def\hyper@link@{##1}##2##3##4{##4}%
5888 \let\Hy@backout\@gobble
5889 \def\hyper@@anchor##1{%
5890 \def\hyper@link##1##2##3{##3}%
5891 \def\hyper@anchor##1{%
5892 \def\hyper@anchorstart##1{%
5893 \let\hyper@anchorend\@empty
5894 \def\hyper@linkstart##1##2{%
5895 \let\hyper@linkend\@empty
5896 \def\hyper@linkurl##1##2{##1}%
5897 \def\hyper@linkfile##1##2##3{##1}%
5898 \def\hyper@link@{##1}##2##3{%
5899 }
5900 \def\endNoHyper{%
5901 \global\let\hyper@link\hyper@livelink
5902 }
5903 \</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:

```

5904 \*nohyperref
5905 \RequirePackage{letltxmacro}[2008/06/13]
5906 \let\hyper@@anchor\@gobble
5907 \def\hyper@link##1##2##3{##3}%
5908 \let\hyper@anchorstart\@gobble
5909 \let\hyper@anchorend\@empty
5910 \let\hyper@linkstart\@gobbletwo
5911 \let\hyper@linkend\@empty
5912 \def\hyper@linkurl##1##2{##1}%
5913 \def\hyper@linkfile##1##2##3{##1}%
5914 \def\hyper@link@{##1}##2##3{%
5915 \let\PDF@SetupDoc\@empty
5916 \let\PDF@FinishDoc\@empty
5917 \def\nohyperpage#1{#1}

```

Some top-level commands:

```

5918 \def\Acrobatmenu#1##2{\leavevmode#2}
5919 \let\pdfstringdefDisableCommands\@gobbletwo
5920 \let\texorpdfstring\@firstoftwo
5921 \let\pdfbookmark\@undefined
5922 \newcommand\pdfbookmark[3]{}
5923 \let\phantomsection\@empty

```

```

5924 \let\hypersetup\@gobble
5925 \let\hyperbaseurl\@gobble
5926 \newcommand*{\href}[3][\#3]{}
5927 \let\hyperdef\@gobbletwo
5928 \let\hyperlink\@gobble
5929 \let\hypertarget\@gobble
5930 \def\hyperref{%
5931   \ifnextchar[\@gobbleopt{\expandafter\@gobbletwo\@gobble}%
5932 }
5933 \long\def\@gobbleopt[#1]{%
5934 \let\hyperpage\@empty

```

Ignore star from referencing macros:

```

5935 \LetLtxMacro\NoHy@OrgRef\ref
5936 \DeclareRobustCommand*\ref{%
5937   \@ifstar\NoHy@OrgRef\NoHy@OrgRef
5938 }
5939 \LetLtxMacro\NoHy@OrgPageRef\pageref
5940 \DeclareRobustCommand*\pageref{%
5941   \@ifstar\NoHy@OrgPageRef\NoHy@OrgPageRef
5942 }
5943 \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}`

```

5944 \*package
5945 \Hy@AtBeginDocument{%

```

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.

```

5946 \if@filesw
5947   \ifHy@typexml
5948     \immediate\closeout\@mainaux
5949     \immediate\openout\@mainaux\jobname.aux\relax
5950     \immediate\write\@auxout{<relaxxml>\relax}%
5951   \fi
5952   \immediate\write\@auxout{%
5953     \string\providecommand\string\HyperFirstAtBeginDocument{%
5954       \string\AtBeginDocument}^^J%
5955     \string\HyperFirstAtBeginDocument{%
5956       \string\ifx\string\hyper@anchor\string\@undefined^^J%
5957       \string\global\string\let\string\oldcontentsline\string\contentsline^^J%
5958       \string\gdef\string\contentsline%
5959         \string#1\string#2\string#3\string#4{%
5960         \string\oldcontentsline%
5961         {\string#1}{\string#2}{\string#3}}^^J%
5962       \string\global\string\let\string\oldnewlabel\string\newlabel^^J%
5963       \string\gdef\string\newlabel\string#1\string#2{%
5964         \string\newlabelxx{\string#1}\string#2}^^J%
5965       \string\gdef\string\newlabelxx%
5966         \string#1\string#2\string#3\string#4\string#5\string#6{%
5967         \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.

```

5968 \string\AtEndDocument{%
5969 \string\ifx\string\hyper@anchor\string\@undefined^^J%
5970 \string\let\string\contentsline\string\oldcontentsline^^J%
5971 \string\let\string\newlabel\string\oldnewlabel^^J%
5972 \string\fi%
5973 }^^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.

```

5974 \string\fi%
5975 }^^J%
5976 \string\global\string\let\string\hyper@last\relax^^J%
5977 \string\gdef\string\HyperFirstAtBeginDocument\string#1{\string#1}%
5978 }%
5979 \fi
5980 \def\HyperFirstAtBeginDocument#1{#1}%

```

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.

```

5981 \ifx\hyper@last\@undefined
5982 \def\@starttoc#1{%
5983 \begingroup
5984 \makeatletter
5985 \IfFileExists{\jobname.#1}{%
5986 \Hy@WarningNoLine{%
5987 old #1 file detected, not used; run LaTeX again%
5988 }%
5989 }{}%
5990 \if@filesw
5991 \expandafter\newwrite\csname tf@#1\endcsname
5992 \immediate\openout\csname tf@#1\endcsname \jobname.#1\relax
5993 \fi
5994 \@nobreakfalse
5995 \endgroup
5996 }%
5997 \def\newlabel#1#2{\@newl@bel r{#1}{#2}{-}{-}{-}}%
5998 \fi
5999 }

```

25 Title strings

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

```

6000 \ifHy@usetitle
6001 \let\HyOrg@title\title
6002 \let\HyOrg@author\author
6003 \def\title{\@ifnextchar{\Hy@scanopttitle}{\Hy@scantitle}}%
6004 \def\Hy@scanopttitle[#1]{%
6005 \gdef\Hy@title{#1}%
6006 \HyOrg@title{#1}}%
6007 }%

```

```

6008 \def\Hy@scantitle#1{%
6009   \gdef\Hy@title{#1}%
6010   \HyOrg@title{#1}%
6011 }%
6012 \def\author{\@ifnextchar[{\Hy@scanoptauthor}{\Hy@scanauthor}}%
6013 \def\Hy@scanoptauthor[#1]{%
6014   \gdef\Hy@author{#1}%
6015   \HyOrg@author[{#1}]%
6016 }%
6017 \def\Hy@scanauthor#1{%
6018   \gdef\Hy@author{#1}%
6019   \HyOrg@author{#1}%
6020 }%

```

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.

```

6021 \begingroup
6022   \def\process@me#1\@nil#2{%
6023     \expandafter\let\expandafter\x\csname @#2\endcsname
6024     \edef\y{\expandafter\strip@prefix\meaning\x}%
6025     \def\c##1#1##2\@nil{%
6026       \ifx\\##1\\%
6027         \else
6028           \expandafter\gdef\csname Hy@#2\expandafter\endcsname
6029             \expandafter{\x}%
6030         \fi
6031       }%
6032     \expandafter\c\y\relax#1\@nil
6033   }%
6034   \expandafter\process@me\string\@latex@\@nil{title}%
6035   \expandafter\process@me\string\@latex@\@nil{author}%
6036 \endgroup
6037 \fi
6038 \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.

```

6039 \def\Hy@UseMaketitleString#1{%
6040   \ltx@ifundefined{Hy@#1}{-}{%
6041     \begingroup
6042       \let\Hy@saved@hook\pdfstringdefPreHook
6043       \pdfstringdefDisableCommands{%
6044         \expandafter\let\expandafter\\\csname Hy@newline@#1\endcsname
6045         \let\newline\\%
6046       }%
6047       \expandafter\ifx\csname @pdf#1\endcsname\@empty
6048         \expandafter\pdfstringdef\csname @pdf#1\endcsname{%
6049           \csname Hy@#1\endcsname\@empty
6050         }%
6051       \fi

```

```

6052 \global\let\pdfstringdefPreHook\Hy@saved@hook
6053 \endgroup
6054 }%
6055 }
6056 \def\Hy@newline@title#1{ #1}
6057 \def\Hy@newline@author#1{, #1}
6058 \def\Hy@UseMaketitleInfos{%
6059 \Hy@UseMaketitleString{title}%
6060 \Hy@UseMaketitleString{author}%
6061 }

```

26 Page numbers

This stuff is done by Heiko Oberdiek.

27 Every page

```

6062 \RequirePackage{atbegshi}[2007/09/09]
6063 \def\Hy@EveryPageHook{}
6064 \def\Hy@EveryPageBoxHook{}
6065 \def\Hy@FirstPageHook{}
6066 \AtBeginShipout{%
6067 \Hy@EveryPageHook
6068 \ifx\Hy@EveryPageBoxHook\@empty
6069 \else
6070 \setbox\AtBeginShipoutBox=\vbox{%
6071 \offinterlineskip
6072 \Hy@EveryPageBoxHook
6073 \box\AtBeginShipoutBox
6074 }%
6075 \fi
6076 }
6077 \AtBeginShipoutFirst{%
6078 \Hy@FirstPageHook
6079 }
6080 \g@addto@macro\Hy@FirstPageHook{%
6081 \PDF@FinishDoc
6082 \gdef\PDF@FinishDoc{}}%
6083 }

```

27.1 PDF /PageLabels

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

```

6084 \ifHy@pagelabels
6085 \begingroup\expandafter\expandafter\expandafter\endgroup
6086 \expandafter\ifx\csname thepage\endcsname\relax
6087 \Hy@pagelabelsfalse
6088 \Hy@WarningNoLine{%
6089 Option 'pdfpagelabels' is turned off\MessageBreak
6090 because \string\thepage\space is undefined%
6091 }%
6092 \csname fi\endcsname
6093 \csname iffalse\expandafter\endcsname
6094 \fi

```

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

```
6095 \def\thispdfpagelabel#1{%
6096   \gdef\HyPL@thisLabel{#1}%
6097 }%
6098 \global\let\HyPL@thisLabel\relax
```

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

```
6099 \def\HyPL@Labels{}%
```

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

```
6100 \newcount\Hy@abspage
6101 \Hy@abspage=0 %
```

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

```
6102 \def\HyPL@LastType{init}%
6103 \def\HyPL@LastNumber{0}%
6104 \def\HyPL@LastPrefix{}%
```

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

```
6105 \def\HyPL@arabic{D}%
6106 \def\HyPL@Roman{R}%
6107 \def\HyPL@roman{r}%
6108 \def\HyPL@Alph{A}%
6109 \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.

```
6110 \def\HyPL@EveryPage{%
6111   \begingroup
6112   \ifx\HyPL@thisLabel\relax
6113     \let\HyPL@page\thepage
6114   \else
6115     \let\HyPL@page\HyPL@thisLabel
6116     \global\let\HyPL@thisLabel\relax
6117   \fi
6118   \let\HyPL@Type\relax
6119   \ifnum\the\c@page>0 %
6120     \expandafter\HyPL@CheckThePage\HyPL@page\@nil
6121   \fi
6122   \let\Hy@temp Y%
6123   \ifx\HyPL@Type\HyPL@LastType
6124   \else
6125     \let\Hy@temp N%
6126   \fi
6127   \ifx\HyPL@Type\relax
6128     \pdfstringdef\HyPL@Prefix{\HyPL@page}%
6129   \else
6130     \pdfstringdef\HyPL@Prefix\HyPL@Prefix
6131   \fi
6132   \ifx\HyPL@Prefix\HyPL@LastPrefix
6133   \else
6134     \let\Hy@temp N%
6135   \fi
6136   \if Y\Hy@temp
6137     \advance\c@page by -1 %
6138     \ifnum\HyPL@LastNumber=\the\c@page\relax
```

```

6139 \else
6140 \let\Hy@temp N%
6141 \fi
6142 \Hy@StepCount\c@page
6143 \fi
6144 \if N\Hy@temp
6145 \ifx\HyPL@Type\relax
6146 \HyPL@StorePageLabel{/P(\HyPL@Prefix)}%
6147 \else
6148 \HyPL@StorePageLabel{%
6149 \ifx\HyPL@Prefix\@empty
6150 \else
6151 /P(\HyPL@Prefix)%
6152 \fi
6153 /S/\csname HyPL\HyPL@Type\endcsname
6154 \ifnum\the\c@page=1 %
6155 \else
6156 \space/St \the\c@page
6157 \fi
6158 }%
6159 \fi
6160 \fi
6161 \xdef\HyPL@LastNumber{\the\c@page}%
6162 \global\let\HyPL@LastType\HyPL@Type
6163 \global\let\HyPL@LastPrefix\HyPL@Prefix
6164 \endgroup
6165 \Hy@GlobalStepCount\Hy@abspage
6166 }%

```

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

```

6167 \def\HyPL@CheckThePage#1\@nil{%
6168 \HyPL@@CheckThePage{#1}#1\csname\endcsname\c@page\@nil
6169 }%

```

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

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

```

6170 \def\HyPL@@CheckThePage#1#2\csname#3\endcsname\c@page#4\@nil{%
6171 \def\Hy@tempa{#4}%
6172 \def\Hy@tempb{\csname\endcsname\c@page}%
6173 \ifx\Hy@tempa\Hy@tempb
6174 \expandafter\ifx\csname HyPL#3\endcsname\relax
6175 \else
6176 \def\HyPL@Type{#3}%
6177 \def\HyPL@Prefix{#2}%
6178 \fi
6179 \else
6180 \begingroup
6181 \let\Hy@next\endgroup
6182 \let\HyPL@found\@undefined
6183 \def\arabic{\HyPL@Format{arabic}}%
6184 \def\Roman{\HyPL@Format{Roman}}%
6185 \def\roman{\HyPL@Format{roman}}%
6186 \def\Alph{\HyPL@Format{Alph}}%
6187 \def\alph{\HyPL@Format{alph}}%

```

```

6188 \protected@edef\Hy@temp{#1}%
6189 \ifx\HyPL@found\relax
6190 \toks@{\expandafter{\Hy@temp}}%
6191 \edef\Hy@next{\endgroup
6192 \noexpand\HyPL@@@CheckThePage\the\toks@
6193 \noexpand\HyPL@found\relax\noexpand\@nil
6194 }%
6195 \fi
6196 \Hy@next
6197 \fi
6198 }%

```

\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`.

```

6199 \def\HyPL@Format#1#2{%
6200 \ifx\HyPL@found\@undefined
6201 \expandafter\ifx\csname c@#2\endcsname\c@page
6202 \expandafter\noexpand\csname HyPL@found\endcsname{#1}%
6203 \else
6204 \expandafter\noexpand\csname#1\endcsname{#2}%
6205 \fi
6206 \else
6207 \expandafter\noexpand\csname#1\endcsname{#2}%
6208 \fi
6209 }%

```

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

```

6210 \def\HyPL@@@CheckThePage#1\HyPL@found#2#3\@nil{%
6211 \def\Hy@tempa{#3}%
6212 \def\Hy@tempb{\HyPL@found\relax}%
6213 \ifx\Hy@tempa\Hy@tempb
6214 \def\HyPL@Type{#2}%
6215 \def\HyPL@Prefix{#1}%
6216 \fi
6217 }%

```

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

```

6218 \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`.

```

6219 \def\HyPL@Useless{0<</S/D>>}%
6220 \@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.

```

6221 \def\HyPL@SetPageLabels{%
6222 \@onelevel@sanitize\HyPL@Labels
6223 \ifx\HyPL@Labels\@empty
6224 \else
6225 \ifx\HyPL@Labels\HyPL@Useless
6226 \else
6227 \Hy@PutCatalog{/PageLabels<</Nums[\HyPL@Labels]>>}%
6228 \fi

```



```

6229 \fi
6230 }%

6231 \g@addto@macro\Hy@EveryPageHook{\HyPL@EveryPage}%
6232 \fi

```

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

```

6233 \Hy@DisableOption{pdfpagelabels}
6234 \>/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

```

6235 <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.

```

6236 <*vTeX>
6237 \providecommand*{\XR@ext}{pdf}
6238 \edef\Hy@VTeXversion{%
6239 \ifx\VTeXversion\@undefined
6240 \z@
6241 \else
6242 \ifx\VTeXversion\relax
6243 \z@
6244 \else
6245 \VTeXversion
6246 \fi
6247 \fi
6248 }
6249 \begingroup
6250 \ifnum\Hy@VTeXversion<660 %
6251 \gdef\Hy@PutCatalog#1{%
6252 \Hy@WarningNoLine{%
6253 VTeX 6.59g or above required for pdfpagelabels%
6254 }%
6255 }%
6256 \else
6257 \gdef\Hy@PutCatalog#1{%
6258 \Hy@vt@PutCatalog#1/PageLabels<<>>\@nil
6259 }%
6260 \gdef\Hy@vt@PutCatalog#1/PageLabels<<#2>>#3\@nil{%
6261 \ifx\#2\%
6262 \else
6263 \immediate\special{!pdfpagelabels #2}%
6264 \fi
6265 }%
6266 \fi
6267 \endgroup
6268 </vTeX>

6269 <*pdfTeX | vTeX>

```

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

```

6270 \ifHy@pagelabels
6271 \def\HyPL@StorePageLabel#1{%
6272 \toks@\expandafter{\HyPL@Labels}%
6273 \xdef\HyPL@Labels{%
6274 \the\toks@
6275 \the\Hy@abspage<<#1>>%
6276 }%
6277 }%

```

Package `atveryend` is used to get behind the final `\clearpage` and to avoid a `\clearpage` in `\AtEndDocument`. Then the PDF catalog entry for `\PageLabels` is set.

```

6278 \RequirePackage{atveryend}[2009/12/07]%
6279 \AtVeryEndDocument{%
6280 \HyPL@SetPageLabels
6281 }%

6282 \fi
6283 </pdfTeX | vTeX>

```

27.1.2 xetex

```

6284 < *xetex >
6285 \HyPsd@LoadUnicode
6286 \Hy@unicodetrue
6287 \ifx\HyPsd@pdfencoding\HyPsd@pdfencoding@unicode
6288 \else
6289 \let\HyPsd@pdfencoding\HyPsd@pdfencoding@auto
6290 \fi
6291 \HyPsd@LoadStringEncoding
6292 \define@key{Hyp}{unicode}[true]{%
6293 \Hy@boolkey{unicode}{#1}%
6294 \ifHy@unicode
6295 \else
6296 \Hy@Warning{%
6297 XeTeX driver only supports 'unicode=true'. Ignoring\MessageBreak
6298 option setting 'unicode=false'%
6299 }%
6300 \Hy@unicodetrue
6301 \fi
6302 }
6303 \define@key{Hyp}{pdfencoding}{%
6304 \edef\HyPsd@temp{#1}%
6305 \ifx\HyPsd@temp\HyPsd@pdfencoding@unicode
6306 \let\HyPsd@pdfencoding\HyPsd@temp
6307 \else
6308 \ifx\HyPsd@temp\HyPsd@pdfencoding@auto
6309 \let\HyPsd@pdfencoding\HyPsd@temp
6310 \else
6311 \Hy@Warning{%
6312 XeTeX driver only supports\MessageBreak
6313 'pdfencoding=unicode|auto'. Ignoring option\MessageBreak
6314 setting 'pdfencoding=\HyPsd@temp'%
6315 }%
6316 \fi
6317 \fi

```

```

6318 }
6319 \let\HyXeTeX@CheckUnicode\relax
6320 \xetex

```

27.1.3 pdfmarkbase, dvipdfm, xetex

```

6321 \pdfmarkbase
6322 \begingroup
6323 \ifundefined{headerps@out}{%
6324   \toks@{\expandafter\Hy@FirstPageHook}%
6325   \xdef\Hy@FirstPageHook{%
6326     \noexpand\headerps@out{%
6327       systemdict /pdfmark known%
6328       {%
6329         userdict /?pdfmark systemdict /exec get put%
6330       }%
6331       userdict /?pdfmark systemdict /pop get put %
6332       userdict /pdfmark systemdict /cleartomark get put%
6333     }%
6334     ifelse%
6335   }%
6336   \the\toks@
6337 }%
6338 }%
6339 \endgroup
6340 \pdfmarkbase

```

\Hy@PutCatalog

```

6341 \dvipdfm | xetex\def\Hy@PutCatalog#1{\@pdfm@mark{docview << #1 >>}}
6342 \pdfmarkbase
6343 \def\Hy@PutCatalog#1{%
6344   \pdfmark{pdfmark=/PUT,Raw={\string{Catalog}\string} << #1 >>}}%
6345 }
6346 \pdfmarkbase

6347 \pdfmarkbase | dvipdfm | xetex
6348 \ifHy@pagelabels

```

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

```

6349 \def\HyPL@StorePageLabel#1{%
6350   \if@files
6351     \begingroup
6352     \edef\Hy@tempa{\the\Hy@abspage<<#1>>}%
6353     \immediate\write\@mainaux{%
6354       \string\HyPL@Entry{\Hy@tempa}%
6355     }%
6356     \endgroup
6357   \fi
6358 }%

```

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.

```

6359 \Hy@AtBeginDocument{%
6360   \if@files
6361     \immediate\write\@mainaux{%
6362       \string\providecommand\string*\string\HyPL@Entry[1]{}%
6363     }%
6364   \fi

```

```

6365 \ifx\HyPL@Labels\@empty
6366   \Hy@WarningNoLine{Rerun to get /PageLabels entry}%
6367 \else
6368   \HyPL@SetPageLabels
6369 \fi
6370 \let\HyPL@Entry\@gobble
6371 }%

```

\HyPL@Entry

```

6372 \def\HyPL@Entry#1{%
6373   \expandafter\gdef\expandafter\HyPL@Labels\expandafter{%
6374     \HyPL@Labels
6375     #1%
6376   }%
6377 }%

6378 \fi
6379 </pdfmarkbase | dvipdfm | xetex>

6380 <*package>

6381 \MaybeStopEarly

```

28 Automated L^AT_EX hypertext cross-references

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

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

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

Start with a fallback for equations

```

6382 \def\Hy@CounterExists#1{%
6383   \begingroup\expandafter\expandafter\expandafter\endgroup
6384   \expandafter\ifx\csname c@#1\endcsname\relax
6385     \expandafter\@gobble
6386   \else
6387     \begingroup\expandafter\expandafter\expandafter\endgroup
6388     \expandafter\ifx\csname the#1\endcsname\relax
6389       \expandafter\expandafter\expandafter\@gobble
6390     \else
6391       \expandafter\expandafter\expandafter\@firstofone
6392     \fi
6393   \fi
6394 }
6395 \Hy@CounterExists{section}{%
6396   \newcommand\theHequation{\theHsection.\arabic{equation}}}%

```

```

6397 }
6398 \Hy@CounterExists{part}{%
6399 \newcommand\theHpart{\arabic{part}}%
6400 }
6401 \ltx@ifundefined{thechapter}{%
6402 \newcommand\theHsection {\arabic{section}}%
6403 \newcommand\theHfigure {\arabic{figure}}%
6404 \newcommand\theHtable {\arabic{table}}%
6405 }{%
6406 \newcommand\theHchapter {\arabic{chapter}}%
6407 \newcommand\theHfigure {\theHchapter.\arabic{figure}}%
6408 \newcommand\theHtable {\theHchapter.\arabic{table}}%
6409 \newcommand\theHsection {\theHchapter.\arabic{section}}%
6410 }
6411 \newcommand\theHsubsection {\theHsection.\arabic{subsection}}
6412 \newcommand\theHsubsubsection{\theHsubsection.\arabic{subsubsection}}
6413 \newcommand\theHparagraph {\theHsubsubsection.\arabic{paragraph}}
6414 \newcommand\theHsubparagraph {\theHparagraph.\arabic{subparagraph}}
6415 \newcommand\theHtheorem {\theHsection.\arabic{theorem}}
6416 \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.

```

6417 \let\H@item\item
6418 \newcounter{Item}
6419 \def\theHItem{\arabic{Item}}
6420 \def\item{%
6421 \@hyper@itemfalse
6422 \if@nmbrlist\@hyper@itemtrue\fi
6423 \H@item
6424 }
6425 \newcommand\theHenumi {\theHItem}
6426 \newcommand\theHenumii {\theHItem}
6427 \newcommand\theHenumiii {\theHItem}
6428 \newcommand\theHenumiv {\theHItem}
6429 \newcommand\theHHfootnote {\arabic{Hfootnote}}
6430 \newcommand\theHmpfootnote{\arabic{mpfootnote}}
6431 \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.

```

6432 \let\H@refstepcounter\refstepcounter
6433 \edef\name@of@eq{equation}%
6434 \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.

```

6435 \newif\if@hyper@item
6436 \newif\if@skiphyperref
6437 \@hyper@itemfalse
6438 \@skiphyperreffalse
6439 \def\refstepcounter#1{%
6440 \ifHy@pdfstring
6441 \else
6442 \H@refstepcounter{#1}%

```

```

6443 \edef\This@name{#1}%
6444 \ifx\This@name\name@of@slide
6445 \else
6446 \if@skiphyperref
6447 \else
6448 \if@hyper@item
6449 \stepcounter{Item}%
6450 \hyper@refstepcounter{Item}%
6451 \@hyper@itemfalse
6452 \else
6453 \hyper@refstepcounter{#1}%
6454 \fi
6455 \fi
6456 \fi
6457 \fi
6458 }
6459 \let\Hy@saved@refstepcounter\refstepcounter

```

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

```

6460 \ifpackageloaded{amsmath}{\newif\ifmeasuring@\measuring@false}

```

`\hyper@refstepcounter`

```

6461 \def\hyper@refstepcounter#1{%
6462 \edef\This@name{#1}%
6463 \ifx\This@name\name@of@eq
6464 \@ifundefined{theHequation}{%
6465 \make@stripped@name{\theequation}%
6466 \let\theHequation\newname
6467 }{}%
6468 \fi
6469 \@ifundefined{theH#1}{%
6470 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
6471 }{}%
6472 \hyper@makecurrent{#1}%
6473 \ifmeasuring@
6474 \else
6475 \Hy@raisedlink{%
6476 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6477 }%
6478 \fi
6479 }

```

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`.

```

6480 \begingroup\expandafter\expandafter\expandafter\endgroup
6481 \expandafter\ifx\csname chapter\endcsname\relax
6482 \def\Hy@chapterstring{section}%
6483 \else
6484 \def\Hy@chapterstring{chapter}%
6485 \fi
6486 \def\Hy@appendixstring{appendix}
6487 \def\Hy@chapapp{\Hy@chapterstring}

```

```

6488 \let\HyOrg@appendix\appendix
6489 \def\appendix{%
6490   \ltx@ifundefined{chapter}%
6491     {\gdef\theHsection{\Alph{section}}}%
6492     {\gdef\theHchapter{\Alph{chapter}}}%
6493   \xdef\Hy@chapapp{\Hy@appendixstring}%
6494   \HyOrg@appendix
6495 }

```

\Hy@Test@alph

```

6496 \def\Hy@Test@alph#1{%
6497   \ifcase#1\or
6498     a\or b\or c\or d\or e\or f\or g\or h\or i\or j\or
6499     k\or l\or m\or n\or o\or p\or q\or r\or s\or t\or
6500     u\or v\or w\or x\or y\or z%
6501   \else
6502     \@ctrerr
6503   \fi
6504 }

```

\Hy@Test@Alph

```

6505 \def\Hy@Test@Alph#1{%
6506   \ifcase#1\or
6507     A\or B\or C\or D\or E\or F\or G\or H\or I\or J\or
6508     K\or L\or M\or N\or O\or P\or Q\or R\or S\or T\or
6509     U\or V\or W\or X\or Y\or Z%
6510   \else
6511     \@ctrerr
6512   \fi
6513 }

```

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

```

6514 \def\hyper@makecurrent#1{%
6515   \begingroup
6516   \edef\Hy@param{#1}%
6517   \ifx\Hy@param\Hy@chapterstring
6518     \let\Hy@param\Hy@chapapp
6519   \fi
6520   \ifHy@hypertextnames
6521     \let\@number\@firstofone
6522     \def\@fnsymbol##1{\fnsymbol\number##1}%
6523     \ifx\@alph\Hy@Test@alph
6524       \else
6525         \def\@alph{alph\number}%
6526       \fi
6527     \ifx\@Alph\Hy@Test@Alph
6528       \else
6529         \def\@Alph{Alph\number}%
6530       \fi
6531     \ifHy@naturalnames
6532       \let\textlatin\@firstofone
6533       \xdef\HyperGlobalCurrentHref{\csname the#1\endcsname}%
6534     \else
6535       \xdef\HyperGlobalCurrentHref{%
6536         \csname
6537           the%

```

```

6538         \expandafter\ifx\csname theH#1\endcsname\relax\else H\fi
6539         #1%
6540     \endcsname
6541 }%
6542 \fi
6543 \xdef\HyperGlobalCurrentHref{%
6544     \Hy@param.\expandafter\strip@prefix\meaning\HyperGlobalCurrentHref
6545 }%
6546 \else
6547     \Hy@GlobalStepCount\Hy@linkcounter
6548     \xdef\HyperGlobalCurrentHref{\Hy@param.\the\Hy@linkcounter}%
6549 \fi
6550 \endgroup
6551 \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6552 \ifHy@localanchorname
6553     \let\@currentHref\HyperLocalCurrentHref
6554 \else
6555     \global\let\@currentHref\HyperGlobalCurrentHref
6556 \fi
6557 }

```

`\Hy@MakeCurrentHref`

```

6558 \def\Hy@MakeCurrentHref#1{%
6559     \edef\HyperLocalCurrentHref{#1}%
6560     \@onelevel@sanitize\HyperLocalCurrentHref
6561     \global\let\HyperGlobalCurrentHref\HyperLocalCurrentHref
6562     \let\HyperLocalCurrentHref\HyperGlobalCurrentHref
6563     \ifHy@localanchorname
6564         \let\@currentHref\HyperLocalCurrentHref
6565     \else
6566         \global\let\@currentHref\HyperGlobalCurrentHref
6567     \fi
6568 }

```

`\Hy@MakeCurrentHrefAuto`

```

6569 \def\Hy@MakeCurrentHrefAuto#1{%
6570     \Hy@GlobalStepCount\Hy@linkcounter
6571     \Hy@MakeCurrentHref{#1.\the\Hy@linkcounter}%
6572 }

```

`\@currentHlabel` `\@currentHlabel` is only defined for compatibility with package ‘hypdvips’.

```

6573 \def\@currentHlabel{\@currentHref}

6574 \@ifpackageloaded{fancyvrb}{%
6575     \@ifpackagelater{fancyvrb}{1998/05/20}{-}{%
6576         \def\FV@StepLineNo{%
6577             \FV@SetLineNo
6578             \def\FV@StepLineNo{\H@refstepcounter{FancyVerbLine}}%
6579             \FV@SetLineNo
6580         }%
6581     }%
6582 }{-}

```

29 Package lastpage support

Package lastpage directly writes the `\newlabel` command to the aux file. Because package hyperref requires additional arguments, the internal command `\lastpage@putlabel`

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

`\lastpage@putlabel`

```

6583 \Hy@AtBeginDocument{%
6584   \ifclassloaded{revtex4}{%
6585     \@namedef{ver@lastpage.sty}{1994/06/25}%
6586   }{}%
6587   \ifpackageloaded{lastpage}{%
6588     \ifHy@pageanchor
6589     \else
6590       \Hy@WarningNoLine{%
6591         The \string\pageref{LastPage} link doesn't work\MessageBreak
6592         with disabled option 'pageanchor'%
6593       }%
6594     \fi
6595     \def\lastpage@putlabel{%
6596       \addtocounter{page}{-1}%
6597       \if@filesw
6598         \begingroup
6599         \let\@number\@firstofone
6600         \ifHy@pageanchor
6601           \ifHy@hypertextnames
6602             \ifHy@plainpages
6603               \def\Hy@temp{\arabic{page}}%
6604             \else
6605               \Hy@unicodefalse
6606               \pdfstringdef\Hy@temp{\thepage}%
6607             \fi
6608           \else
6609             \def\Hy@temp{\the\Hy@pagecounter}%
6610           \fi
6611         \fi
6612         \immediate\write\@auxout{%
6613           \string\newlabel
6614           {LastPage}{\the\Hy@temp}{\thepage}{\thepage}{%
6615             \ifHy@pageanchor page.\Hy@temp\fi}{}}%
6616       }%
6617     \endgroup
6618   \fi
6619   \addtocounter{page}{1}%
6620 }%
6621 \@ifclassloaded{revtex4}{%
6622   \begingroup
6623   \toks@{\expandafter{\lastpage@putlabel}}%
6624   \edef\x{\endgroup
6625     \def\noexpand\lastpage@putlabel{%
6626       \noexpand\stepcounter{page}%
6627       \the\toks@
6628       \noexpand\addtocounter{page}\noexpand\m@ne
6629     }%
6630   }%
6631   \x
6632 }{}%
```

```

6633 }{}%
6634 }
6635 \</package>
6636 \<*check>
6637 \checkpackage{lastpage}[1994/06/25]
6638 \checkcommand\def\lastpage@putlabel{%
6639   \addtocounter{page}{-1}%
6640   \immediate\write\@auxout{%
6641     \string\newlabel{LastPage}{\the\thepage}}%
6642   }%
6643   \addtocounter{page}{1}%
6644 }
6645 \</check>
6646 \<*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.

```

6647 \def\hypergetref#1{\getrefbykeydefault{#1}{-}{??}}
6648 \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:

```

6649 \@ifpackageloaded{titlesec}{%
6650   \def\ttl@Hy@steplink#1{%
6651     \Hy@MakeCurrentHrefAuto{#1*}%
6652     \edef\ttl@Hy@saveanchor{%
6653       \noexpand\Hy@raisedlink{%
6654         \noexpand\hyper@anchorstart{\@currentHref}%
6655         \noexpand\hyper@anchorend
6656         \def\noexpand\ttl@Hy@SavedCurrentHref{\@currentHref}%
6657         \noexpand\ttl@Hy@PatchSaveWrite
6658       }%
6659     }%
6660   }%
6661   \def\ttl@Hy@PatchSaveWrite{%
6662     \begingroup
6663     \toks@\expandafter{\ttl@savewrite}%
6664     \edef\x{\endgroup
6665       \def\noexpand\ttl@savewrite{%
6666         \let\noexpand\@currentHref
6667           \noexpand\ttl@Hy@SavedCurrentHref
6668         \the\toks@
6669       }%
6670     }%
6671     \x
6672   }%
6673   \def\ttl@Hy@refstepcounter#1{%
6674     \let\ttl@b\Hy@raisedlink
6675     \def\Hy@raisedlink##1{%

```

```

6676 \def\ttl@Hy@saveanchor{\Hy@raisedlink{##1}}%
6677 }%
6678 \refstepcounter{#1}%
6679 \let\Hy@raisedlink\ttl@b
6680 }%
6681 {}

```

Package titletoc support:

```

6682 \@ifpackageloaded{titletoc}{%
6683 \def\ttl@gobblecontents#1#2#3#4{\ignorespaces}%
6684 }{}

```

32 Package varioref support

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

```

6685 \def\Hy@varioref@undefined{???}{??}{-}{-}{}
6686 \@ifpackageloaded{varioref}{%
6687 \def\vref@pagenum#1#2{%
6688 \ifundefined{r@#2}{%
6689 \expandafter\let\csname r@#2\endcsname\Hy@varioref@undefined
6690 }{}%
6691 \edef#1{\getpagerefnumber{#2}}%
6692 }%
6693 {}

```

Package varioref redefines \refstepcounter, thus it needs fixing, if the package is loaded *after* hyperref.

```

6694 \def\Hy@varioref@refstepcounter#1{%
6695 \stepcounter{#1}%
6696 \protected@edef\@currentlabel{%
6697 \csname p@#1\expandafter\endcsname\csname the#1\endcsname
6698 }%
6699 }
6700 \AtBeginDocument{%
6701 \ifx\refstepcounter\Hy@varioref@refstepcounter
6702 \let\H@refstepcounter\refstepcounter
6703 \let\refstepcounter\Hy@saved@refstepcounter
6704 \fi
6705 }

```

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

```

6706 \@ifpackageloaded{longtable}{%
6707 \begingroup
6708 \def\y{\LT@array}%
6709 \@ifundefined{scr@LT@array}{%
6710 \ifundefined{adl@LT@array}{-}{\def\y{\adl@LT@array}}%
6711 }{\def\y{\scr@LT@array}}%
6712 \long\def\x\refstepcounter#1#2\@sharp#3#4\@nil{%

```

```

6713 \expandafter\endgroup
6714 \expandafter\def\y[##1]##2{%
6715 \H@refstepcounter{#1}%
6716 \hyper@makecurrent{table}%
6717 \let\Hy@LT@currentHref\@currentHref
6718 #2\@sharp####4%
6719 }%
6720 }%
6721 \expandafter\expandafter\expandafter\x\y[{#1}]{#2}\@nil

```

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

```

6722 \begingroup
6723 \def\x#1\ifvoid\LT@foot#2\fi#3\@nil{%
6724 \endgroup
6725 \def\LT@start{%
6726 #1%
6727 \ifvoid\LT@foot#2\fi
6728 \let\@currentHref\Hy@LT@currentHref
6729 \Hy@raisedlink{%
6730 \hyper@anchorstart{\@currentHref}\hyper@anchorend
6731 }%
6732 #3%
6733 }%
6734 }%
6735 \expandafter\x\LT@start\@nil
6736 }{}

```

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.

```

6737 \let\new@refstepcounter\refstepcounter
6738 \let\H@equation\equation
6739 \let\H@endequation\endequation
6740 \ifpackageloaded{amsmath}{%
6741 \long\def\Hy@temp{%
6742 \incr@eqnum
6743 \mathdisplay@push
6744 \st@rredfalse \global\@eqnswtrue
6745 \mathdisplay{equation}%
6746 }%
6747 \ifx\Hy@temp\equation
6748 \expandafter\ifx\csname if@fleqn\expandafter\endcsname
6749 \csname iftrue\endcsname
6750 \else
6751 \long\def\equation{%
6752 \mathdisplay@push
6753 \st@rredfalse \global\@eqnswtrue
6754 \mathdisplay{equation}%
6755 \incr@eqnum
6756 }%
6757 \fi
6758 \fi

```

```

6759 }{%
6760   \def\equation{%
6761     \let\refstepcounter\H@refstepcounter
6762     \H@equation
6763     \@ifundefined{theHequation}{%
6764       \make@stripped@name{\theequation}%
6765       \let\theHequation\newname
6766     }{%
6767       \hyper@makecurrent{equation}%
6768       \Hy@raisedlink{\hyper@anchorstart{\@currentHref}}%
6769       \let\refstepcounter\new@refstepcounter
6770     }%
6771   \def\endequation{\Hy@raisedlink{\hyper@anchorend}\H@endequation}%
6772 }

```

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.

```

6773 \newif\if@eqnstar
6774 \@eqnstarfalse
6775 \let\H@eqnarray\eqnarray
6776 \let\H@endeqnarray\endeqnarray
6777 \def\eqnarray{%
6778   \let\Hy@reserved@a\relax
6779   \def\@currentHref{}%
6780   \H@eqnarray
6781   \if@eqnstar
6782   \else
6783     \ifx\\\@currentHref\\%
6784     \else
6785       \@ifundefined{theHequation}{%
6786         \make@stripped@name{\theequation}%
6787         \let\theHequation\newname
6788       }{%
6789         \hyper@makecurrent{equation}%
6790         \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6791       }%
6792     \fi
6793   }
6794 \def\endeqnarray{%
6795   \H@endeqnarray
6796 }

```

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.

```

6797 \@namedef{eqnarray*}{%
6798   \def\@eqncr{\nonumber\@seqncr}\@eqnstartrue\eqnarray
6799 }
6800 \@namedef{endeqnarray*}{%
6801   \nonumber\endeqnarray\@eqnstarfalse
6802 }

```

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

```

6803 \ltx@ifundefined{subeqnarray}{%
6804   \let\H@subeqnarray\subeqnarray
6805   \let\H@endsubeqnarray\endsubeqnarray

```

```

6806 \def\subeqnarray{%
6807   \let\Hy@reserved@a\relax
6808   \H@subeqnarray
6809   \@ifundefined{theHequation}{%
6810     \make@stripped@name{\theequation}%
6811     \let\theHequation\newname
6812   }{}%
6813   \hyper@makecurrent{equation}%
6814   \hyper@anchorstart{\@currentHref}{\hyper@anchorend
6815 }%
6816 \def\endsubeqnarray{%
6817   \H@endsubeqnarray
6818 }%
6819 \newcommand\theHsubequation{\theHequation\alph{subequation}}%
6820 }

```

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

```

6821 \def\make@stripped@name#1{%
6822   \begingroup
6823   \escapechar\m@ne
6824   \global\let\newname\@empty
6825   \protected@edef\Hy@tempa{#1}%
6826   \edef\@tempb{%
6827     \noexpand\@tfor\noexpand\Hy@tempa:=%
6828     \expandafter\strip@prefix\meaning\Hy@tempa
6829   }%
6830   \@tempb\do{%
6831     \if{\Hy@tempa\else
6832     \if}\Hy@tempa\else
6833     \xdef\newname{\newname\Hy@tempa}%
6834     \fi
6835   }%
6836 }%
6837 \endgroup
6838 }

```

Support for amsmath's subequations:

```

6839 \begingroup\expandafter\expandafter\expandafter\endgroup
6840 \expandafter\ifx\csname subequations\endcsname\relax
6841 \else
6842   \let\HyOrg@subequations\subequations
6843   \def\subequations{%
6844     \stepcounter{equation}%
6845     \protected@edef\theHparentequation{%
6846       \@ifundefined{theHequation}\theequation\theHequation
6847     }%
6848     \addtocounter{equation}{-1}%
6849     \HyOrg@subequations
6850     \def\theHequation{\theHparentequation\alph{equation}}%
6851     \ignorespaces
6852   }%
6853 \fi

```

Support for package amsthm (Daniel Müllner):

```

6854 \@ifpackageloaded{amsthm}{%
6855   \def\@thm#1#2#3{%
6856     \ifhmode
6857       \unskip\unskip\par

```

```

6858 \fi
6859 \normalfont
6860 \trivlist
6861 \let\thmheadnl\relax
6862 \let\thm@swap\@gobble
6863 \thm@notefont{\fontseries\mddefault\upshape}%
6864 \thm@headpunct{.}% add period after heading
6865 \thm@headsep 5\p@ plus\p@ minus\p@\relax
6866 \thm@space@setup
6867 #1% style overrides
6868 \@topsep \thm@preskip % used by thm head
6869 \@topsepadd \thm@postskip % used by \@endparenv
6870 \def\dth@counter{#2}%
6871 \ifx\@empty\dth@counter
6872 \def\@tempa{%
6873 \oparg{\@begintheorem{#3}{}}[]%
6874 }%
6875 \else
6876 \H@refstepcounter{#2}%
6877 \hyper@makecurrent{#2}%
6878 \let\Hy@dth@currentHref\@currentHref
6879 \def\@tempa{%
6880 \@oparg{\@begintheorem{#3}{\csname the#2\endcsname}}[]%
6881 }%
6882 \fi
6883 \@tempa
6884 }%
6885 \dth@everypar={%
6886 \@minipagefalse
6887 \global\@newlistfalse
6888 \@noparitemfalse
6889 \if@inlabel
6890 \global\@inlabelfalse
6891 \begingroup
6892 \setbox\z@\lastbox
6893 \ifvoid\z@
6894 \kern-\itemindent
6895 \fi
6896 \endgroup
6897 \ifx\@empty\dth@counter
6898 \else
6899 \Hy@raisedlink{%
6900 \hyper@anchorstart{%
6901 \ltx@ifundefined{Hy@dth@currentHref}%
6902 \@currentHref\Hy@dth@currentHref
6903 }\hyper@anchorend
6904 }%
6905 \fi
6906 \unhbox\@labels
6907 \fi
6908 \if@nobreak
6909 \@nobreakfalse \clubpenalty\@M
6910 \else
6911 \clubpenalty\@clubpenalty \everypar{}%
6912 \fi
6913 }%
6914 }{}

```

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.

```

6915 \@ifpackageloaded{tabularx}{\Hy@hyperfootnotesfalse}{}
6916 \ifHy@hyperfootnotes
6917   \newcounter{Hfootnote}%
6918   \let\H@@footnotetext\@footnotetext
6919   \let\H@@footnotemark\@footnotemark
6920   \def\xfootnotenext[#1]{%
6921     \begingroup
6922       \csname c@\@mpfn\endcsname #1\relax
6923       \unrestored@protected@xdef\@thefnmark{\thempfn}%
6924     \endgroup
6925     \ifx\@footnotetext\@mpfootnotetext
6926       \expandafter\H@@mpfootnotetext
6927     \else
6928       \expandafter\H@@footnotetext
6929     \fi
6930   }%
6931   \def\@xfootnotemark[#1]{%
6932     \begingroup
6933       \c@footnote #1\relax
6934       \unrestored@protected@xdef\@thefnmark{\thefootnote}%
6935     \endgroup
6936     \H@@footnotemark
6937   }%
6938   \let\H@@mpfootnotetext\@mpfootnotetext
6939   \long\def\@mpfootnotetext#1{%
6940     \H@@mpfootnotetext{%
6941       \ifHy@nesting
6942         \expandafter\hyper@@anchor\expandafter{%
6943           \Hy@footnote@currentHref
6944         }{#1}%
6945       \else
6946         \Hy@raisedlink{%
6947           \expandafter\hyper@@anchor\expandafter{%
6948             \Hy@footnote@currentHref
6949           }{\relax}%
6950         }#1%
6951       \fi
6952     }%
6953   }%
6954   \long\def\@footnotetext#1{%
6955     \H@@footnotetext{%
6956       \ifHy@nesting
6957         \expandafter\hyper@@anchor\expandafter{%
6958           \Hy@footnote@currentHref
6959         }{#1}%
6960       \else
6961         \Hy@raisedlink{%
6962           \expandafter\hyper@@anchor\expandafter{%
6963             \Hy@footnote@currentHref
6964           }{\relax}%

```



```

6965     }%
6966     \let\@currentHref\Hy@footnote@currentHref
6967     \let\@currentlabelname\@empty
6968     #1%
6969     \fi
6970   }%
6971 }%

```

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.

```

6972 \def\@footnotemark{%
6973   \leavevmode
6974   \ifhmode\edef\x@sf{\the\spacefactor}\nobreak\fi
6975   \stepcounter{Hfootnote}%
6976   \global\let\Hy@saved@currentHref\@currentHref
6977   \hyper@makecurrent{Hfootnote}%
6978   \global\let\Hy@footnote@currentHref\@currentHref
6979   \global\let\@currentHref\Hy@saved@currentHref
6980   \hyper@linkstart{link}{\Hy@footnote@currentHref}%
6981   \@makefnmark
6982   \hyper@linkend
6983   \ifhmode\spacefactor\x@sf\fi
6984   \relax
6985 }%

```

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

```

6986 \@ifpackageloaded{longtable}{%
6987   \CheckCommand*{\LT@p@ftntext}[1]{%
6988     \edef\@tempa{%
6989       \the\LT@p@ftn
6990       \noexpand\footnotetext[\the\c@footnote]%
6991     }%
6992     \global\LT@p@ftn\expandafter{\@tempa{#1}}%
6993   }%
6994   \long\def\LT@p@ftntext#1{%
6995     \edef\@tempa{%
6996       \the\LT@p@ftn
6997       \begingroup
6998         \noexpand\c@footnote=\the\c@footnote\relax
6999         \noexpand\protected@xdef
7000           \noexpand\@thefnmark{\noexpand\thempfn}%
7001         \noexpand\protected@xdef\noexpand\@thefnmark{%
7002           \noexpand\thempfn
7003         }%
7004         \expandafter\noexpand\expandafter\Hy@LT@footnotetext
7005         \expandafter{%
7006           \Hy@footnote@currentHref
7007         }%
7008       }%
7009     \global\LT@p@ftn\expandafter{%
7010       \@tempa{#1}%
7011     }%
7012   }%

```

```

7013 }%
7014 \long\def\Hy@LT@footnotetext#1#2{%
7015   \H@@@footnotetext{%
7016     \ifHy@nesting
7017       \hyper@@anchor{#1}{#2}%
7018     \else
7019       \Hy@raisedlink{%
7020         \hyper@@anchor{#1}{\relax}%
7021       }%
7022       \def\@currentHref{#1}%
7023       \let\@currentlabelname\@empty
7024       #2%
7025     \fi
7026   }%
7027 }%
7028 }{}%

```

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

```

7029 \@ifpackageloaded{fancyvrb}{%
7030   \def\V@@@footnotetext{%
7031     \insert\footins\bgroup
7032     \csname reset@font\endcsname
7033     \footnotesize
7034     \interlinepenalty\interfootnotelinepenalty
7035     \splittopskip\footnotesep
7036     \splitmaxdepth\dp\strutbox
7037     \floatingpenalty \@MM
7038     \hsize\columnwidth
7039     \@parboxrestore
7040     \edef\@currentlabel{\csname p@footnote\endcsname\@thefnmark}%
7041     \@makefnintext{}%
7042     \rule{\z@}{\footnotesep}%
7043     \bgroup
7044     \aftergroup\V@@@footnotetext
7045     \Hy@raisedlink{%
7046       \expandafter\hyper@@anchor\expandafter{%
7047         \Hy@footnote@currentHref
7048       }\relax}%
7049   }%
7050   \let\@currentHref\Hy@footnote@currentHref
7051   \let\@currentlabelname\@empty
7052   \ignorespaces
7053 }%
7054 }{}%

```

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

```

7055 \def\Hy@temp#1{%
7056   \begingroup
7057   \unrestored@protected\xdef\@thefnmark{\ref{#1}}%
7058   \endgroup
7059   \@footnotemark
7060 }%
7061 \ifx\Hy@temp\footref
7062   \def\footref#1{%
7063     \begingroup
7064     \unrestored@protected\xdef\@thefnmark{\ref{#1}}%
7065     \endgroup

```

```

7066 \H@@footnotemark
7067 }%
7068 \fi

```

But the special footnotes in `\maketitle` are much too hard to deal with properly. Let them revert to plain behaviour. The koma classes add an optional argument.

```

7069 \let\HyOrg@maketitle\maketitle
7070 \def\maketitle{%
7071   \let\Hy@saved@footnotemark\@footnotemark
7072   \let\Hy@saved@footnotetext\@footnotetext
7073   \let\@footnotemark\H@@footnotemark
7074   \let\@footnotetext\H@@footnotetext
7075   \@ifnextchar[\Hy@maketitle@optarg{% ]
7076   \HyOrg@maketitle
7077   \Hy@maketitle@end
7078 }%
7079 }%
7080 \def\Hy@maketitle@optarg[#1]{%
7081   \HyOrg@maketitle[{#1}]%
7082   \Hy@maketitle@end
7083 }%
7084 \def\Hy@maketitle@end{%
7085   \ifx\@footnotemark\H@@footnotemark
7086     \let\@footnotemark\Hy@saved@footnotemark
7087   \fi
7088   \ifx\@footnotetext\H@@footnotetext
7089     \let\@footnotetext\Hy@saved@footnotetext
7090   \fi
7091 }%

```

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

```

7092 \def\realfootnote{%
7093   \@ifnextchar[\@xfootnote{%
7094     \stepcounter{\@mpfn}%
7095     \protected@xdef\@thefnmark{\thempfn}%
7096     \H@@@footnotemark\H@@@footnotetext
7097   }%
7098 }%

7099 \fi
7100 \Hy@DisableOption{hyperfootnotes}

7101 \</package>
7102 \<*check>
7103 \checklatex
7104 \checkcommand\def\@xfootnotenext[#1]{%
7105   \begingroup
7106     \csname c@\@mpfn\endcsname #1\relax
7107     \unrestored@protected@xdef\@thefnmark{\thempfn}%
7108   \endgroup
7109   \@footnotetext
7110 }
7111 \checkcommand\def\@xfootnotemark[#1]{%
7112   \begingroup
7113     \c@footnote #1\relax
7114     \unrestored@protected@xdef\@thefnmark{\thefootnote}%
7115   \endgroup
7116   \@footnotemark

```

```

7117 }
7118 \checkcommand\def\@footnotemark{%
7119   \leavevmode
7120   \ifhmode\edef\@x@sf{\the\spacefactor}\nobreak\fi
7121   \@makefnmark
7122   \ifhmode\spacefactor\@x@sf\fi
7123   \relax
7124 }
7125 \</check>
7126 \<*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.

```

7127 \def\caption{%
7128   \ifx\@captype\@undefined
7129     \@latex@error{\noexpand\caption outside float}\@ehd
7130     \expandafter\@gobble
7131   \else
7132     \H@refstepcounter\@captype
7133     \let\Hy@tempa\@caption
7134     \ifundefined{float@caption}{%
7135       {%
7136         \expandafter\ifx\csname @float@c@\@captype\endcsname
7137           \float@caption
7138         \let\Hy@tempa\Hy@float@caption
7139       }%
7140     }%
7141     \expandafter\@firstofone
7142   \fi
7143   {\@dblarg{\Hy@tempa\@captype}}}%
7144 }
7145 \long\def\@caption#1[#2]#3{%
7146   \expandafter\ifx\csname if@capstart\expandafter\endcsname
7147     \csname iftrue\endcsname
7148     \global\let\@currentHref\hc@currentHref
7149   \else
7150     \hyper@makecurrent{\@captype}%
7151   \fi
7152   \@ifundefined{NR@gettitle}{%
7153     \def\@currentlabelname{#2}%
7154   }{%
7155     \NR@gettitle{#2}%
7156   }%
7157   \par\addcontentsline{\csname ext@#1\endcsname}{#1}{%
7158     \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7159   }%
7160   \begingroup
7161     \@parboxrestore
7162     \if@minipage
7163       \@setminipage
7164     \fi
7165     \normalsize
7166     \expandafter\ifx\csname if@capstart\expandafter\endcsname
7167       \csname iftrue\endcsname

```

```

7168 \global\@capstartfalse
7169 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces#3}%
7170 \else
7171 \@makecaption{\csname fnum@#1\endcsname}{%
7172 \ignorespaces

```

If we cannot have nesting, the anchor is empty.

```

7173 \ifHy@nesting
7174 \expandafter\hyper@@anchor\expandafter{\@currentHref}{#3}%
7175 \else
7176 \Hy@raisedlink{%
7177 \expandafter\hyper@@anchor\expandafter{%
7178 \@currentHref
7179 }{\relax}%
7180 }%
7181 #3%
7182 \fi
7183 }%
7184 \fi
7185 \par
7186 \endgroup
7187 }

```

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.

```

7188 \let\Hy@float@caption\@caption
7189 \ifpackageloaded{float}{%
7190 \def\Hy@float@caption{%
7191 \ifx\Hy@float@currentHref\@undefined
7192 \hyper@makecurrent{\@cuptype}%
7193 \global\let\Hy@float@currentHref\@currentHref
7194 \else
7195 \let\@currentHref\Hy@float@currentHref
7196 \fi
7197 \float@caption
7198 }%
7199 \let\HyOrg@float@makebox\float@makebox
7200 \renewcommand{\float@makebox}[1]{%
7201 \HyOrg@float@makebox{%
7202 #1\relax
7203 \ifx\Hy@float@currentHref\@undefined
7204 \else
7205 \expandafter\hyper@@anchor\expandafter{%
7206 \Hy@float@currentHref
7207 }{\relax}%
7208 \global\let\Hy@float@currentHref\@undefined
7209 \fi
7210 }%
7211 }%
7212 }{}
7213 \</package>
7214 \<?check>
7215 \checklatex[1999/06/01 - 2000/06/01]
7216 \checkcommand\def\caption{%
7217 \ifx\@cuptype\@undefined
7218 \@latex@error{\noexpand\caption outside float}{\@ehd
7219 \expandafter\@gobble
7220 \else

```

```

7221 \refstepcounter\@captype
7222 \expandafter\@firstofone
7223 \fi
7224 {\@dblarg{\@caption\@captype}}}%
7225 }
7226 \checkcommand\long\def\@caption#1[#2]#3{%
7227 \par
7228 \addcontentsline{\csname ext@#1\endcsname}{#1}{%
7229 \protect\numberline{\csname the#1\endcsname}{\ignorespaces #2}%
7230 }%
7231 \begingroup
7232 \@parboxrestore
7233 \if@minipage
7234 \@setminipage
7235 \fi
7236 \normalsize
7237 \@makecaption{\csname fnum@#1\endcsname}{\ignorespaces #3}\par
7238 \endgroup
7239 }
7240 \</check>
7241 \<*package>

```

37 Bibliographic references

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

However, 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.

```

7242 \def\hyper@natlinkstart#1{%
7243 \Hy@backout{#1}%
7244 \hyper@linkstart{cite}{cite.#1}%
7245 \def\hyper@nat@current{#1}%
7246 }
7247 \def\hyper@natlinkend{%
7248 \hyper@linkend
7249 }
7250 \def\hyper@natlinkbreak#1#2{%
7251 \hyper@linkend#1\hyper@linkstart{cite}{cite.#2}%
7252 }
7253 \def\hyper@natanchorstart#1{%
7254 \Hy@raisedlink{\hyper@anchorstart{cite.#1}}%
7255 }
7256 \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.

```

7257 \ltx@ifundefined{NAT@parse}{%
7258 \providecommand*\@extra@binfo{%
7259 \providecommand*\@extra@b@citeb{%
7260 \def\bibcite#1#2{%

```

```

7261 \newlabel{b}{#1\@extra@binfo}{%
7262 \hyper@link[cite]{cite.#1\@extra@b@citeb}{#2}%
7263 }%
7264 }%
7265 \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.”.

```

7266 \let\Hy@bibcite\bibcite
7267 \begingroup
7268 \ifundefined{bbl@cite@choice}{}{}%
7269 \g@addto@macro\bbl@cite@choice{%
7270 \let\bibcite\Hy@bibcite
7271 }%
7272 }%
7273 \endgroup

```

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

```

7274 \providecommand*\@BIBLABEL{\@biblabel}%
7275 \def\@bibitem[#1]#2{%
7276 \skiphyperreftrue
7277 \H@item[%
7278 \ifx\Hy@raisedlink\@empty
7279 \hyper@anchorstart{cite.#2\@extra@b@citeb}%
7280 \@BIBLABEL{#1}%
7281 \hyper@anchorend
7282 \else
7283 \Hy@raisedlink{%
7284 \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
7285 }%
7286 \@BIBLABEL{#1}%
7287 \fi
7288 \hfill
7289 ]%
7290 \skiphyperreffalse
7291 \if@filesw
7292 \begingroup
7293 \let\protect\noexpand
7294 \immediate\write\@auxout{%
7295 \string\bibcite{#2}{#1}%
7296 }%
7297 \endgroup
7298 \fi
7299 \ignorespaces
7300 }%

```

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

```

7301 \def\@bibitem#1{%
7302 \skiphyperreftrue\H@item\skiphyperreffalse
7303 \Hy@raisedlink{%
7304 \hyper@anchorstart{cite.#1\@extra@b@citeb}\relax\hyper@anchorend
7305 }%
7306 \if@filesw
7307 \begingroup
7308 \let\protect\noexpand
7309 \immediate\write\@auxout{%
7310 \string\bibcite{#1}{\the\value{\@listctr}}%
7311 }%

```

```

7312 \endgroup
7313 \fi
7314 \ignorespaces
7315 }%
7316 }{}

7317 </package>
7318 <*check>
7319 \checklatex
7320 \checkcommand\def\@bibitem[#1]#2{%
7321 \item[\@biblabel{#1}\hfill]%
7322 \if@filesw
7323 {%
7324 \let\protect\noexpand
7325 \immediate\write\@auxout{%
7326 \string\bibcite{#2}{#1}%
7327 }%
7328 }%
7329 \fi
7330 \ignorespaces
7331 }
7332 \checkcommand\def\@bibitem#1{%
7333 \item
7334 \if@filesw
7335 \immediate\write\@auxout{%
7336 \string\bibcite{#1}{\the\value{\@listctr}}}%
7337 }%
7338 \fi
7339 \ignorespaces
7340 }
7341 </check>
7342 <*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.

```

7343 \ifclassloaded{revtex}{%
7344 \Hy@Info{*** compatibility with revtex **** }%
7345 \def\revtex@checking#1#2{%
7346 \expandafter\let\expandafter\T@temp\csname b@#1\endcsname
7347 \expandafter\def\csname b@#1\endcsname{#2}%
7348 \@SetMaxRnhefLabel{#1}%
7349 \expandafter\let\csname b@#1\endcsname\T@temp
7350 }%

```

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

```

7351 \ifundefined{CITE}{\def\@CITE{\@cite}}{}%
7352 \providecommand*{\@extra@b@citeb}{}%
7353 \def\@CITEX[#1]#2{%
7354 \let\@citea\@empty
7355 \leavevmode
7356 \unskip
7357 $\sim$%
7358 \scriptstyle
7359 \@CITE{%
7360 \@for\@citeb:=#2\do{%
7361 \@citea

```



```

7362 \def\@citea{,\penalty\@m\ }%
7363 \edef\@citeb{\expandafter\@firstofone\@citeb}%
7364 \if@filesw
7365 \immediate\write\@auxout{\string\citation{\@citeb}}%
7366 \fi
7367 \ifundefined{b@\@citeb\extra@b@citeb}{%
7368 \mbox{\reset@font\bfseries ?}%
7369 \G@refundefinedtrue
7370 \@latex@warning{%
7371 Citation '\@citeb' on page \thepage \space undefined%
7372 }%
7373 }{%
7374 {\csname b@\@citeb\extra@b@citeb\endcsname}%
7375 }%
7376 }%
7377 }{#1}%
7378 }$%
7379 }%

```

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.

```

7380 \def\@citex[#1]#2{%
7381 \let\@citea\@empty
7382 \@cite{%
7383 \@for\@citeb:=#2\do{%
7384 \@citea
7385 \def\@citea{,\penalty\@m\ }%
7386 \edef\@citeb{\expandafter\@firstofone\@citeb}%
7387 \if@filesw
7388 \immediate\write\@auxout{\string\citation{\@citeb}}%
7389 \fi
7390 \ifundefined{b@\@citeb\extra@b@citeb}{%
7391 \mbox{\reset@font\bfseries ?}%
7392 \G@refundefinedtrue
7393 \@latex@warning{%
7394 Citation '\@citeb' on page \thepage \space undefined%
7395 }%
7396 }{%
7397 \hbox{\csname b@\@citeb\extra@b@citeb\endcsname}%
7398 }%
7399 }%
7400 }{#1}%
7401 }%
7402 }{}

```

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.

```

7403 \ifpackageloaded{harvard}{%
7404 \Hy@AtBeginDocument{%
7405 \Hy@Info{*** compatibility with harvard **** }%
7406 \Hy@raiselinksfalse

```

```

7407 \def\harvardcite#1#2#3#4{%
7408 \global\@namedef{HAR@fn@#1}{\hyper@@link[cite]{#1}{#2}}%
7409 \global\@namedef{HAR@an@#1}{\hyper@@link[cite]{#1}{#3}}%
7410 \global\@namedef{HAR@yr@#1}{\hyper@@link[cite]{#1}{#4}}%
7411 \global\@namedef{HAR@df@#1}{\csname HAR@fn@#1\endcsname}%
7412 }%
7413 \def\HAR@citetoaux#1{%
7414 \if@filesw\immediate\write\@auxout{\string\citation{#1}}\fi%
7415 \ifHy@backref
7416 \ifx\@empty\@currentlabel
7417 \else
7418 \@bsphack
7419 \if@filesw
7420 \protected@write\@auxout{}{%
7421 \string\@writefile{brf}{%
7422 \string\backcite{#1}{%
7423 {\thepage}{\@currentlabel}{\@currentHref}%
7424 }%
7425 }%
7426 }%
7427 \fi
7428 \@esphack
7429 \fi
7430 \fi
7431 }%
7432 \def\harvarditem{%
7433 \ifnextchar[{\@harvarditem}{\@harvarditem[\null]}%
7434 }%
7435 \def\@harvarditem[#1]#2#3#4#5\par{%
7436 \item[]%
7437 \hyper@anchorstart{cite.#4}\relax\hyper@anchorend
7438 \if@filesw
7439 \begingroup
7440 \def\protect##1{\string ##1\space}%
7441 \ifthenelse{\equal{#1}{\null}}{%
7442 {\def\next{{#4}{#2}{#2}{#3}}}%
7443 {\def\next{{#4}{#2}{#1}{#3}}}%
7444 \immediate\write\@auxout{\string\harvardcite\codeof\next}%
7445 \endgroup
7446 \fi
7447 \protect\hspace*{-\labelwidth}%
7448 \protect\hspace*{-\labelsep}%
7449 \ignorespaces
7450 #5%
7451 \ifHy@backref
7452 \newblock
7453 \backref{\csname br@#4\endcsname}%
7454 \fi
7455 \par
7456 }%

```

\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:

```

7457 \long\def\HAR@checkcitations#1#2#3#4{%
7458 \def\HAR@tempa{\hyper@@link[cite]{#1}{#2}}%
7459 \expandafter\ifx\csname HAR@fn@#1\endcsname\HAR@tempa

```

```

7460 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#3}}%
7461 \expandafter\ifx\csname HAR@an@#1\endcsname\HAR@tempa
7462 \def\HAR@tempa{\hyper@@link[cite]{}{cite.#1}{#4}}%
7463 \expandafter\ifx\csname HAR@yr@#1\endcsname\HAR@tempa
7464 \else
7465 \@tempwattrue
7466 \fi
7467 \else
7468 \@tempwattrue
7469 \fi
7470 \else
7471 \@tempwattrue
7472 \fi
7473 }%
7474 }%
7475 }{}

```

37.2 Package chicago

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

```

7476 \@ifpackageloaded{chicago}{%

```

`\citeN`

```

7477 \def\citeN{%
7478 \def\@citesep{-1000}%
7479 \def\@cite##1##2{##1}%
7480 \def\citeauthoryear##1##2##3{##1 (##3\@cite@opt)}%
7481 \@citedata@opt
7482 }%

```

`\shortciteN`

```

7483 \def\shortciteN{%
7484 \def\@citesep{-1000}%
7485 \def\@cite##1##2{##1}%
7486 \def\citeauthoryear##1##2##3{##2 (##3\@cite@opt)}%
7487 \@citedata@opt
7488 }%

```

`\@citedata@opt`

```

7489 \def\@citedata@opt{%
7490 \let\@cite@opt\@empty
7491 \@ifnextchar [{%
7492 \@tempwattrue
7493 \@citedatax@opt
7494 }{%
7495 \@tempwafalse
7496 \@citedatax[]%
7497 }%
7498 }%

```

`\@citedatax@opt`

```

7499 \def\@citedatax@opt[#1]{%
7500 \def\@cite@opt{, #1}%
7501 \@citedatax[{#1}]%
7502 }%
7503 }{}

```

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.

```
7504 \def\Hy@EveryPageAnchor{%
7505   \Hy@DistillerDestFix
7506   \ifHy@pageanchor
7507     \ifHy@hypertextnames
7508       \ifHy@plainpages
7509         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\the\c@page}}%
7510       \else
7511         \begingroup
7512           \let\@number\@firstofone
7513           \Hy@unicodedefalse
7514           \pdfstringdef\@the@H@page{\thepage}%
7515         \endgroup
7516         \def\Hy@TempPageAnchor{\hyper@@anchor{page.\@the@H@page}}%
7517       \fi
7518     \else
7519       \Hy@GlobalStepCount\Hy@pagecounter
7520       \def\Hy@TempPageAnchor{%
7521         \hyper@@anchor{page.\the\Hy@pagecounter}%
7522       }%
7523     \fi
7524   \vbox to 0pt{%
7525     \kern\voffset
7526     \kern\topmargin
7527     \kern-1bp\relax
7528     \hbox to 0pt{%
7529       \kern\hoffset
7530       \kern\ifodd\value{page}%
7531         \oddsidemargin
7532       \else
7533         \evensidemargin
7534       \fi
7535       \kern-1bp\relax
7536       \Hy@TempPageAnchor\relax
7537     \hss
7538   }%
7539   \vss
7540 }%
7541 \fi
7542 }
7543 \g@addto@macro\Hy@EveryPageBoxHook{%
7544   \Hy@EveryPageAnchor
7545 }
```

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.

```

7546 \def\addcontentsline#1#2#3{% toc extension, type, tag
7547 \begingroup
7548 \let\label\@gobble
7549 \ifx\@currentHref\@empty
7550 \Hy@Warning{%
7551   No destination for bookmark of \string\addcontentsline,%
7552   \MessageBreak destination is added%
7553 }%
7554 \phantomsection
7555 \fi
7556 \expandafter\ifx\csname toplevel@#2\endcsname\relax
7557 \begingroup
7558 \def\Hy@tempa{#1}%
7559 \ifx\Hy@tempa\Hy@bookmarkstype
7560 \Hy@WarningNoLine{%
7561   bookmark level for unknown #2 defaults to 0%
7562 }%
7563 \else
7564 \Hy@Info{bookmark level for unknown #2 defaults to 0}%
7565 \fi
7566 \endgroup
7567 \expandafter\gdef\csname toplevel@#2\endcsname{0}%
7568 \fi
7569 \edef\Hy@toplevel{\csname toplevel@#2\endcsname}%
7570 \Hy@writebookmark{\csname the#2\endcsname}%
7571 {#3}%
7572 {\@currentHref}%
7573 {\Hy@toplevel}%
7574 {#1}%
7575 \ifHy@verbose
7576 \begingroup
7577 \def\Hy@tempa{#3}%
7578 \@onelevel@sanitize\Hy@tempa
7579 \let\temp@online\on@line
7580 \let\on@line\@empty
7581 \Hy@Info{%
7582   bookmark\temp@online:\MessageBreak
7583   thecounter {\csname the#2\endcsname}\MessageBreak
7584   text {\Hy@tempa}\MessageBreak
7585   reference {\@currentHref}\MessageBreak
7586   toplevel {\Hy@toplevel}\MessageBreak
7587   type {#1}%
7588 }%
7589 \endgroup
7590 \fi
7591 \addtocontents{#1}{%
7592 \protect\contentsline{#2}{#3}{\thepage}{\@currentHref}%
7593 }%
7594 \endgroup
7595 }
7596 \def\contentsline#1#2#3#4{%
7597 \ifx\#4\%
7598 \csname l@#1\endcsname{#2}{#3}%
7599 \else
7600 \ifcase\Hy@linktoc % none
7601 \csname l@#1\endcsname{#2}{#3}%

```

```

7602 \or % section
7603 \csname l@#1\endcsname{%
7604 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7605 }{#3}%
7606 \or % page
7607 \csname l@#1\endcsname{#{#2}}{%
7608 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7609 }%
7610 \else % all
7611 \csname l@#1\endcsname{%
7612 \hyper@linkstart{link}{#4}{#2}\hyper@linkend
7613 }{#3}%
7614 \hyper@linkstart{link}{#4}{#3}\hyper@linkend
7615 }%
7616 \fi
7617 \fi
7618 }

7619 </package>
7620 <*check>
7621 \checklatex
7622 \checkcommand\def\addcontentsline#1#2#3{%
7623 \addtocontents{#1}{\protect\contentsline{#2}{#3}{\thepage}}%
7624 }
7625 \checkcommand\def\contentsline#1{\csname l@#1\endcsname}
7626 </check>
7627 <*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.

```

7628 \let\H@definecounter\@definecounter
7629 \def\@definecounter#1{%
7630 \H@definecounter{#1}%
7631 \expandafter\def\csname theH#1\endcsname{\arabic{#1}}%
7632 }

```

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.

```

7633 \let\H@newctr\@newctr
7634 \def\@newctr#1[#2]{%
7635 \H@newctr#1[{#2}]%
7636 \expandafter\def\csname theH#1\endcsname{%
7637 \csname the\@ifundefined{theH#2}{H}{H}#2\endcsname.\arabic{#1}%
7638 }%
7639 }

```

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.

```

7640 \ifpackageloaded{amsmath}{%
7641   \def\Hy@make@anchor{%
7642     \Hy@MakeCurrentHrefAuto{AMS}%
7643     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
7644   }%
7645   \def\Hy@make@df@tag@@#1{%
7646     \gdef\df@tag{%
7647       \maketag@@@{\Hy@make@anchor#1}%
7648       \def\@currentlabel{#1}%
7649     }%
7650   }%
7651   \def\Hy@make@df@tag@@@#1{%
7652     \gdef\df@tag{%
7653       \tagform@{\Hy@make@anchor#1}%
7654       \toks@{\xp{\p@equation{#1}}}%
7655       \edef\@currentlabel{the\toks@}%
7656     }%
7657   }%
7658   \let\HyOrg@make@df@tag@@\make@df@tag@@
7659   \let\HyOrg@make@df@tag@@@\make@df@tag@@@
7660   \let\make@df@tag@@\Hy@make@df@tag@@
7661   \let\make@df@tag@@@\Hy@make@df@tag@@@
7662 }{}

```

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

```

7663 \ifpackagewith{hyperref}{pdftex}{%
7664   \let\H@seteqlabel\@seteqlabel
7665   \def\@seteqlabel#1{%
7666     \H@seteqlabel{#1}%
7667     \xdef\@currentHref{AMS.the\Hy@linkcounter}%
7668     \Hy@raisedlink{%
7669       \hyper@anchorstart{\@currentHref}\hyper@anchorend
7670     }%
7671   }%
7672 }{}

```

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.

```

7673 \let\HyOrg@addtoreset\@addtoreset
7674 \def\@addtoreset#1#2{%
7675   \HyOrg@addtoreset{#1}{#2}%
7676   \expandafter\xdef\csname theH#1\endcsname{%
7677     \expandafter\noexpand

```

```

7678 \csname the\@ifundefined{theH#2}{H#2\endcsname
7679 .\noexpand\the\noexpand\value{#1}%
7680 }%
7681 }

```

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

```

7682 </package>
7683 <*check>
7684 \checkpackage{amsmath}[1999/12/14 - 2000/06/06]
7685 \checkcommand\newcommand{\numberwithin}[3][\arabic]{%
7686 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7687 \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7688 \addtoreset{#2}{#3}%
7689 \exp\xdef\csname the#2\endcsname{%
7690 \exp\xnx\csname the#3\endcsname .\@nx#1{#2}%
7691 }%
7692 }%
7693 }%
7694 }%
7695 </check>
7696 <*package>
7697 \@ifpackageloaded{amsmath}{%
7698 \@ifpackagelater{amsmath}{1999/12/14}{%
7699 \renewcommand*{\numberwithin}[3][\arabic]{%
7700 \@ifundefined{c@#2}{\@nocounterr{#2}}{%
7701 \@ifundefined{c@#3}{\@nocnterr{#3}}{%
7702 \HyOrg@addtoreset{#2}{#3}%
7703 \exp\xdef\csname the#2\endcsname{%
7704 \exp\xnx\csname the#3\endcsname .\@nx#1{#2}%
7705 }%
7706 \exp\xdef\csname theH#2\endcsname{%
7707 \exp\xnx
7708 \csname the\@ifundefined{theH#3}{H#3\endcsname
7709 .\@nx#1{#2}%
7710 }%
7711 }%
7712 }%
7713 }%
7714 }%
7715 \Hy@WarningNoLine{%
7716 \string\numberwithin\space of package 'amsmath' %
7717 only fixed\MessageBreak
7718 for version 2000/06/06 v2.12 or newer%
7719 }%
7720 }%
7721 }{}

```

42 Included figures

Simply intercept the low level graphics package macro.

```

7722 \ifHy@figures
7723 \let\Hy@Gin@setfile\Gin@setfile
7724 \def\Gin@setfile#1#2#3{%
7725 \hyperimage{#3}{\Hy@Gin@setfile{#1}{#2}{#3}}%
7726 }%

```



```

7727 \fi
7728 \Hy@DisableOption{hyperfigures}

```

43 hyperindex entries

Internal command names are prefixed with \HyInd@.

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

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

```

7729 \ifHy@hyperindex
7730 \def\HyInd@ParenLeft{({}%
7731 \def\HyInd@ParenRight{)}}%
7732 \def\hyperindexformat#1#2{%
7733 \let\HyOrg@hyperpage\hyperpage
7734 \let\hyperpage\@firstofone
7735 #1{\HyOrg@hyperpage{#2}}%
7736 \let\hyperpage\HyOrg@hyperpage
7737 }%
7738 \Hy@nextfalse
7739 \@ifpackageloaded{multind}{\Hy@nexttrue}{}%
7740 \@ifpackageloaded{index}{\Hy@nexttrue}{}%
7741 \@ifpackageloaded{amsmidx}{\Hy@nexttrue}{}%
7742 \begingroup
7743 \lccode'\|=\expandafter\HyInd@EncapChar\relax
7744 \lccode'\|=\|\\relax
7745 \lowercase{\endgroup
7746 \ifHy@next
7747 \let\HyInd@org@wrindex\@wrindex
7748 \def\@wrindex#1#2{\HyInd@@wrindex{#1}{#2}||\\}%
7749 \def\HyInd@@wrindex#1#2|#3|#4\\{%
7750 \ifx\\#3\\%
7751 \HyInd@org@wrindex{#1}{#2|hyperpage}%
7752 \else
7753 \HyInd@@@wrindex{#1}{#2}{#3}\\%
7754 \fi
7755 }%
7756 \def\HyInd@@@wrindex#1#2#3#4\\{%
7757 \def\Hy@temp@A{#3}%
7758 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7759 \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7760 \relax
7761 \HyInd@org@wrindex{#1}{%
7762 #2|hyperindexformat{/#3#4}%
7763 }%
7764 \else
7765 \ifx\\#4\\%
7766 \ifx\Hy@temp@A\HyInd@ParenRight
7767 \HyInd@org@wrindex{#1}{#2|#3}%
7768 \else
7769 \HyInd@org@wrindex{#1}{#2|#3hyperpage}%

```

```

7770         \fi
7771     \else
7772         \HyInd@org@wrindex{#1}{%
7773             #2|#3hyperindexformat{/#4}%
7774         }%
7775     \fi
7776 \fi
7777 }%
7778 \else
7779 \def\@wrindex#1{\@@wrindex#1||\}%
7780 \def\@@wrindex#1|#2|#3\{%
7781     \if@filesw
7782     \ifx\#2\%
7783         \protected@write\@indexfile{}\{%
7784             \string\indexentry{#1|hyperpage}{\thepage}%
7785         }%
7786     \else
7787         \HyInd@@@wrindex{#1}#2\%
7788     \fi
7789 \fi
7790 \endgroup
7791 \@esphack
7792 }%
7793 \def\HyInd@@@wrindex#1#2#3\{%
7794 \def\Hy@temp@A{#2}%
7795 \ifcase0\ifx\Hy@temp@A\HyInd@ParenLeft 1\fi
7796     \ifx\Hy@temp@A\HyInd@ParenRight 1\fi
7797     \relax
7798     \protected@write\@indexfile{}\{%
7799         \string\indexentry{%
7800             #1|hyperindexformat{/#2#3}%
7801         }\thepage}%
7802     }%
7803 \else
7804     \ifx\#3\%
7805         \ifx\Hy@temp@A\HyInd@ParenRight
7806             \protected@write\@indexfile{}\{%
7807                 \string\indexentry{#1|#2}{\thepage}%
7808             }%
7809         \else
7810             \protected@write\@indexfile{}\{%
7811                 \string\indexentry{#1|#2hyperpage}{\thepage}%
7812             }%
7813         \fi
7814     \else
7815         \protected@write\@indexfile{}\{%
7816             \string\indexentry{%
7817                 #1|#2hyperindexformat{/#3}%
7818             }\thepage}%
7819         }%
7820     \fi
7821 \fi
7822 }%
7823 \fi
7824 }%
7825 \fi
7826 \Hy@DisableOption{hyperindex}

```

```
7827 \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.

```
7828 \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.

```
7829 \def\hyperpage#1{%
7830   \HyInd@hyperpage#1\nohyperpage{}\@nil
7831 }
7832 \def\HyInd@hyperpage#1\nohyperpage#2#3\@nil{%
7833   \HyInd@@hyperpage{#1}%
7834   #2%
7835   \def\Hy@temp{#3}%
7836   \ifx\Hy@temp\@empty
7837   \else
7838     \Hy@ReturnAfterFi{%
7839       \HyInd@hyperpage#3\@nil
7840     }%
7841   \fi
7842 }
7843 \def\HyInd@@hyperpage#1{\@hyperpage#1----\}
7844 \def\@hyperpage#1--#2--#3\{\%
7845   \ifx\#2\%
7846     \@commahyperpage{#1}%
7847   \else
7848     \HyInd@pagelink{#1}--\HyInd@pagelink{#2}%
7849   \fi
7850 }
7851 \def\@commahyperpage#1{\@commahyperpage#1, \}
7852 \def\@commahyperpage#1, #2,#3\{\%
7853   \ifx\#2\%
7854     \HyInd@pagelink{#1}%
7855   \else
7856     \HyInd@pagelink{#1}, \HyInd@pagelink{#2}%
7857   \fi
7858 }
```

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

```
7859 \def\HyInd@pagelink#1{%
7860   \begingroup
7861   \toks@={}%
7862   \HyInd@removespaces#1 \@nil
7863   \endgroup
7864 }
7865 \def\HyInd@removespaces#1 #2\@nil{%
7866   \toks@=\expandafter\the\toks@#1}%
7867   \ifx\#2\%
7868     \edef\x{\the\toks@}%
7869     \ifx\x\@empty
7870     \else
7871       \hyperlink{page.\the\toks@}{\the\toks@}%
7872     \fi
7873   \else
7874     \Hy@ReturnAfterFi{%
```

```

7875 \HyInd@removespaces#2\@nil
7876 }%
7877 \fi
7878 }

```

44 Compatibility with foiltex

```

7879 \@ifclassloaded{foils}{%
7880 \providecommand*\ext@table{lot}%
7881 \providecommand*\ext@figure{lof}%
7882 }{}

```

45 Compatibility with seminar slide package

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

```

7883 \@ifclassloaded{seminar}{%
7884 \Hy@seminarslidestrue\newcommand\theHslide{\arabic{slide}}}%
7885 }{%
7886 \Hy@seminarslidesfalse
7887 }
7888 \@ifpackageloaded{slidesec}{%
7889 \newcommand\theHslidesection {\arabic{slidesection}}}%
7890 \newcommand\theHslidesubsection{%
7891 \theHslidesection.\arabic{slidesubsection}}%
7892 }%
7893 \def\slide@heading[#1]#2{%
7894 \H@refstepcounter{slidesection}%
7895 \@addtoreset{slidesubsection}{slidesection}%
7896 \addtocontents{los}{%
7897 \protect\l@slide{\the\c@slidesection}{\ignorespaces#1}}%
7898 {\@SCTR}{slideheading.\theslidesection}}%
7899 }%
7900 \def\Hy@tempa{#2}%
7901 \ifx\Hy@tempa\@empty
7902 \else
7903 {%
7904 \edef\@currentlabel{%
7905 \csname p@slidesection\endcsname\theslidesection
7906 }%
7907 \makeslideheading{#2}%
7908 }%
7909 \fi
7910 \gdef\theslideheading{#1}%
7911 \gdef\theslidesubheading{}%
7912 \ifHy@bookmarksnumbered
7913 \def\Hy@slidetitle{\theslidesection\space #1}%
7914 \else
7915 \def\Hy@slidetitle{#1}%
7916 \fi
7917 \ifHy@hypertextnames
7918 \ifHy@naturalnames
7919 \hyper@{anchor}{slideheading.\theslidesection}{\relax}%
7920 \Hy@writebookmark
7921 {\theslidesection}%
7922 {\Hy@slidetitle}%

```

```

7923         {slideheading.\theslidesection}%
7924         {1}%
7925         {toc}%
7926     \else
7927         \hyper@@anchor{slideheading.\theHslidesection}{\relax}%
7928         \Hy@writebookmark
7929         {\theslidesection}%
7930         {\Hy@slidetitle}%
7931         {slideheading.\theHslidesection}%
7932         {1}%
7933         {toc}%
7934     \fi
7935 \else
7936     \Hy@GlobalStepCount\Hy@linkcounter
7937     \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7938     \Hy@writebookmark
7939     {\theslidesection}%
7940     {\Hy@slidetitle}%
7941     {slideheading.\the\Hy@linkcounter}%
7942     {1}%
7943     {toc}%
7944 \fi
7945 }%
7946 \def\slide@subheading[#1]#2{%
7947     \H@refstepcounter{slidesubsection}%
7948     \addtocontents{los}{%
7949         \protect\l@subslide{\the\c@slidesubsection}{\ignorespaces#1}%
7950         {\@SCTR}{slideheading.\theslidesubsection}%
7951     }%
7952 \def\Hy@tempa{#2}%
7953 \ifx\Hy@tempa\@empty
7954 \else
7955     {%
7956         \edef\@currentlabel{%
7957             \csname p@slidesubsection\endcsname\theslidesubsection
7958         }%
7959         \makeslidesubheading{#2}%
7960     }%
7961 \fi
7962 \gdef\theslidesubheading{#1}%
7963 \ifHy@bookmarksnumbered
7964     \def\Hy@slidetitle{\theslidesubsection\space #1}%
7965 \else
7966     \def\Hy@slidetitle{#1}%
7967 \fi
7968 \ifHy@hypertextnames
7969     \ifHy@naturalnames
7970         \hyper@@anchor{slideheading.\theslidesubsection}{\relax}%
7971         \Hy@writebookmark
7972         {\theslidesubsection}%
7973         {\Hy@slidetitle}%
7974         {slideheading.\theslidesubsection}%
7975         {2}%
7976         {toc}%
7977     \else
7978         \hyper@@anchor{slideheading.\theHslidesubsection}{\relax}%
7979         \Hy@writebookmark

```

```

7980     {\theslidesubsection}%
7981     {\Hy@slidetitle}%
7982     {slideheading.\theHslidesubsection}%
7983     {2}%
7984     {toc}%
7985   \fi
7986 \else
7987   \Hy@GlobalStepCount\Hy@linkcounter
7988   \hyper@@anchor{slideheading.\the\Hy@linkcounter}{\relax}%
7989   \Hy@writebookmark
7990     {\theslidesubsection}%
7991     {\Hy@slidetitle}%
7992     {slideheading.\the\Hy@linkcounter}%
7993     {1}%
7994     {toc}%
7995   \fi
7996 }%
7997 \providecommand*{\listslidenam}{List of Slides}%
7998 \def\listofslides{%
7999   \section*{%
8000     \listslidenam
8001     \@mkboth{%
8002       \expandafter\MakeUppercase\listslidenam
8003     }{%
8004       \expandafter\MakeUppercase\listslidenam
8005     }%
8006   }%
8007   \def\l@slide##1##2##3##4{%
8008     \slide@undottedcline{%
8009       \slidenumberline{##3}{\hyperlink{##4}{##2}}%
8010     }{%
8011     }%
8012     \let\l@subslide\l@slide
8013     \@startlos
8014   }%
8015   \def\slide@contents{%
8016     \def\l@slide##1##2##3##4{%
8017       \slide@ccline{\slidenumberline{##3}{\hyperlink{##4}{##2}}}{##3}%
8018     }%
8019     \let\l@subslide\@gobblefour
8020     \@startlos
8021   }%
8022   \def\Slide@contents{%
8023     \def\l@slide##1##2##3##4{%
8024       \ifcase\lslide@flag
8025         \message{##1 ** \the\c@slidesection}%
8026         \ifnum##1>\c@slidesection
8027           \def\lslide@flag{1}%
8028         {%
8029           \large
8030           \slide@ccline{%
8031             \slidenumberline{$\Rightarrow\bullet$}%
8032             {\hyperlink{##4}{##2}}%
8033           }{##3}%
8034         }%
8035       \else
8036         {%

```

```

8037         \large
8038         \slide@cline{%
8039             \slidenumberline{$\surd\;\bullet$}%
8040             {\hyperlink{##4}{##2}}%
8041             }{##3}%
8042     }%
8043     \fi
8044     \or
8045     \def\lslide@flag{2}%
8046     {%
8047         \large
8048         \slide@cline{%
8049             \slidenumberline{$\bullet$}%
8050             {\hyperlink{##4}{##2}}%
8051             }{##3}%
8052     }%
8053     \or
8054     {%
8055         \large
8056         \slide@cline{%
8057             \slidenumberline{$\bullet$}%
8058             {\hyperlink{##4}{##2}}%
8059             }{##3}%
8060     }%
8061     \fi
8062 }%
8063 \def\l@subslide##1##2##3##4{%
8064     \ifnum\lslide@flag=1 %
8065         \@undottedtocline{2}{3.8em}{3.2em}{\hyperlink{##4}{##2}}{}%
8066     \fi
8067 }%
8068 \def\lslide@flag{0}%
8069 \@startlos
8070 }%
8071 }{}

```

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.)

```

8072 \ifHy@texht
8073     \expandafter\endinput
8074 \fi
8075 \let\real@setref\@setref
8076 \def\@setref#1#2#3{% csname, extract group, refname
8077     \ifx#1\relax
8078         \protect\G@refundefinedtrue
8079         \nfss@text{\reset@font\bfseries ??}%
8080         \@latex@warning{%
8081             Reference ‘#3’ on page \thepage \space undefined%
8082         }%
8083     \else
8084         \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
8085     \fi
8086 }

```

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

```

8087 \def\Hy@setref@link#1#2#3#4#5#6\@nil#7{%

```

```

8088 \begingroup
8089 \toks0={\hyper@@link{#5}{#4}}%
8090 \toks1=\expandafter{#7{#1}{#2}{#3}{#4}{#5}}%
8091 \edef\x{\endgroup
8092 \the\toks0 \the\toks1 }%
8093 }%
8094 \x
8095 }
8096 \def\@pagesetref#1#2#3{% csname, extract macro, ref
8097 \ifx#1\relax
8098 \protect\G@refundefinedtrue
8099 \nfss@text{\reset@font\bfseries ??}%
8100 \@latex@warning{%
8101 Reference '#3' on page \thepage \space undefined%
8102 }%
8103 \else
8104 \protect\hyper@@link
8105 {\expandafter\@fifthoffive#1}%
8106 {page.\expandafter\@secondoffive#1}%
8107 {\expandafter\@secondoffive#1}%
8108 \fi
8109 }
8110 </package>
8111 <*check>
8112 \checklatex
8113 \checkcommand\def\@setref#1#2#3{%
8114 \ifx#1\relax
8115 \protect\G@refundefinedtrue
8116 \nfss@text{\reset@font\bfseries ??}%
8117 \@latex@warning{%
8118 Reference '#3' on page \thepage\space undefined%
8119 }%
8120 \else
8121 \expandafter#2#1\null
8122 \fi
8123 }
8124 </check>
8125 <*package>

```

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

```

8126 \def\HyRef@StarSetRef#1{%
8127 \begingroup
8128 \Hy@safe@activetrue
8129 \edef\x{#1}%
8130 \@onelevel@sanitize\x
8131 \edef\x{\endgroup
8132 \noexpand\HyRef@@StarSetRef
8133 \expandafter\noexpand\csname r@\x\endcsname{\x}%
8134 }%
8135 \x
8136 }
8137 \def\HyRef@@StarSetRef#1#2#3{%
8138 \ifx#1\@undefined
8139 \let#1\relax
8140 \fi
8141 \real@setref#1#3{#2}%

```



```

8142 }
8143 \def\@refstar#1{%
8144   \HyRef@StarSetRef{#1}\@firstoffive
8145 }
8146 \def\@pagerefstar#1{%
8147   \HyRef@StarSetRef{#1}\@secondoffive
8148 }
8149 \def\@namerefstar#1{%
8150   \HyRef@StarSetRef{#1}\@thirdoffive
8151 }
8152 \Hy@AtBeginDocument{%
8153   \@ifpackageloaded{varioref}{%
8154     \def\@Refstar#1{%
8155       \HyRef@StarSetRef{#1}\HyRef@MakeUppercaseFirstOfFive
8156     }%
8157     \def\HyRef@MakeUppercaseFirstOfFive#1#2#3#4#5{%
8158       \MakeUppercase#1%
8159     }%
8160     \DeclareRobustCommand*\@Ref*{%
8161       \@ifstar\@Refstar\HyRef@Ref
8162     }%
8163     \def\HyRef@Ref#1{%
8164       \hyperref[{#1}]{\@Ref*{#1}}%
8165     }%
8166     \def\@Vr@f#1{%
8167       \leavevmode\unskip\vref@space
8168       \hyperref[{#1}]{%
8169         \@Ref*{#1}%
8170         \let\vref@space\nobreakspace
8171         \@vpageref[\unskip]{#1}%
8172       }%
8173     }%
8174     \def\@Vr@f#1{%
8175       \leavevmode\unskip\vref@space
8176       \begingroup
8177         \let\T@pageref\@pagerefstar
8178         \hyperref[{#1}]{%
8179           \@Ref*{#1}%
8180           \vpageref[\unskip]{#1}%
8181         }%
8182       \endgroup
8183     }%
8184   }{}%
8185 }
8186 \DeclareRobustCommand*\@autopageref{%
8187   \@ifstar{%
8188     \HyRef@autopagerefname\pageref*%
8189   }\HyRef@autopageref
8190 }
8191 \def\HyRef@autopageref#1{%
8192   \hyperref[{#1}]{\HyRef@autopagerefname\pageref*{#1}}%
8193 }
8194 \def\HyRef@autopagerefname{%
8195   \ltx@ifundefined{pageautorefname}{%
8196     \ltx@ifundefined{pagename}{%
8197       \Hy@Warning{No autoref name for ‘page’}%
8198     }{%

```

```

8199 \pagename\nobreakspace
8200 }%
8201 }{%
8202 \pageautorefname\nobreakspace
8203 }%
8204 }
8205 \DeclareRobustCommand*{\autoref}{%
8206 \@ifstar{\HyRef@autoref@gobbletwo}{\HyRef@autoref\hyper@@link}%
8207 }
8208 \def\HyRef@autoref#1#2{%
8209 \begingroup
8210 \Hy@safe@activetrue
8211 \expandafter\HyRef@autosetref\csname r@#2\endcsname{#2}{#1}%
8212 \endgroup
8213 }
8214 \def\HyRef@autosetref#1#2#3{% link command, csname, refname
8215 \HyRef@ShowKeysRef{#2}%
8216 \ifcase 0\ifx#1\relax 1\fi\ifx#1\Hy@varioref@undefined 1\fi\relax
8217 \edef\HyRef@thisref{%
8218 \expandafter\@fourthoffive#1\@empty\@empty\@empty
8219 }%
8220 \expandafter\HyRef@testreftype\HyRef@thisref.\.%
8221 \Hy@safe@activesfalse
8222 #3{%
8223 \expandafter\@fifthoffive#1\@empty\@empty\@empty
8224 }{%
8225 \expandafter\@fourthoffive#1\@empty\@empty\@empty
8226 }{%
8227 \HyRef@currentHtag
8228 \expandafter\@firstoffive#1\@empty\@empty\@empty
8229 \null
8230 }%
8231 \else
8232 \protect\G@refundefinedtrue
8233 \nfss@text{\reset@font\bfseries ??}%
8234 \@latex@warning{%
8235 Reference '#2' on page \thepage\space undefined%
8236 }%
8237 \fi
8238 }
8239 \def\HyRef@testreftype#1.#2\{\%
8240 \ltx@ifundefined{#1autorefname}{%
8241 \ltx@ifundefined{#1name}{%
8242 \HyRef@StripStar#1\*\@nil{#1}%
8243 \ltx@ifundefined{\HyRef@name autorefname}{%
8244 \ltx@ifundefined{\HyRef@name name}{%
8245 \def\HyRef@currentHtag{}%
8246 \Hy@Warning{No autoref name for '#1'}%
8247 }{%
8248 \edef\HyRef@currentHtag{%
8249 \expandafter\noexpand\csname\HyRef@name name\endcsname
8250 \noexpand~%
8251 }%
8252 }%
8253 }{%
8254 \edef\HyRef@currentHtag{%
8255 \expandafter\noexpand

```

```

8256     \csname\HyRef@name autorefname\endcsname
8257     \noexpand~%
8258   }%
8259 }%
8260 }{%
8261   \edef\HyRef@currentHtag{%
8262     \expandafter\noexpand\csname#1name\endcsname
8263     \noexpand~%
8264   }%
8265 }%
8266 }{%
8267   \edef\HyRef@currentHtag{%
8268     \expandafter\noexpand\csname#1autorefname\endcsname
8269     \noexpand~%
8270   }%
8271 }%
8272 }
8273 \def\HyRef@StripStar#1*\#2\@nil#3{%
8274   \def\HyRef@name{#2}%
8275   \ifx\HyRef@name\HyRef@CaseStar
8276     \def\HyRef@name{#1}%
8277   \else
8278     \def\HyRef@name{#3}%
8279   \fi
8280 }
8281 \def\HyRef@CaseStar{*\\}
8282 \def\HyRef@currentHtag{

```

Support for package showkeys.

\HyRef@ShowKeysRef

```

8283 \let\HyRef@ShowKeysRef\@gobble
8284 \def\HyRef@ShowKeysInit{%
8285   \begingroup\expandafter\expandafter\expandafter\endgroup
8286   \expandafter\ifx\csname SK@@label\endcsname\relax
8287   \else
8288     \ifx\SK@ref\@empty
8289     \else
8290       \def\HyRef@ShowKeysRef{%
8291         \SK@\SK@@ref
8292       }%
8293     \fi
8294   \fi
8295 }
8296 \@ifpackageloaded{showkeys}{%
8297   \HyRef@ShowKeysInit
8298 }{%
8299   \Hy@AtBeginDocument{%
8300     \@ifpackageloaded{showkeys}{%
8301       \HyRef@ShowKeysInit
8302     }{}%
8303   }%
8304 }

```

Defaults for the names that \autoref uses.

```

8305 \providecommand*\AMSautorefname{\equationautorefname}
8306 \providecommand*\Hfootnoteautorefname{\footnoteautorefname}
8307 \providecommand*\Itemautorefname{\itemautorefname}

```

```

8308 \providecommand*\itemautorefname{item}
8309 \providecommand*\equationautorefname{Equation}
8310 \providecommand*\footnoteautorefname{footnote}
8311 \providecommand*\itemautorefname{item}
8312 \providecommand*\figureautorefname{Figure}
8313 \providecommand*\tableautorefname{Table}
8314 \providecommand*\partautorefname{Part}
8315 \providecommand*\appendixautorefname{Appendix}
8316 \providecommand*\chapterautorefname{chapter}
8317 \providecommand*\sectionautorefname{section}
8318 \providecommand*\subsectionautorefname{subsection}
8319 \providecommand*\subsubsectionautorefname{subsubsection}
8320 \providecommand*\paragraphautorefname{paragraph}
8321 \providecommand*\subparagraphautorefname{subparagraph}
8322 \providecommand*\FancyVerbLineautorefname{line}
8323 \providecommand*\theoremautorefname{Theorem}
8324 \providecommand*\pageautorefname{page}
8325 \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 pdfTeX offers `\pdfescapestring`.

```

8326 <*pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>
8327 \RequirePackage{pdfTeXcmds}[2009/04/10]
8328 \begingroup\expandafter\expandafter\expandafter\endgroup
8329 \expandafter\ifx\csname pdf@escapestring\endcsname\relax
8330 \begingroup
8331 \catcode'\=0 %
8332 \@makeother\%
8333 |@firstofone{|endgroup
8334 |def|Hy@pstringdef#1#2{%
8335 |begingroup
8336 |edef~{|string~}%
8337 |xdef|Hy@gtemp{#2}%
8338 |endgroup
8339 |let#1|Hy@gtemp
8340 |@onelevel@sanitize#1%
8341 |edef#1{|expandafter|Hy@ExchangeBackslash#1\|@nil}%
8342 |edef#1{|expandafter|Hy@ExchangeLeftParenthesis#1(|@nil}%
8343 |edef#1{|expandafter|Hy@ExchangeRightParenthesis#1)|@nil}%
8344 }%
8345 |def|Hy@ExchangeBackslash#1\#2|@nil{%
8346 #1%
8347 |ifx|\#2|\%%
8348 |else
8349 \\\%
8350 |Hy@ReturnAfterFi{%
8351 |Hy@ExchangeBackslash#2|@nil

```

```

8352     }%
8353     |fi
8354   }%
8355 }%
8356 \def\Hy@ExchangeLeftParenthesis#1(#2\@nil{%
8357   #1%
8358   \ifx\#2\%
8359   \else
8360     \@backslashchar(%
8361     \Hy@ReturnAfterFi{%
8362       \Hy@ExchangeLeftParenthesis#2\@nil
8363     }%
8364   \fi
8365 }%
8366 \def\Hy@ExchangeRightParenthesis#1)#2\@nil{%
8367   #1%
8368   \ifx\#2\%
8369   \else
8370     \@backslashchar)%
8371     \Hy@ReturnAfterFi{%
8372       \Hy@ExchangeRightParenthesis#2\@nil
8373     }%
8374   \fi
8375 }%
8376 \else
8377 \def\Hy@pstringdef#1#2{%
8378   \begingroup
8379   \edef~{\string~}%
8380   \xdef\Hy@gtemp{\pdf@escapestring{#2}}%
8381   \endgroup
8382   \let#1\Hy@gtemp
8383 }%
8384 \fi
8385 </pdfTeX | dvipdfm | xetex | vtex | pdfmarkbase | dviwindo>

```

46.2 pdfTeX

```

8386 <*pdfTeX>
8387 \providecommand*{\XR@ext}{pdf}
8388 \Hy@setbreaklinks{true}
8389 \def\HyPat@ObjRef{%
8390   [0-9]*[1-9][0-9]* 0 R%
8391 }

```

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

Set PDF version if requested by option `pdfversion`.

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

```

8392 \let\Hy@pdfminorversion\relax
8393 \begingroup\expandafter\expandafter\expandafter\endgroup
8394 \expandafter\ifx\cname pdfminorversion\endcsname\relax
8395 \begingroup\expandafter\expandafter\expandafter\endgroup
8396 \expandafter\ifx\cname pdfoptionpdfminorversion\endcsname\relax
8397 \else

```

```

8398 \def\Hy@pdfminorversion{\pdfoptionpdfminorversion}%
8399 \fi
8400 \else
8401 \def\Hy@pdfminorversion{\pdfminorversion}%
8402 \fi
8403 \@ifundefined{Hy@pdfminorversion}{%
8404 \PackageInfo{hyperref}{%
8405 PDF version is not set, because pdfTeX is too old (<1.10a)%
8406 }%
8407 }{%
8408 \ifHy@ocgcolorlinks
8409 \ifnum\Hy@pdfminorversion<5 %
8410 \kvsetkeys{Hyp}{pdfversion=1.5}%
8411 \fi
8412 \fi
8413 \ifHy@setpdfversion
8414 \ifnum\Hy@pdfminorversion=\Hy@pdfversion\relax
8415 \else
8416 \Hy@pdfminorversion=\Hy@pdfversion\relax
8417 \fi
8418 \PackageInfo{hyperref}{%
8419 \expandafter\string\Hy@pdfminorversion
8420 :=\number\Hy@pdfversion\space
8421 }%
8422 \fi
8423 \edef\Hy@pdfversion{\number\Hy@pdfminorversion}%
8424 }
8425 \Hy@DisableOption{pdfversion}%

8426 \ifHy@ocgcolorlinks
8427 \immediate\pdfobj{%
8428 <<%
8429 /Type/OCG%
8430 /Name(View)%
8431 /Usage<<%
8432 /Print<<%
8433 /PrintState/OFF%
8434 >>%
8435 /View<<%
8436 /ViewState/ON%
8437 >>%
8438 >>%
8439 >>%
8440 }%
8441 \edef\OBJ@OCG@view{\the\pdflastobj\space 0 R}%
8442 \immediate\pdfobj{%
8443 <<%
8444 /Type/OCG%
8445 /Name(Print)%
8446 /Usage<<%
8447 /Print<<%
8448 /PrintState/ON%
8449 >>%
8450 /View<<%
8451 /ViewState/OFF%
8452 >>%
8453 >>%
8454 >>%

```

```

8455 }%
8456 \edef\OBJ@OCG@print{\the\pdflastobj\space 0 R}%
8457 \immediate\pdfobj{%
8458   [%
8459     \OBJ@OCG@view\space\OBJ@OCG@print
8460   ]%
8461 }%
8462 \edef\OBJ@OCGs{\the\pdflastobj\space 0 R}%
8463 \pdfcatalog{%
8464   /OCProperties<<%
8465     /OCGs \OBJ@OCGs
8466   /D<<%
8467     /OFF[\OBJ@OCG@print]%
8468     /AS[%
8469       <<%
8470         /Event/View%
8471         /OCGs \OBJ@OCGs
8472         /Category[/View]%
8473       >>%
8474       <<%
8475         /Event/Print%
8476         /OCGs \OBJ@OCGs
8477         /Category[/Print]%
8478       >>%
8479       <<%
8480         /Event/Export%
8481         /OCGs \OBJ@OCGs
8482         /Category[/Print]%
8483       >>%
8484     ]%
8485   >>%
8486 >>%
8487 }%
8488 \begingroup
8489 \edef\x{\endgroup
8490   \pdfpageresources{%
8491     /Properties<<%
8492       /OCView \OBJ@OCG@view
8493       /OCPrint \OBJ@OCG@print
8494     >>%
8495   }%
8496 }%
8497 \x
8498 \Hy@AtBeginDocument{%
8499   \def\Hy@colorlink#1{%
8500     \begingroup
8501       \ifHy@ocgcolorlinks
8502         \def\Hy@ocgcolor{#1}%
8503         \setbox0=\hbox\bgroup\color@begingroup
8504       \else
8505         \HyColor@UseColor#1%
8506       \fi
8507     }%
8508   \def\Hy@endcolorlink{%
8509     \ifHy@ocgcolorlinks
8510       \color@endgroup\egroup
8511     \mbox{%

```

```

8512 \pdfliteral page{/OC/OCPrint BDC}%
8513 \rlap{\copy0}%
8514 \pdfliteral page{EMC/OC/OCView BDC}%
8515 \begingroup
8516 \expandafter\HyColor@UseColor\Hy@ocgcolor
8517 \box0 %
8518 \endgroup
8519 \pdfliteral page{EMC}%
8520 }%
8521 \fi
8522 \endgroup
8523 }%
8524 }%
8525 \else
8526 \Hy@DisableOption{ocgcolorlinks}%
8527 \fi

```

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

```

8528 \def\setpdfinkmargin#1{\pdfinkmargin#1}
8529 \ifx\pdfstartlink\@undefined% less than version 14
8530 \let\pdfstartlink\pdfannotlink
8531 \let\pdfinkmargin\@tempdima
8532 \let\pdfxform\pdfform
8533 \let\pdflastxform\pdflastform
8534 \let\pdfrefxform\pdfrefform
8535 \else
8536 \pdfinkmargin1pt %
8537 \fi

```

First set up the default linking

```

8538 \providecommand*\@pdfview{XYZ}

```

First define the anchors:

```

8539 \Hy@WrapperDef\new@pdfink#1{%
8540 \ifhmode
8541 \@savs\spacefactor
8542 \fi
8543 \Hy@SaveLastskip
8544 \Hy@VerboseAnchor{#1}%
8545 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
8546 \Hy@DestName\Hy@pstringDest\@pdfview
8547 \Hy@RestoreLastskip
8548 \ifhmode
8549 \spacefactor\@savs
8550 \fi
8551 }
8552 \let\pdf@endanchor\@empty

```

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

```

8553 \def\Hy@DestName#1#2{%
8554 \pdfdest name{#1}#2\relax
8555 }

```

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.


```

8556 \providecommand*\@pdfborder{0 0 1}
8557 \providecommand*\@pdfborderstyle{}
8558 \def\Hy@undefinedname{UNDEFINED}
8559 \def\find@pdflink#1#2{%
8560   \leavevmode
8561   \protected@edef\Hy@testname{#2}%
8562   \ifx\Hy@testname\@empty
8563     \Hy@Warning{%
8564       Empty destination name,\MessageBreak
8565       using '\Hy@undefinedname'%
8566     }%
8567     \let\Hy@testname\Hy@undefinedname
8568   \else
8569     \Hy@pstringdef\Hy@testname{%
8570       \expandafter\HyperDestNameFilter\expandafter{\Hy@testname}%
8571     }%
8572   \fi
8573   \Hy@StartlinkName{%
8574     \ifHy@pdfa /F 4\fi
8575     \Hy@setpdfborder
8576     \ifx\@pdfhighlight\@empty
8577     \else
8578       /H\@pdfhighlight
8579     \fi
8580     \ifx\CurrentBorderColor\relax
8581     \else
8582       /C\CurrentBorderColor]%
8583   \fi
8584 } \Hy@testname
8585 \expandafter\Hy@colorlink\csname @#1color\endcsname
8586 }
8587 \def\Hy@StartlinkName#1#2{%
8588   \pdfstartlink attr{#1}goto name{#2}\relax
8589 }
8590 \def\close@pdflink{%
8591   \Hy@endcolorlink
8592   \Hy@VerboseLinkStop
8593   \pdfendlink
8594 }
8595 \def\hyper@anchor#1{%
8596   \new@pdflink{#1}\anchor@spot\pdf@endanchor
8597 }
8598 \def\hyper@anchorstart#1{%
8599   \new@pdflink{#1}%
8600   \Hy@activeanchortrue
8601 }
8602 \def\hyper@anchorend{%
8603   \pdf@endanchor
8604   \Hy@activeanchorfalse
8605 }
8606 \def\hyper@linkstart#1#2{%
8607   \Hy@VerboseLinkStart{#1}{#2}%
8608   \ltx@ifundefined{@#1bordercolor}{%
8609     \let\CurrentBorderColor\relax
8610   }{%
8611     \edef\CurrentBorderColor{\csname @#1bordercolor\endcsname}%
8612   }%

```

```

8613 \find@pdfink{#1}{#2}%
8614 }
8615 \def\hyper@linkend{\close@pdfink}
8616 \def\hyper@link#1#2#3{%
8617 \Hy@VerboseLinkStart{#1}{#2}%
8618 \ltx@ifundefined{#@#1bordercolor}{%
8619 \let\CurrentBorderColor\relax
8620 }{%
8621 \edef\CurrentBorderColor{\csname #@#1bordercolor\endcsname}%
8622 }%
8623 \find@pdfink{#1}{#2}#3%
8624 \close@pdfink
8625 }
8626 \let\CurrentBorderColor\@linkbordercolor
8627 \def\hyper@linkurl#1#2{%
8628 \begingroup
8629 \Hy@pstringdef\Hy@pstringURI{#2}%
8630 \hyper@chars
8631 \leavevmode
8632 \pdfstartlink
8633 attr{%
8634 \Hy@setpdfborder
8635 \ifx\@pdfnhighlight\@empty
8636 \else
8637 /H\@pdfhighlight
8638 \fi
8639 \ifx\@urlbordercolor\relax
8640 \else
8641 /C[\@urlbordercolor]%
8642 \fi
8643 }%
8644 user{%
8645 /Subtype/Link%
8646 \ifHy@pdfa /F 4\fi
8647 /A<<%
8648 /Type/Action%
8649 /S/URI%
8650 /URI(\Hy@pstringURI)%
8651 \ifHy@href@ismap
8652 /IsMap true%
8653 \fi
8654 \Hy@href@nextactionraw
8655 >>%
8656 }%
8657 \relax
8658 \Hy@colorlink\@urlcolor#1%
8659 \close@pdfink
8660 \endgroup
8661 }
8662 \def\hyper@linkfile#1#2#3{% anchor text, filename, linkname
8663 \begingroup
8664 \def\Hy@pstringF{#2}%
8665 \Hy@CleanupFile\Hy@pstringF
8666 \Hy@pstringdef\Hy@pstringF\Hy@pstringF
8667 \Hy@pstringdef\Hy@pstringD{#3}%
8668 \Hy@MakeRemoteAction
8669 \leavevmode

```

```

8670 \pdfstartlink
8671   attr{%
8672     \Hy@setpdfborder
8673     \ifx\@pdfhighlight\@empty
8674     \else
8675       /H\@pdfhighlight
8676     \fi
8677     \ifx\@filebordercolor\relax
8678     \else
8679       /C[\@filebordercolor]%
8680     \fi
8681   }%
8682   user {%
8683     /Subtype/Link%
8684     \ifHy@pdfa /F 4\fi
8685     /A<<%
8686     /F(\Hy@pstringF)%
8687     /S/GoToR%
8688     \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}

```

```

8689   \ifx\|#3\%
8690     /D[\Hy@href@page\@pdfremotestartview]%
8691   \else
8692     /D(\Hy@pstringD)%
8693   \fi
8694   \Hy@href@nextactionraw
8695   >>%
8696   }%
8697   \relax
8698   \Hy@colorlink\@filecolor#1%
8699   \close@pdfink
8700 \endgroup
8701 }
8702 \def\@hyper@launch run:#1\|#2#3{% filename, anchor text linkname
8703   \begingroup
8704     \Hy@pstringdef\Hy@pstringF{#1}%
8705     \Hy@pstringdef\Hy@pstringP{#3}%
8706     \leavevmode
8707     \pdfstartlink
8708       attr{%
8709         \Hy@setpdfborder
8710         \ifx\@pdfhighlight\@empty
8711         \else
8712           /H\@pdfhighlight
8713         \fi
8714         \ifx\@runbordercolor\relax
8715         \else

```

```

8716      /C[\@runbordercolor]%
8717      \fi
8718    }%
8719    user {%
8720      /Subtype/Link%
8721      \ifHy@pdfa /F 4\fi
8722      /A<<%
8723      /F(\Hy@pstringF)%
8724      /S/Launch%
8725      \Hy@SetNewWindow
8726      \ifx\#3\%
8727      \else
8728      /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
8729      \fi
8730      \Hy@href@nextactionraw
8731      >>%
8732    }%
8733    \relax
8734    \Hy@colorlink\@runcolor#2%
8735    \close@pdflink
8736  \endgroup
8737 }

```

\@pdfproducer

```

8738 \ifx\@pdfproducer\relax
8739 \begingroup\expandafter\expandafter\expandafter\endgroup
8740 \expandafter\ifx\csname luatexversion\endcsname\relax
8741 \def\@pdfproducer{pdfTeX}%
8742 \ifx\TeXversion\@undefined
8743 \else
8744 \ifx\TeXversion\relax
8745 \else
8746 \ifnum\TeXversion>0 %
8747 \def\@pdfproducer{pdfTeX}%
8748 \fi
8749 \fi
8750 \fi
8751 \ifx\pdfTeXversion\@undefined
8752 \else
8753 \ifnum\pdfTeXversion<100 %
8754 \edef\@pdfproducer{%
8755 \@pdfproducer
8756 \the\pdfTeXversion.\pdfTeXrevision
8757 }%
8758 \else
8759 \ifnum\pdfTeXversion<130 %
8760 \edef\@pdfproducer{%
8761 \@pdfproducer-
8762 \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8763 \expandafter\@cdr\the\pdfTeXversion\@empty\@nil
8764 \pdfTeXrevision
8765 }%
8766 \else
8767 \ifnum\pdfTeXversion<140 %
8768 \else
8769 \def\@pdfproducer{pdfTeX}%
8770 \fi

```

```

8771     \edef\@pdfproducer{%
8772       \@pdfproducer-%
8773       \expandafter\@car\the\pdfTeXversion\@empty\@nil.%
8774       \expandafter\@cdr\the\pdfTeXversion\@empty\@nil.%
8775       \pdfTeXrevision
8776     }%
8777   \fi
8778 \fi
8779 \fi
8780 \else
8781   \begingroup
8782     \count@=\luatexversion
8783     \divide\count@ by 100 %
8784     \edef\x{\the\count@}%
8785     \count@=-\x\relax
8786     \multiply\count@ by 100 %
8787     \advance\count@ by \luatexversion
8788     \edef\x{\endgroup
8789       \def\noexpand\@pdfproducer{%
8790         LuaTeX-\x.\the\count@.\luatexrevision
8791       }%
8792     }%
8793   \x
8794 \fi
8795 \fi

```

\PDF@SetupDox

```

8796 \def\PDF@SetupDoc{%
8797   \ifx\@pdfpagescrop\@empty
8798   \else
8799     \edef\process@me{%
8800       \pdfpagesattr={%
8801         /CropBox[\@pdfpagescrop]%
8802         \expandafter\ifx\expandafter\\the\pdfpagesattr\\%
8803         \else
8804           ^^J\the\pdfpagesattr
8805         \fi
8806       }%
8807     }%
8808     \process@me
8809   \fi
8810   \Hy@pstringdef\Hy@pstringB{\@baseurl}%
8811   \pdfcatalog{%
8812     /PageMode/\@pdfpagemode
8813     \ifx\@baseurl\@empty
8814     \else
8815       /URI<</Base(\Hy@pstringB)>>%
8816     \fi
8817   }%
8818   \ifx\@pdfstartpage\@empty
8819   \else
8820     \ifx\@pdfstartview\@empty
8821     \else
8822       openaction goto page\@pdfstartpage{\@pdfstartview}%
8823     \fi
8824   \fi
8825   \edef\Hy@temp{%

```

```

8826 \ifHy@toolbar\else /HideToolbar true\fi
8827 \ifHy@menubar\else /HideMenubar true\fi
8828 \ifHy>windowui\else /HideWindowUI true\fi
8829 \ifHy@fitwindow /FitWindow true\fi
8830 \ifHy@centerwindow /CenterWindow true\fi
8831 \ifHy@displaydoctitle /DisplayDocTitle true\fi
8832 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
8833 \Hy@UseNameKey{Direction}\@pdfdirection
8834 \Hy@UseNameKey{ViewArea}\@pdfviewarea
8835 \Hy@UseNameKey{ViewClip}\@pdfviewclip
8836 \Hy@UseNameKey{PrintArea}\@pdfprintarea
8837 \Hy@UseNameKey{PrintClip}\@pdfprintclip
8838 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
8839 \Hy@UseNameKey{Duplex}\@pdfduplex
8840 \ifx\@pdfpicktraybypdfsize\@empty
8841 \else
8842 /PickTrayByPDFSize \@pdfpicktraybypdfsize
8843 \fi
8844 \ifx\@pdfprintpagerange\@empty
8845 \else
8846 /PrintPageRange[\@pdfprintpagerange]%
8847 \fi
8848 \ifx\@pdfnumcopies\@empty
8849 \else
8850 /NumCopies \@pdfnumcopies
8851 \fi
8852 }%
8853 \pdfcatalog{%
8854 \ifx\Hy@temp\@empty
8855 \else
8856 /ViewerPreferences<<\Hy@temp>>%
8857 \fi
8858 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
8859 \ifx\@pdflang\@empty
8860 \else
8861 /Lang(\@pdflang)%
8862 \fi
8863 }%
8864 }

```

\PDF@FinishDoc

```

8865 \def\PDF@FinishDoc{%
8866 \Hy@UseMaketitleInfos
8867 \HyInfo@GenerateAddons
8868 \pdfinfo{%
8869 /Author(\@pdfauthor)%
8870 /Title(\@pdftitle)%
8871 /Subject(\@pdfsubject)%
8872 /Creator(\@pdfcreator)%
8873 \ifx\@pdfcreationdate\@empty
8874 \else
8875 /CreationDate(\@pdfcreationdate)%
8876 \fi
8877 \ifx\@pdfmoddate\@empty
8878 \else
8879 /ModDate(\@pdfmoddate)%
8880 \fi

```

```

8881 \ifx\@pdfproducer\relax
8882 \else
8883 /Producer(\@pdfproducer)%
8884 \fi
8885 /Keywords(\@pdfkeywords)%
8886 \ifx\@pdftrapped\@empty
8887 \else
8888 /Trapped/\@pdftrapped
8889 \fi
8890 \HyInfo@Addons
8891 }%
8892 \Hy@DisableOption{pdfauthor}%
8893 \Hy@DisableOption{pdftitle}%
8894 \Hy@DisableOption{pdfsubject}%
8895 \Hy@DisableOption{pdfcreator}%
8896 \Hy@DisableOption{pdfcreationdate}%
8897 \Hy@DisableOption{pdfmoddate}%
8898 \Hy@DisableOption{pdfproducer}%
8899 \Hy@DisableOption{pdfkeywords}%
8900 \Hy@DisableOption{pdftrapped}%
8901 \Hy@DisableOption{pdfinfo}%
8902 }

```

`\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`.

```

8903 \def\hyper@pagetransition{%
8904 \ifx\@pdfpagetransition\relax
8905 \else
8906 \expandafter\Hy@RemoveTransPageAttr
8907 \the\pdfpageattr^^J/Trans{>>\END
8908 \ifx\@pdfpagetransition\@empty
8909 \else
8910 \edef\@processme{%
8911 \global\pdfpageattr{%
8912 \the\pdfpageattr
8913 ^^J/Trans << /S /\@pdfpagetransition\space >>%
8914 }%
8915 }%
8916 \@processme
8917 \fi
8918 \fi
8919 }

```

`\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.

```

8920 \gdef\Hy@RemoveTransPageAttr#1^^J/Trans#2#3>>#4\END{%
8921 \ifx\#2\%
8922 \global\pdfpageattr{#1}%
8923 \else
8924 \Hy@RemoveTransPageAttr#1#4\END
8925 \fi
8926 }

```

`\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.

```

8927 \def\hyper@pageduration{%
8928   \ifx\@pdfpageduration\relax
8929   \else
8930   \expandafter
8931   \Hy@RemoveDurPageAttr\the\pdfpageattr^^J/Dur{} \END
8932   \ifx\@pdfpageduration\@empty
8933   \else
8934     \edef\@processme{%
8935       \global\pdfpageattr{%
8936         \the\pdfpageattr
8937         ^^J/Dur \@pdfpageduration\space
8938       }%
8939     }%
8940     \@processme
8941   \fi
8942 \fi
8943 }

```

\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.

```

8944 \gdef\Hy@RemoveDurPageAttr#1^^J/Dur#2#3 #4\END{%
8945   \ifx\#2\%
8946     \global\pdfpageattr{#1}%
8947   \else
8948     \Hy@RemoveDurPageAttr#1#4\END
8949   \fi
8950 }

```

\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).

```

8951 \def\hyper@pagehidden{%
8952   \ifHy@useHidKey
8953   \expandafter
8954   \Hy@RemoveHidPageAttr\the\pdfpageattr^^J/Hid{} \END
8955   \ifHy@pdfpagehidden
8956     \edef\@processme{%
8957       \global\pdfpageattr{%
8958         \the\pdfpageattr
8959         ^^J/Hid true % SPACE
8960       }%
8961     }%
8962     \@processme
8963   \fi
8964 \fi
8965 }

```

\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.

```

8966 \gdef\Hy@RemoveHidPageAttr#1^^J/Hid#2#3 #4\END{%

```



```

8967 \ifx\#2\%
8968 \global\pdfpageattr{#1}%
8969 \else
8970 \Hy@RemoveHidPageAttr#1#4\END
8971 \fi
8972 }

8973 \g@addto@macro\Hy@EveryPageHook{%
8974 \hyper@pagetransition
8975 \hyper@pageduration
8976 \hyper@pagehidden
8977 }

```

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

```

8978 \</pdfTeX>
8979 \<*pdfTeX | xetex>
8980 \Hy@AtBeginDocument{%
8981 \ifHy@setpagesize
8982 \expandafter\@firstofone
8983 \else
8984 \expandafter\@gobble
8985 \fi
8986 {%
8987 \@ifclassloaded{seminar}{%
8988 \<*pdfTeX>
8989 \setlength{\pdfhorigin}{1truein}%
8990 \setlength{\pdfvorigin}{1truein}%
8991 \</pdfTeX>
8992 \ifportrait
8993 \ifdim\paperwidth=\z@
8994 \else
8995 \setlength{\pdfpagewidth}{\strip@pt\paperwidth truept}%
8996 \fi
8997 \ifdim\paperheight=\z@
8998 \else
8999 \setlength{\pdfpageheight}{\strip@pt\paperheight truept}%
9000 \fi
9001 \else
9002 \ifdim\paperheight=\z@
9003 \else
9004 \setlength{\pdfpagewidth}{\strip@pt\paperheight truept}%
9005 \fi
9006 \ifdim\paperwidth=\z@
9007 \else
9008 \setlength{\pdfpageheight}{\strip@pt\paperwidth truept}%
9009 \fi
9010 \fi
9011 }{%
9012 \ltx@ifundefined{stockwidth}{%
9013 \ifdim\paperwidth>\z@
9014 \setlength{\pdfpagewidth}{\paperwidth}%
9015 \fi
9016 \ifdim\paperheight>\z@
9017 \setlength{\pdfpageheight}{\paperheight}%
9018 \fi
9019 }{%
9020 \ifdim\stockwidth>\z@

```

```

9021     \setlength{\pdfpagewidth}{\stockwidth}%
9022     \fi
9023     \ifdim\stockheight>\z@
9024     \setlength{\pdfpageheight}{\stockheight}%
9025     \fi
9026   }%
9027 }%
9028 }%
9029 \Hy@DisableOption{setpagesize}%
9030 }
9031 </pdfTeX | xetex>
9032 <*pdfTeX>
9033 \def\Acrobatmenu#1#2{%
9034   \Hy@Acrobatmenu{#1}{#2}{%
9035     \pdfstartlink
9036     attr{%
9037       \Hy@setpdfborder
9038       \ifx\@pdfhighlight\@empty
9039       \else
9040         /H\@pdfhighlight
9041       \fi
9042       \ifx\@menubordercolor\relax
9043       \else
9044         /C[\@menubordercolor]%
9045       \fi
9046     }%
9047     user{%
9048       /Subtype/Link%
9049       \ifHy@pdfa /F 4\fi
9050       /A<<%
9051       /S/Named%
9052       /N/#1%
9053       \Hy@href@nextactionraw
9054       >>%
9055     }%
9056     \relax
9057     \Hy@colorlink\@menucolor#2%
9058     \close@pdflink
9059   }%
9060 }

```

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.

```

9061 \def\Hy@FixNotFirstPage{%
9062   \gdef\Hy@FixNotFirstPage{%
9063     \setbox\AtBeginShipoutBox=\hbox{%
9064       \copy\AtBeginShipoutBox
9065     }%
9066   }%
9067 }

```

```

9068 \AtBeginShipout{\Hy@FixNotFirstPage}
9069 \pdfTeX

```

46.3 hypertex

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

href: html:

name: html:

end: html:

image: html:

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

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

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

```

9070 (*hypertex)
9071 \providecommand*{\XR@ext}{dvi}
9072 \def\PDF@FinishDoc{}
9073 \def\PDF@SetupDoc{%
9074   \ifx\@baseurl\@empty
9075   \else
9076     \special{html:<base href="\@baseurl">}%
9077   \fi
9078 }
9079 \Hy@WrapperDef\hyper@anchor#1{%
9080   \Hy@SaveLastskip
9081   \Hy@VerboseAnchor{#1}%
9082   \begingroup
9083     \let\protect=\string
9084     \hyper@chars
9085     \special{html:<a name=%
9086       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9087   \endgroup
9088   \Hy@Activeanchortrue
9089   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9090   \special{html:</a>}%

```

```

9091 \Hy@activeanchorfalse
9092 \Hy@RestoreLastskip
9093 }
9094 \Hy@WrapperDef\hyper@anchorstart#1{%
9095 \Hy@SaveLastskip
9096 \Hy@VerboseAnchor{#1}%
9097 \begingroup
9098 \hyper@chars
9099 \special{html:<a name=%
9100 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9101 \endgroup
9102 \Hy@activeanchortrue
9103 }
9104 \def\hyper@anchorend{%
9105 \special{html:</a>}%
9106 \Hy@activeanchorfalse
9107 \Hy@RestoreLastskip
9108 }
9109 \def\@urltype{url}
9110 \def\hyper@linkstart#1#2{%
9111 \Hy@VerboseLinkStart{#1}{#2}%
9112 \expandafter\Hy@colorlink\csname @#1color\endcsname
9113 \def\Hy@tempa{#1}%
9114 \ifx\Hy@tempa\@urltype
9115 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9116 \else
9117 \begingroup
9118 \hyper@chars
9119 \special{html:<a href=%
9120 \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}%
9121 \endgroup
9122 \fi
9123 }
9124 \def\hyper@linkend{%
9125 \special{html:</a>}%
9126 \Hy@endcolorlink
9127 }
9128 \def\hyper@linkfile#1#2#3{%
9129 \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\#3\\\else\#3\fi}%
9130 }
9131 \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.

```

9132 \leavevmode
9133 \ifHy@raiselinks
9134 \Hy@SaveSpaceFactor
9135 \Hy@SaveSavedSpaceFactor
9136 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9137 \Hy@RestoreSavedSpaceFactor
9138 \@linkdim\dp\@tempboxa
9139 \lower\@linkdim\hbox{%
9140 \hyper@chars
9141 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9142 }%
9143 \Hy@colorlink\@urlcolor
9144 \Hy@RestoreSpaceFactor
9145 #1%

```

```

9146 \Hy@SaveSpaceFactor
9147 \@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).

```

9148 \advance\@linkdim by -6.5\p@
9149 \raise\@linkdim\hbox{\special{html:</a>}}%
9150 \Hy@endcolorlink
9151 \Hy@RestoreSpaceFactor
9152 \else
9153 \begingroup
9154 \hyper@chars
9155 \special{html:<a href=\hyper@quote#2\hyper@quote>}%
9156 \Hy@colorlink\@urlcolor#1%
9157 \special{html:</a>}%
9158 \Hy@endcolorlink
9159 \endgroup
9160 \fi
9161 }

```

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

```

9162 \def\hyper@link#1#2#3{%
9163 \Hy@VerboseLinkStart{#1}{#2}%
9164 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%
9165 }

9166 \def\hyper@image#1#2{%
9167 \begingroup
9168 \hyper@chars
9169 \special{html:<img src=\hyper@quote#1\hyper@quote>}%
9170 \endgroup
9171 }
9172 </hypertex>
9173 <*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.

```

9174 \providecommand*\XR@ext{dvi}
9175 \providecommand*\wwwbrowser{c:\string\netscape\string\netscape}
9176 \Hy@WrapperDef\hyper@anchor#1{%
9177 \Hy@SaveLastskip
9178 \Hy@VerboseAnchor{#1}%
9179 \begingroup
9180 \let\protect=\string
9181 \special{mark: #1}%
9182 \endgroup

```

```

9183 \Hy@activeanchortrue
9184 \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
9185 \Hy@activeanchorfalse
9186 \Hy@RestoreLastskip
9187 }
9188 \Hy@WrapperDef\hyper@anchorstart#1{%
9189 \Hy@SaveLastskip
9190 \Hy@VerboseAnchor{#1}%
9191 \special{mark: #1}%
9192 \Hy@activeanchortrue
9193 }
9194 \def\hyper@anchorend{%
9195 \Hy@activeanchorfalse
9196 \Hy@RestoreLastskip
9197 }
9198 \def\hyper@linkstart#1#2{%
9199 \Hy@VerboseLinkStart{#1}{#2}%
9200 \expandafter\Hy@colorlink\csname @#1color\endcsname
9201 \special{button: %
9202 10000000 %
9203 \number\baselineskip\space
9204 #2%
9205 }%
9206 }
9207 \def\hyper@linkend{%
9208 \Hy@endcolorlink
9209 }
9210 \def\hyper@link#1#2#3{%
9211 \Hy@VerboseLinkStart{#1}{#2}%
9212 \leavevmode
9213 \ifHy@raiselinks
9214 \Hy@SaveSpaceFactor
9215 \Hy@SaveSavedSpaceFactor
9216 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#3}%
9217 \Hy@RestoreSavedSpaceFactor
9218 \@linkdim\dp\@tempboxa
9219 \lower\@linkdim\hbox{%
9220 \special{button: %
9221 \number\wd\@tempboxa\space
9222 \number\ht\@tempboxa\space
9223 #2%
9224 }%
9225 \expandafter\Hy@colorlink\csname @#1color\endcsname
9226 \Hy@RestoreSpaceFactor
9227 #3%
9228 \Hy@SaveSpaceFactor
9229 \Hy@endcolorlink
9230 }%
9231 \@linkdim\ht\@tempboxa
9232 \advance\@linkdim by -6.5\p@
9233 \raise\@linkdim\hbox{}%
9234 \Hy@RestoreSpaceFactor
9235 \else
9236 \special{button: %
9237 \number\wd\@tempboxa\space
9238 \number\ht\@tempboxa\space
9239 #2%

```

```

9240 }%
9241 \expandafter\Hy@colorlink\csname @#1color\endcsname
9242 #3%
9243 \Hy@endcolorlink
9244 \fi
9245 }
9246 \def\hyper@linkurl#1#2{%
9247 \begingroup
9248 \hyper@chars
9249 \leavevmode
9250 \ifHy@raiselinks
9251 \Hy@SaveSpaceFactor
9252 \Hy@SaveSavedSpaceFactor
9253 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9254 \Hy@RestoreSavedSpaceFactor
9255 \@linkdim\dp\@tempboxa
9256 \lower\@linkdim\hbox{%
9257 \special{button: %
9258 \number\wd\@tempboxa\space
9259 \number\ht\@tempboxa\space
9260 launch: \wwwbrowser\space
9261 #2%
9262 }%
9263 \Hy@colorlink\@urlcolor
9264 \Hy@RestoreSpaceFactor
9265 #1%
9266 \Hy@SaveSpaceFactor
9267 \Hy@endcolorlink
9268 }%
9269 \@linkdim\ht\@tempboxa
9270 \advance\@linkdim by -6.5\p@
9271 \raise\@linkdim\hbox{}}%
9272 \Hy@RestoreSpaceFactor
9273 \else
9274 \special{button: %
9275 \number\wd\@tempboxa\space
9276 \number\ht\@tempboxa\space
9277 launch: \wwwbrowser\space
9278 #2%
9279 }%
9280 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
9281 \fi
9282 \endgroup
9283 }
9284 \def\hyper@linkfile#1#2#3{%
9285 \begingroup
9286 \hyper@chars
9287 \leavevmode
9288 \ifHy@raiselinks
9289 \Hy@SaveSpaceFactor
9290 \Hy@SaveSavedSpaceFactor
9291 \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
9292 \Hy@RestoreSavedSpaceFactor
9293 \@linkdim\dp\@tempboxa
9294 \lower\@linkdim\hbox{%
9295 \special{button: %
9296 \number\wd\@tempboxa\space

```

```

9297      \number\ht\@tempboxa\space
9298      #3,%
9299      file: #2%
9300  }%
9301  \Hy@colorlink\@filecolor
9302  \Hy@RestoreSpaceFactor
9303  #1%
9304  \Hy@SaveSpaceFactor
9305  \Hy@endcolorlink
9306  }%
9307  \@linkdim\ht\@tempboxa
9308  \advance\@linkdim by -6.5\p@
9309  \raise\@linkdim\hbox{}%
9310  \Hy@RestoreSpaceFactor
9311  \else
9312  \special{button: %
9313    \number\wd\@tempboxa\space
9314    \number\ht\@tempboxa\space
9315    #3,%
9316    file: #2%
9317  }%
9318  \Hy@colorlink\@filecolor#1\Hy@endcolorlink
9319  \fi
9320  \endgroup
9321 }
9322 \ifx\@pdfproducer\relax
9323 \def\@pdfproducer{dviwindo + Distiller}%
9324 \fi
9325 \HyInfo@AddonUnsupportedtrue
9326 \def\PDF@FinishDoc{%
9327   \Hy@UseMaketitleInfos
9328   \HyInfo@TrappedUnsupported
9329   \special{PDF: Keywords \@pdfkeywords}%
9330   \special{PDF: Title \@pdftitle}%
9331   \special{PDF: Creator \@pdfcreator}%
9332   \ifx\@pdfcreationdate\@empty
9333   \else
9334     \special{PDF: CreationDate \@pdfcreationdate}%
9335   \fi
9336   \ifx\@pdfmoddate\@empty
9337   \else
9338     \special{PDF: ModDate \@pdfmoddate}%
9339   \fi
9340   \special{PDF: Author \@pdfauthor}%
9341   \ifx\@pdfproducer\relax
9342   \else
9343     \special{PDF: Producer \@pdfproducer}%
9344   \fi
9345   \special{PDF: Subject \@pdfsubject}%
9346   \Hy@DisableOption{pdfauthor}%
9347   \Hy@DisableOption{pdftitle}%
9348   \Hy@DisableOption{pdfsubject}%
9349   \Hy@DisableOption{pdfcreator}%
9350   \Hy@DisableOption{pdfcreationdate}%
9351   \Hy@DisableOption{pdfmoddate}%
9352   \Hy@DisableOption{pdfproducer}%
9353   \Hy@DisableOption{pdfkeywords}%

```



```

9354 \Hy@DisableOption{pdftrapped}%
9355 \Hy@DisableOption{pdfinfo}%
9356 }
9357 \def\PDF@SetupDoc{%
9358 \ifx\@baseurl\@empty
9359 \else
9360 \special{PDF: Base \@baseurl}%
9361 \fi
9362 \ifx\@pdfpagescrop\@empty\else
9363 \special{PDF: BBox \@pdfpagescrop}%
9364 \fi
9365 \def\Hy@temp{%
9366 \ifx\@pdfstartpage\@empty
9367 \else
9368 \ifx\@pdfstartview\@empty
9369 \else
9370 \edef\Hy@temp{%
9371 ,Page=\@pdfstartpage
9372 ,View=\@pdfstartview
9373 }%
9374 \fi
9375 \fi
9376 \edef\Hy@temp{%
9377 \noexpand\pdfmark{%
9378 pdfmark=/DOCVIEW,%
9379 PageMode=/\@pdfpagemode
9380 \Hy@temp
9381 }%
9382 }%
9383 \Hy@temp
9384 \ifx\@pdfpagescrop\@empty
9385 \else
9386 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
9387 \fi
9388 \edef\Hy@temp{%
9389 \ifHy@toolbar\else /HideToolbar true\fi
9390 \ifHy@menubar\else /HideMenubar true\fi
9391 \ifHy>windowui\else /HideWindowUI true\fi
9392 \ifHy@fitwindow /FitWindow true\fi
9393 \ifHy@centerwindow /CenterWindow true\fi
9394 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9395 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9396 \Hy@UseNameKey{Direction}\@pdfdirection
9397 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9398 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9399 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9400 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9401 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9402 \Hy@UseNameKey{Duplex}\@pdfduplex
9403 \ifx\@pdfpicktraybypdfsize\@empty
9404 \else
9405 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9406 \fi
9407 \ifx\@pdfprintpagerange\@empty
9408 \else
9409 /PrintPageRange[\@pdfprintpagerange]%
9410 \fi

```

```

9411 \ifx\@pdfnumcopies\@empty
9412 \else
9413 /NumCopies \@pdfnumcopies
9414 \fi
9415 }%
9416 \pdfmark{pdfmark=/PUT,%
9417 Raw={%
9418 \string{Catalog\string}<<%
9419 \ifx\Hy@temp\@empty
9420 \else
9421 /ViewerPreferences<<\Hy@temp>>%
9422 \fi
9423 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9424 \ifx\@pdflang\@empty
9425 \else
9426 /Lang(\@pdflang)%
9427 \fi
9428 >>%
9429 }%
9430 }%
9431 }
9432 </dviwindo>
9433 <*dvi pdfm | xetex>

```

46.5 dvipdfm/xetex dvi to PDF converter

Provided by Mark Wicks (mwicks@kettering.edu)

```

9434 \providecommand*{\XR@ext}{pdf}
9435 \Hy@setbreaklinks{true}
9436 \def\HyPat@ObjRef{%
9437 @[\~ ]+%
9438 }
9439 \newsavebox{\pdfm@box}
9440 \def\@pdfm@mark#1{\special{pdf:#1}}
9441 \Hy@WrapperDef\@pdfm@dest#1{%
9442 \Hy@SaveLastskip
9443 \Hy@VerboseAnchor{#1}%
9444 \begingroup
9445 \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
9446 \def\x{XYZ}%
9447 \ifx\x\@pdfview
9448 \def\x{XYZ @xpos @ypos null}%
9449 \else
9450 \def\x{FitH}%
9451 \ifx\x\@pdfview
9452 \def\x{FitH @ypos}%
9453 \else
9454 \def\x{FitBH}%
9455 \ifx\x\@pdfview
9456 \def\x{FitBH @ypos}%
9457 \else
9458 \def\x{FitV}%
9459 \ifx\x\@pdfview
9460 \def\x{FitV @xpos}%
9461 \else
9462 \def\x{FitBV}%
9463 \ifx\x\@pdfview

```

```

9464         \def\x{FitBV @xpos}%
9465     \else
9466         \def\x{Fit}%
9467     \ifx\x\@pdfview
9468         \let\x\@pdfview
9469     \else
9470         \def\x{FitB}%
9471     \ifx\x\@pdfview
9472         \let\x\@pdfview
9473     \else
9474         \def\x{FitR}%
9475     \ifx\x\@pdfview
9476         \Hy@Warning{'pdfview=FitR' is not supported}%
9477         \def\x{XYZ @xpos @ypos null}%
9478     \else
9479         \@onelevel@sanitize\@pdfview
9480         \Hy@Warning{%
9481             Unknown value '\@pdfview' for pdfview%
9482         }%
9483         \def\x{XYZ @xpos @ypos null}%
9484     \fi
9485 \fi
9486 \fi
9487 \fi
9488 \fi
9489 \fi
9490 \fi
9491 \fi
9492 \@pdfm@mark{dest (\Hy@pstringDest) [@thispage /\x]}%
9493 \endgroup
9494 \Hy@RestoreLastskip
9495 }
9496 \providecommand*\@pdfview{XYZ}
9497 \providecommand*\@pdfborder{0 0 1}
9498 \providecommand*\@pdfborderstyle{}
9499 \def\hyper@anchor#1{%
9500     \@pdfm@dest{#1}%
9501 }
9502 \def\hyper@anchorstart#1{%
9503     \Hy@activeanchortrue
9504     \@pdfm@dest{#1}%
9505 }
9506 \def\hyper@anchorend{%
9507     \Hy@activeanchorfalse
9508 }
9509 \newcounter{Hy@AnnotLevel}
9510 \ifHy@ocgcolorlinks
9511     \def\OBJ@OCG@view{@OCG@view}%
9512     \@pdfm@mark{%
9513         obj \OBJ@OCG@view <<%
9514         /Type/OCG%
9515         /Name(View)%
9516         /Usage<<%
9517         /Print<<%
9518         /PrintState/OFF%
9519         >>%
9520         /View<<%

```

```

9521         /ViewState/ON%
9522     >>%
9523 >>%
9524 >>%
9525 }%
9526 \@pdfm@mark{close \OBJ@OCG@view}%
9527 \def\OBJ@OCG@print{@OCG@print}%
9528 \@pdfm@mark{%
9529     obj \OBJ@OCG@print <<%
9530         /Type/OCG%
9531         /Name(Print)%
9532         /Usage<<%
9533         /Print<<%
9534         /PrintState/ON%
9535     >>%
9536     /View<<%
9537         /ViewState/OFF%
9538     >>%
9539 >>%
9540 >>%
9541 }%
9542 \@pdfm@mark{close \OBJ@OCG@print}%
9543 \def\OBJ@OCGs{@OCGs}%
9544 \@pdfm@mark{%
9545     obj \OBJ@OCGs [%
9546         \OBJ@OCG@view\space\OBJ@OCG@print
9547     ]%
9548 }%
9549 \@pdfm@mark{close \OBJ@OCGs}%
9550 \@pdfm@mark{%
9551     put @catalog <<%
9552         /OCProperties<<%
9553         /OCGs \OBJ@OCGs
9554         /D<<%
9555         /OFF[\OBJ@OCG@print]%
9556         /AS[%
9557             <<%
9558                 /Event/View%
9559                 /OCGs \OBJ@OCGs
9560                 /Category[/View]%
9561             >>%
9562             <<%
9563                 /Event/Print%
9564                 /OCGs \OBJ@OCGs
9565                 /Category[/Print]%
9566             >>%
9567             <<%
9568                 /Event/Export%
9569                 /OCGs \OBJ@OCGs
9570                 /Category[/Print]%
9571             >>%
9572         ]%
9573     >>%
9574 >>%
9575 >>%
9576 }%
9577 \AtBeginShipout{%

```

```

9578 \setbox\AtBeginShipoutBox=\hbox{%
9579 \copy\AtBeginShipoutBox
9580 \@pdfm@mark{%
9581 put @resources <<%
9582 /Properties<<%
9583 /OCView \OBJ@OCG@view
9584 /OCPrint \OBJ@OCG@print
9585 >>%
9586 >>%
9587 }%
9588 }%
9589 }%
9590 \Hy@AtBeginDocument{%
9591 \def\Hy@colorlink#1{%
9592 \begingroup
9593 \ifHy@ocgcolorlinks
9594 \def\Hy@ocgcolor{#1}%
9595 \setbox0=\hbox\bgroup\color@begingroup
9596 \else
9597 \HyColor@UseColor#1%
9598 \fi
9599 }%
9600 \def\Hy@endcolorlink{%
9601 \ifHy@ocgcolorlinks
9602 \color@endgroup\egroup
9603 \mbox{%
9604 \@pdfm@mark{content /OC/OCPrint BDC}%
9605 \rlap{\copy0}%
9606 \@pdfm@mark{content EMC/OC/OCView BDC}%
9607 \begingroup
9608 \expandafter\HyColor@UseColor\Hy@ocgcolor
9609 \box0 %
9610 \endgroup
9611 \@pdfm@mark{content EMC}%
9612 }%
9613 \fi
9614 \endgroup
9615 }%
9616 }%
9617 \else
9618 \Hy@DisableOption{ocgcolorlinks}%
9619 \fi
9620 \def\Hy@BeginAnnot#1{%
9621 \stepcounter{Hy@AnnotLevel}%
9622 \ifnum\value{Hy@AnnotLevel}=\@ne
9623 #1%
9624 \fi
9625 }
9626 \def\Hy@EndAnnot{%
9627 \ifnum\value{Hy@AnnotLevel}=\@ne
9628 \Hy@endcolorlink
9629 \@pdfm@mark{eann}%
9630 \fi
9631 \addtocounter{Hy@AnnotLevel}\m@ne
9632 }
9633 \def\Hy@undefinedname{UNDEFINED}
9634 \def\hyper@linkstart#1#2{%

```

```

9635 \Hy@VerboseLinkStart{#1}{#2}%
9636 \Hy@BeginAnnot{%
9637   \protected@edef\Hy@testname{#2}%
9638   \ifx\Hy@testname\@empty
9639     \Hy@Warning{%
9640       Empty destination name,\MessageBreak
9641       using '\Hy@undefinedname'%
9642     }%
9643     \let\Hy@testname\Hy@undefinedname
9644   \else
9645     \Hy@pstringdef\Hy@testname{%
9646       \expandafter\HyperDestNameFilter\expandafter{%
9647         \Hy@testname
9648       }%
9649     }%
9650   \fi
9651   \@pdfm@mark{%
9652     bann<<%
9653     /Type/Annot%
9654     /Subtype/Link%
9655     \ifHy@pdfa /F 4\fi
9656     \Hy@setpdfborder
9657     \expandafter\ifx\csname @#1bordercolor\endcsname\relax
9658     \else
9659       /C[\csname @#1bordercolor\endcsname]%
9660     \fi
9661     /A<<%
9662     /S/GoTo%
9663     /D(\Hy@testname)%
9664     \Hy@href@nextactionraw
9665     >>%
9666     >>%
9667   }%
9668   \expandafter\Hy@colorlink\csname @#1color\endcsname
9669 }%
9670 }
9671 \def\hyper@linkend{\Hy@EndAnnot}%
9672 \def\hyper@link#1#2#3{%
9673   \hyper@linkstart{#1}{#2}#3\hyper@linkend
9674 }
9675 \def\hyper@linkfile#1#2#3{%
9676   \leavevmode
9677   \Hy@BeginAnnot{%
9678     \def\Hy@pstringF{#2}%
9679     \Hy@CleanupFile\Hy@pstringF
9680     \Hy@pstringdef\Hy@pstringF\Hy@pstringF
9681     \Hy@pstringdef\Hy@pstringD{#3}%
9682     \Hy@MakeRemoteAction
9683     \@pdfm@mark{%
9684       bann<<%
9685       /Type/Annot%
9686       /Subtype/Link%
9687       \ifHy@pdfa /F 4\fi
9688       \Hy@setpdfborder
9689       \ifx\@filebordercolor\relax
9690       \else
9691         /C[\@filebordercolor]%

```

```

9692      \fi
9693      /A<<%
9694      /S/GoToR%
9695      /F(\Hy@pstringF)%
9696      /D%
9697      \ifx\|#3\|%
9698      [\Hy@href@page\@pdfremotestartview]%
9699      \else
9700      (\Hy@pstringD)%
9701      \fi
9702      \Hy@SetNewWindow
9703      \Hy@href@nextactionraw
9704      >>%
9705      >>%
9706      }%
9707      \Hy@colorlink\@filecolor
9708      }%
9709      #1%
9710      \Hy@EndAnnot
9711      }
9712      \def\hyper@linkurl#1#2{%
9713      \leavevmode
9714      \Hy@BeginAnnot{%
9715      \Hy@pstringdef\Hy@pstringURI{#2}%
9716      \@pdfm@mark{%
9717      bann<<%
9718      /Type/Annot%
9719      /Subtype/Link%
9720      \ifHy@pdfa /F 4\fi
9721      \Hy@setpdfborder
9722      \ifx\@urlbordercolor\relax
9723      \else
9724      /C[\@urlbordercolor]%
9725      \fi
9726      /A<<%
9727      /S/URI%
9728      /URI(\Hy@pstringURI)%
9729      \ifHy@href@ismap
9730      /IsMap true%
9731      \fi
9732      \Hy@href@nextactionraw
9733      >>%
9734      >>%
9735      }%
9736      \Hy@colorlink\@urlcolor
9737      }%
9738      #1%
9739      \Hy@EndAnnot
9740      }
9741      \def\Acrobatmenu#1#2{%
9742      \Hy@Acrobatmenu{#1}{#2}{%
9743      \Hy@BeginAnnot{%
9744      \@pdfm@mark{%
9745      bann<<%
9746      /Type/Annot%
9747      /Subtype/Link%
9748      \ifHy@pdfa /F 4\fi

```

```

9749      /A<<%
9750      /S/Named%
9751      /N/#1%
9752      \Hy@href@nextactionraw
9753      >>%
9754      \Hy@setpdfborder
9755      \ifx\@menubordercolor\relax
9756      \relax
9757      /C[\@menubordercolor]%
9758      \fi
9759      >>%
9760      }%
9761      \Hy@colorlink\@menucolor
9762      }%
9763      #2%
9764      \Hy@EndAnnot
9765      }%
9766      }
9767      \ifx\@pdfproducer\relax
9768      \def\@pdfproducer{dvipdfm}%

```

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

```

9769      \begingroup\expandafter\expandafter\expandafter\endgroup
9770      \expandafter\ifx\csname XeTeXversion\endcsname\relax
9771      \else
9772      \edef\@pdfproducer{XeTeX \the\XeTeXversion\XeTeXrevision}%
9773      \fi
9774      \fi
9775      \def\PDF@FinishDoc{%
9776      \Hy@UseMaketitleInfos
9777      \HyInfo@GenerateAddons
9778      \@pdfm@mark{%
9779      docinfo<<%
9780      /Title(\@pdftitle)%
9781      /Subject(\@pdfsubject)%
9782      /Creator(\@pdfcreator)%
9783      \ifx\@pdfcreationdate\@empty
9784      \else
9785      /CreationDate(\@pdfcreationdate)%
9786      \fi
9787      \ifx\@pdfmoddate\@empty
9788      \else
9789      /ModDate(\@pdfmoddate)%
9790      \fi
9791      /Author(\@pdfauthor)%
9792      \ifx\@pdfproducer\relax
9793      \else
9794      /Producer(\@pdfproducer)%
9795      \fi
9796      /Keywords(\@pdfkeywords)%
9797      \ifx\@pdftrapped\@empty
9798      \else
9799      /Trapped/\@pdftrapped
9800      \fi
9801      \HyInfo@Addons
9802      >>%
9803      }%
9804      \Hy@DisableOption{pdfauthor}%

```



```

9805 \Hy@DisableOption{pdftitle}%
9806 \Hy@DisableOption{pdfsubject}%
9807 \Hy@DisableOption{pdfcreator}%
9808 \Hy@DisableOption{pdfcreationdate}%
9809 \Hy@DisableOption{pdfmoddate}%
9810 \Hy@DisableOption{pdfproducer}%
9811 \Hy@DisableOption{pdfkeywords}%
9812 \Hy@DisableOption{pdftrapped}%
9813 \Hy@DisableOption{pdfinfo}%
9814 }

9815 \def\PDF@SetupDoc{%
9816 \edef\Hy@temp{%
9817 \ifHy@toolbar\else /HideToolbar true\fi
9818 \ifHy@menubar\else /HideMenubar true\fi
9819 \ifHy>windowui\else /HideWindowUI true\fi
9820 \ifHy@fitwindow /FitWindow true\fi
9821 \ifHy@centerwindow /CenterWindow true\fi
9822 \ifHy@displaydoctitle /DisplayDocTitle true\fi
9823 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
9824 \Hy@UseNameKey{Direction}\@pdfdirection
9825 \Hy@UseNameKey{ViewArea}\@pdfviewarea
9826 \Hy@UseNameKey{ViewClip}\@pdfviewclip
9827 \Hy@UseNameKey{PrintArea}\@pdfprintarea
9828 \Hy@UseNameKey{PrintClip}\@pdfprintclip
9829 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
9830 \Hy@UseNameKey{Duplex}\@pdfduplex
9831 \ifx\@pdfpicktraybypdfsize\@empty
9832 \else
9833 /PickTrayByPDFSize \@pdfpicktraybypdfsize
9834 \fi
9835 \ifx\@pdfprintpagerange\@empty
9836 \else
9837 /PrintPageRange\@pdfprintpagerange\%
9838 \fi
9839 \ifx\@pdfnumcopies\@empty
9840 \else
9841 /NumCopies \@pdfnumcopies
9842 \fi
9843 }%
9844 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
9845 \@pdfm@mark{%
9846 docview<<%
9847 \ifx\@pdfstartpage\@empty
9848 \else
9849 \ifx\@pdfstartview\@empty
9850 \else
9851 /OpenAction[@page\@pdfstartpage\@pdfstartview]\%
9852 \fi
9853 \fi
9854 \ifx\@baseurl\@empty
9855 \else
9856 /URI<</Base(\Hy@pstringB)>>%
9857 \fi
9858 /PageMode/\@pdfpagemode
9859 \ifx\Hy@temp\@empty
9860 \else
9861 /ViewerPreferences<<\Hy@temp>>%

```

```

9862 \fi
9863 \Hy@UseNameKey{PageLayout}\@pdfpagelayout
9864 \ifx\@pdflang\@empty
9865 \else
9866 /Lang(\@pdflang)%
9867 \fi
9868 >>%
9869 }%
9870 \ifx\@pdfpagescrop\@empty
9871 \else
9872 \@pdfm@mark{put @pages <</CropBox[\@pdfpagescrop]>>}%
9873 \fi
9874 }
9875 </dvipdfm | xetex>

```

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

```

9876 <*dvipdfm>
9877 \AtBeginShipoutFirst{%
9878 \ifHy@setpagesize
9879 \begingroup
9880 \@ifundefined{stockwidth}{%
9881 \ifdim\paperwidth>\z@
9882 \ifdim\paperheight>\z@
9883 \special{papersize=\the\paperwidth,\the\paperheight}%
9884 \fi
9885 \fi
9886 }{%
9887 \ifdim\stockwidth>\z@
9888 \ifdim\stockheight>\z@
9889 \special{papersize=\the\stockwidth,\the\stockheight}%
9890 \fi
9891 \fi
9892 }%
9893 \endgroup
9894 \fi
9895 \Hy@DisableOption{setpagesize}%
9896 }
9897 </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.

```

9898 <*vtexhtml>
9899 \providecommand*\XR@ext}{htm}
9900 \RequirePackage{vtexhtml}
9901 \newif\if@Localurl
9902 \def\PDF@FinishDoc{}
9903 \def\PDF@SetupDoc{%
9904 \ifx\@baseurl\@empty
9905 \else
9906 \special{!direct <base href="\@baseurl">}%
9907 \fi
9908 }
9909 \def\@urltype{url}
9910 \def\hyper@link#1#2#3{%

```

```

9911 \Hy@VerboseLinkStart{#1}{#2}%
9912 \leavevmode
9913 \special{!direct <a href=%
9914     \hyper@quote\hyper@hash\HyperDestNameFilter{#2}\hyper@quote>}%
9915 #3%
9916 \special{!direct </a>}}%
9917 }
9918 \def\hyper@linkurl#1#2{%
9919     \begingroup
9920     \hyper@chars
9921     \leavevmode
9922     \MathBSuppress=1\relax
9923     \special{!direct <a href=%
9924         \hyper@quote\HyperDestNameFilter{#2}\hyper@quote>}%
9925     #1%
9926     \MathBSuppress=0\relax
9927     \special{!direct </a>}}%
9928 \endgroup
9929 }
9930 \def\hyper@linkfile#1#2#3{%
9931     \hyper@linkurl{#1}{\Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi}%
9932 }
9933 \def\hyper@linkstart#1#2{%
9934     \Hy@VerboseLinkStart{#1}{#2}%
9935     \def\Hy@tempa{#1}\ifx\Hy@tempa\@urlltype
9936         \@Localurltrue
9937         \special{!direct <a href=\hyper@quote#2\hyper@quote>}}%
9938     \else
9939         \@Localurlfalse
9940         \begingroup
9941         \hyper@chars
9942         \special{!aref \HyperDestNameFilter{#2}}}%
9943     \endgroup
9944 \fi
9945 }
9946 \def\hyper@linkend{%
9947     \if@Localurl
9948         \special{!endaref}%
9949     \else
9950         \special{!direct </a>}}%
9951 \fi
9952 }
9953 \Hy@WrapperDef\hyper@anchorstart#1{%
9954     \Hy@SaveLastskip
9955     \Hy@VerboseAnchor{#1}%
9956     \begingroup
9957     \hyper@chars
9958     \special{!aname #1}%
9959     \special{!direct <a name=%
9960         \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
9961     \endgroup
9962     \Hy@activeanchortrue
9963 }
9964 \def\hyper@anchorend{%
9965     \special{!direct </a>}}%
9966     \Hy@activeanchorfalse
9967     \Hy@RestoreLastskip

```

```

9968 }
9969 \Hy@WrapperDef\hyper@anchor#1{%
9970 \Hy@SaveLastskip
9971 \Hy@VerboseAnchor{#1}%
9972 \begingroup
9973 \let\protect=\string
9974 \hyper@chars
9975 \leavevmode
9976 \special{!aname #1}%
9977 \special{!direct <a name=%
9978 \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
9979 \endgroup
9980 \Hy@activeanchortrue
9981 \bgroup\anchor@spot\egroup
9982 \special{!direct </a>}%
9983 \Hy@activeanchorfalse
9984 \Hy@RestoreLastskip
9985 }
9986 \def\@Form[#1]{%
9987 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
9988 }
9989 \def\@endForm{}
9990 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
9991 \Hy@Message{Sorry, TeXpider does not yet support FORM gauges}%
9992 }
9993 \def\@TextField[#1]#2{% parameters, label
9994 \Hy@Message{Sorry, TeXpider does not yet support FORM text fields}%
9995 }
9996 \def\@CheckBox[#1]#2{% parameters, label
9997 \Hy@Message{Sorry, TeXpider does not yet support FORM checkboxes}%
9998 }
9999 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
10000 \Hy@Message{Sorry, TeXpider does not yet support FORM choice menus}%
10001 }
10002 \def\@PushButton[#1]#2{% parameters, label
10003 \Hy@Message{Sorry, TeXpider does not yet support FORM pushbuttons}%
10004 }
10005 \def\@Reset[#1]#2{%
10006 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10007 }
10008 \def\@Submit[#1]#2{%
10009 \Hy@Message{Sorry, TeXpider does not yet support FORMs}%
10010 }
10011 \</vtexhtml>
10012 \<*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.

```

10013 \ifx\mediaheight\@undefined
10014 \else
10015 \ifx\mediaheight\relax
10016 \else
10017 \ifHy@setpagesize
10018 \providecommand*\VTeXInitMediaSize{%
10019 \ltx@ifundefined{stockwidth}{%
10020 \ifdim\paperheight>0pt %

```

```

10021         \setlength\mediaheight\paperheight
10022     \fi
10023     \ifdim\paperheight>0pt %
10024         \setlength\mediawidth\paperwidth
10025     \fi
10026 }{%
10027     \ifdim\stockheight>0pt %
10028         \setlength\mediaheight\stockheight
10029     \fi
10030     \ifdim\stockwidth>0pt %
10031         \setlength\mediawidth\stockwidth
10032     \fi
10033 }%
10034 }%
10035 \Hy@AtBeginDocument{\VTeXInitMediaSize}%
10036 \fi
10037 \Hy@DisableOption{setpagesize}%
10038 \fi
10039 \fi

```

Older versions of VTeX require xyz in lower case.

```

10040 \providecommand*\@pdfview{xyz}
10041 \providecommand*\@pdfborder{0 0 1}
10042 \providecommand*\@pdfborderstyle{}
10043 \let\CurrentBorderColor\@linkbordercolor
10044 \Hy@WrapperDef\hyper@anchor#1{%
10045     \Hy@SaveLastskip
10046     \Hy@VerboseAnchor{#1}%
10047     \begingroup
10048         \let\protect=\string
10049         \hyper@chars
10050         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10051     \endgroup
10052     \Hy@activeanchortrue
10053     \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
10054     \Hy@activeanchorfalse
10055     \Hy@RestoreLastskip
10056 }
10057 \Hy@WrapperDef\hyper@anchorstart#1{%
10058     \Hy@SaveLastskip
10059     \Hy@VerboseAnchor{#1}%
10060     \begingroup
10061         \hyper@chars
10062         \special{!aname \HyperDestNameFilter{#1};\@pdfview}%
10063     \endgroup
10064     \Hy@activeanchortrue
10065 }
10066 \def\hyper@anchorend{%
10067     \Hy@activeanchorfalse
10068     \Hy@RestoreLastskip
10069 }
10070 \def\@urltype{url}
10071 \def\Hy@undefinedname{UNDEFINED}
10072 \def\hyper@linkstart#1#2{%
10073     \Hy@VerboseLinkStart{#1}{#2}%
10074     \Hy@pstringdef\Hy@pstringURI{#2}%
10075     \expandafter\Hy@colorlink\csname @#1color\endcsname
10076     \ltx@ifundefined{@#1bordercolor}{%

```

```

10077 \let\CurrentBorderColor\relax
10078 }{%
10079 \edef\CurrentBorderColor{%
10080 \csname @#1bordercolor\endcsname
10081 }%
10082 }%
10083 \def\Hy@tempa{#1}%
10084 \ifx\Hy@tempa\@uratype
10085 \special{!%
10086   aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10087   \ifHy@href@ismap
10088   /IsMap true%
10089   \fi
10090   \Hy@href@nextactionraw
10091   >;%
10092   a=<%
10093   \ifHy@pdfa /F 4\fi
10094   \Hy@setpdfborder
10095   \ifx\CurrentBorderColor\relax
10096   \else
10097   /C [\CurrentBorderColor]%
10098   \fi
10099   >%
10100   }%
10101 \else
10102 \protected@edef\Hy@testname{#2}%
10103 \ifx\Hy@testname\@empty
10104 \Hy@Warning{%
10105   Empty destination name,\MessageBreak
10106   using '\Hy@undefinedname'%
10107   }%
10108 \let\Hy@testname\Hy@undefinedname
10109 \fi
10110 \special{!%
10111   aref \expandafter\HyperDestNameFilter
10112   \expandafter{\Hy@testname};%
10113   a=<%
10114   \ifHy@pdfa /F 4\fi
10115   \Hy@setpdfborder
10116   \ifx\CurrentBorderColor\relax
10117   \else
10118   /C [\CurrentBorderColor]%
10119   \fi
10120   >%
10121   }%
10122 \fi
10123 }
10124 \def\hyper@linkend{%
10125 \special{!endaref}%
10126 \Hy@endcolorlink
10127 }
10128 \def\hyper@linkfile#1#2#3{%
10129 \leavevmode
10130 \def\Hy@pstringF{#2}%
10131 \Hy@CleanupFile\Hy@pstringF
10132 \special{!%
10133   aref <%

```

```

10134 \ifnum\Hy@VTeXversion>753 \ifHy@newwindow n\fi\fi
10135 f=\Hy@pstringF>#3;%
10136 a=<%
10137 \ifHy@pdfa /F 4\fi
10138 \Hy@setpdfborder
10139 \ifx\@filebordercolor\relax
10140 \else
10141 /C [\@filebordercolor]%
10142 \fi
10143 >%
10144 }%
10145 \Hy@colorlink\@filecolor#1\Hy@endcolorlink
10146 \special{!endaref}%
10147 }
10148 \def\hyper@linkurl#1#2{%
10149 \begingroup
10150 \Hy@pstringdef\Hy@pstringURI{#2}%
10151 \hyper@chars
10152 \leavevmode
10153 \special{!%
10154 aref <u=/Type/Action/S/URI/URI(\Hy@pstringURI)%
10155 \ifHy@href@ismap
10156 /IsMap true%
10157 \fi
10158 \Hy@href@nextactionraw
10159 >;%
10160 a=<%
10161 \ifHy@pdfa /F 4\fi
10162 \Hy@setpdfborder
10163 \ifx\@urlbordercolor\relax
10164 \else
10165 /C [\@urlbordercolor]%
10166 \fi
10167 >%
10168 }%
10169 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
10170 \special{!endaref}%
10171 \endgroup
10172 }
10173 \def\hyper@link#1#2#3{%
10174 \Hy@VerboseLinkStart{#1}{#2}%
10175 \ltx@ifundefined{@#1bordercolor}{%
10176 \let\CurrentBordercolor\relax
10177 }{%
10178 \edef\CurrentBordercolor{\csname @#1bordercolor\endcsname}%
10179 }%
10180 \leavevmode
10181 \protected@edef\Hy@testname{#2}%
10182 \ifx\Hy@testname\@empty
10183 \Hy@Warning{%
10184 Empty destination name,\MessageBreak
10185 using '\Hy@undefinedname'%
10186 }%
10187 \let\Hy@testname\Hy@undefinedname
10188 \fi
10189 \special{!%
10190 aref \expandafter\HyperDestNameFilter

```

```

10191     \expandafter{\Hy@testname};%
10192 a=<%
10193   \ifHy@pdfa /F 4\fi
10194   \Hy@setpdfborder
10195   \ifx\CurrentBorderColor\relax
10196   \else
10197     /C [\CurrentBorderColor]%
10198   \fi
10199 >%
10200 }%
10201 \expandafter
10202 \Hy@colorlink\csname @#1color\endcsname#3\Hy@endcolorlink
10203 \special{!endaref}%
10204 }
10205 \def\hyper@image#1#2{%
10206   \hyper@linkurl{#2}{#1}%
10207 }
10208 \def\@hyper@launch run:#1\#2#3{%
10209   \Hy@pstringdef\Hy@pstringF{#1}%
10210   \Hy@pstringdef\Hy@pstringP{#3}%
10211   \leavevmode
10212   \special{!aref %
10213     <u=%
10214       /Type/Action%
10215       /S/Launch%
10216       /F(\Hy@pstringF)%
10217       \Hy@SetNewWindow
10218       \ifx\#3\%
10219       \else
10220         /Win<</F(\Hy@pstringF)/P(\Hy@pstringP)>>%
10221       \fi
10222       \Hy@href@nextactionraw
10223     >;%
10224     a=<%
10225       \ifHy@pdfa /F 4\fi
10226       \Hy@setpdfborder
10227       \ifx\@runbordercolor\relax
10228       \else
10229         /C[\@runbordercolor]%
10230       \fi
10231     >%
10232   }%
10233   \Hy@colorlink\@runcolor#2\Hy@endcolorlink
10234   \special{!endaref}%
10235 }
10236 \def\Acrobatmenu#1#2{%
10237   \Hy@Acrobatmenu{#1}{#2}{%
10238     \special{!%
10239       aref <u=/S /Named /N /#1>;%
10240     a=<%
10241       \ifHy@pdfa /F 4\fi
10242       \Hy@setpdfborder
10243       \ifx\@menubordercolor\relax
10244       \else
10245         /C[\@menubordercolor]%
10246       \fi
10247     >%

```



```

10248 }%
10249 \Hy@colorlink\@menucolor#2\Hy@endcolorlink
10250 \special{!endaref}%
10251 }%
10252 }

```

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

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

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

```

10253 \ifnum\Hy@VTeXversion<702 %
10254 \else
10255 \def\hyper@pagetransition{%
10256 \ifx\@pdfpagetransition\relax
10257 \else
10258 \ifx\@pdfpagetransition\@empty

```

Standard incantation.

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

```

10259 \else
10260 \hvtex@parse@trans\@pdfpagetransition
10261 \fi
10262 \fi
10263 }%

```

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:

```

10264 \def\hvtex@trans@effect@Blinds{\def\hvtex@trans@code{B}}%
10265 \def\hvtex@trans@effect@Box{\def\hvtex@trans@code{X}}%
10266 \def\hvtex@trans@effect@Dissolve{\def\hvtex@trans@code{D}}%
10267 \def\hvtex@trans@effect@Glitter{\def\hvtex@trans@code{G}}%
10268 \def\hvtex@trans@effect@Split{\def\hvtex@trans@code{S}}%
10269 \def\hvtex@trans@effect@Wipe{\def\hvtex@trans@code{W}}%
10270 \def\hvtex@trans@effect@R{\def\hvtex@trans@code{R}}%

```

Optional parameters:

```

10271 \def\hvtex@par@dimension{/Dm}%
10272 \def\hvtex@par@direction{/Di}%
10273 \def\hvtex@par@duration{/D}%
10274 \def\hvtex@par@motion{/M}%

```

Tokenizer:

```
10275 \def\hvtex@gettoken{%
10276   \expandafter\hvtex@gettoken@\hvtex@buffer\@nil
10277 }%
```

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

```
10278 \def\hvtex@gettoken@#1 #2\@nil{%
10279   \edef\hvtex@token{#1}%
10280   \edef\hvtex@buffer{#2}%
10281 }%
10282 \def\hvtex@parse@trans#1{%
```

Initializing code:

```
10283 \let\hvtex@trans@code\@empty
10284 \let\hvtex@param@dimension\@empty
10285 \let\hvtex@param@direction\@empty
10286 \let\hvtex@param@duration\@empty
10287 \let\hvtex@param@motion\@empty
10288 \edef\hvtex@buffer{#1\space}%
```

First token is the PDF transition name without escape.

```
10289 \hvtex@gettoken
10290 \ifx\hvtex@token\@empty
```

Leading space(s)?

```
10291   \ifx\hvtex@buffer\@empty
```

The buffer is empty, nothing to do.

```
10292   \else
10293     \hvtex@gettoken
10294   \fi
10295 \fi
10296 \csname hvtex@trans@effect@\hvtex@token\endcsname
```

Now is time to parse optional parameters.

```
10297 \hvtex@trans@params
10298 }%
```

Reentrant macro to parse optional parameters.

```
10299 \def\hvtex@trans@params{%
10300   \ifx\hvtex@buffer\@empty
10301   \else
10302     \hvtex@gettoken
10303     \let\hvtex@trans@par\hvtex@token
10304     \ifx\hvtex@buffer\@empty
10305     \else
10306       \hvtex@gettoken
10307       \ifx\hvtex@trans@par\hvtex@par@duration
```

/D is the effect duration in seconds. V_{TEX} special takes it in milliseconds.

```
10308       \let\hvtex@param@duration\hvtex@token
10309     \else \ifx\hvtex@trans@par\hvtex@par@motion
```

/M can be either /I or /O

```
10310       \expandafter\edef\expandafter\hvtex@param@motion
10311       \expandafter{\expandafter\@gobble\hvtex@token}%
10312     \else \ifx\hvtex@trans@par\hvtex@par@dimension
```

/Dm can be either /H or /V

```
10313       \expandafter\edef\expandafter\hvtex@param@dimension
10314       \expandafter{\expandafter\@gobble\hvtex@token}%
10315     \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).

```

10316      \let\hvtex@param@direction\hvtex@token
10317      \fi\fi\fi\fi
10318      \fi
10319      \fi
10320      \ifx\hvtex@buffer\@empty
10321        \let\next\hvtex@produce@trans
10322      \else
10323        \let\next\hvtex@trans@params
10324      \fi
10325      \next
10326    }%

```

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

```

10327 \def\hvtex@produce@trans{%
10328   \let\vtex@trans@special\@empty
10329   \if S\hvtex@trans@code
10330     \edef\vtex@trans@special{\hvtex@trans@code
10331       \hvtex@param@dimension\hvtex@param@motion}%
10332   \else\if B\hvtex@trans@code
10333     \edef\vtex@trans@special{%
10334       \hvtex@trans@code\hvtex@param@dimension
10335     }%
10336   \else\if X\hvtex@trans@code
10337     \edef\vtex@trans@special{%
10338       \hvtex@trans@code\hvtex@param@motion
10339     }%
10340   \else\if W\hvtex@trans@code
10341     \edef\vtex@trans@special{%
10342       \hvtex@trans@code\hvtex@param@direction
10343     }%
10344   \else\if D\hvtex@trans@code
10345     \let\vtex@trans@special\hvtex@trans@code
10346   \else\if R\hvtex@trans@code
10347     \let\vtex@trans@special\hvtex@trans@code
10348   \else\if G\hvtex@trans@code
10349     \edef\vtex@trans@special{%
10350       \hvtex@trans@code\hvtex@param@direction
10351     }%
10352   \fi\fi\fi\fi\fi\fi
10353   \ifx\vtex@trans@special\@empty
10354     \else
10355       \ifx\hvtex@param@duration\@empty
10356       \else
10357         \setlength{\dimen@}{\hvtex@param@duration\p@}%

```

I'm not guilty of possible overflow.

```

10358     \multiply\dimen@\@m
10359     \edef\vtex@trans@special{%
10360       \vtex@trans@special,\strip@pt\dimen@
10361     }%
10362     \fi

```

And all the mess is just for this.

```

10363     \special{!trans \vtex@trans@special}%
10364     \fi

```

```

10365 }%
10366 \def\hyper@pageduration{%
10367 \ifx\@pdfpageduration\relax
10368 \else
10369 \ifx\@pdfpageduration\@empty
10370 \special{!duration-}%
10371 \else
10372 \special{!duration \@pdfpageduration}%
10373 \fi
10374 \fi
10375 }%
10376 \def\hyper@pagehidden{%
10377 \ifHy@useHidKey
10378 \special{!hidden\ifHy@pdfpagehidden +\else -\fi}%
10379 \fi
10380 }%
10381 \g@addto@macro\Hy@EveryPageBoxHook{%
10382 \hyper@pagetransition
10383 \hyper@pageduration
10384 \hyper@pagehidden
10385 }%
10386 \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

```

10387 \ifx\@pdfproducer\relax
10388 \def\@pdfproducer{VTeX}%
10389 \ifnum\Hy@VTeXversion>\z@
10390 \count@\VTeXversion
10391 \divide\count@ 100 %
10392 \edef\@pdfproducer{\@pdfproducer\space v\the\count@}%
10393 \multiply\count@ -100 %
10394 \advance\count@\VTeXversion
10395 \edef\@pdfproducer{%
10396 \@pdfproducer
10397 .\ifnum\count@<10 0\fi\the\count@
10398 \ifx\VTeXOS\@undefined\else
10399 \ifnum\VTeXOS>0 %
10400 \ifnum\VTeXOS<6 %
10401 \space(
10402 \ifcase\VTeXOS
10403 \or Windows\or Linux\or OS/2\or MacOS\or MacOS/X%
10404 \fi
10405 )%
10406 \fi
10407 \fi
10408 \fi
10409 ,\space
10410 \ifnum\OpMode=\@one PDF\else PS\fi
10411 \space backend%

```

```

10412 \ifx\gexmode\@undefined\else
10413 \ifnum\gexmode>\z@\space with GeX\fi
10414 \fi
10415 }%
10416 \fi
10417 \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).

```

10418 \def\PDF@SetupDoc{%
10419 \ifx\@pdfpagescrop\@empty
10420 \else
10421 \special{!pdfinfo b=<\@pdfpagescrop>}%
10422 \fi
10423 \ifx\@pdfstartpage\@empty
10424 \else
10425 \ifx\@pdfstartview\@empty
10426 \else
10427 \special{!onopen Page\@pdfstartpage}%
10428 \fi
10429 \fi
10430 \special{!pdfinfo p=</\@pdfpagemode>}%
10431 \ifx\@baseurl\@empty
10432 \else
10433 \special{!pdfinfo u=<<</Base (\@baseurl)>>>}%
10434 \fi
10435 \special{!pdfinfo v=<<<%
10436 \ifHy@toolbar\else /HideToolbar true\fi
10437 \ifHy@menubar\else /HideMenubar true\fi
10438 \ifHy>windowui\else /HideWindowUI true\fi
10439 \ifHy@fitwindow /FitWindow true\fi
10440 \ifHy@centerwindow /CenterWindow true\fi
10441 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10442 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10443 \Hy@UseNameKey{Direction}\@pdfdirection
10444 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10445 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10446 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10447 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10448 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10449 \Hy@UseNameKey{Duplex}\@pdfduplex
10450 \ifx\@pdfpicktraybypdfsize\@empty
10451 \else
10452 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10453 \fi

```

```

10454 \ifx\@pdfprintpagerange\@empty
10455 \else
10456 /PrintPageRange[\@pdfprintpagerange]%
10457 \fi
10458 \ifx\@pdfnumcopies\@empty
10459 \else
10460 /NumCopies \@pdfnumcopies
10461 \fi
10462 >>>}%
10463 \ifx\@pdfpagelayout\@empty
10464 \else
10465 \special{!pdfinfo l=</\@pdfpagelayout\space>}%
10466 \fi
10467 }%
10468 \HyInfo@AddonUnsupportedtrue
10469 \def\PDF@FinishDoc{%
10470 \Hy@UseMaketitleInfos
10471 \HyInfo@TrappedUnsupported
10472 \special{!pdfinfo a=<\@pdfauthor>}%
10473 \special{!pdfinfo t=<\@pdftitle>}%
10474 \special{!pdfinfo s=<\@pdfsubject>}%
10475 \special{!pdfinfo c=<\@pdfcreator>}%
10476 \ifx\@pdfproducer\relax
10477 \else
10478 \special{!pdfinfo r=<\@pdfproducer>}%
10479 \fi
10480 \special{!pdfinfo k=<\@pdfkeywords>}%
10481 \Hy@DisableOption{pdfauthor}%
10482 \Hy@DisableOption{pdftitle}%
10483 \Hy@DisableOption{pdfsubject}%
10484 \Hy@DisableOption{pdfcreator}%
10485 \Hy@DisableOption{pdfcreationdate}%
10486 \Hy@DisableOption{pdfmoddate}%
10487 \Hy@DisableOption{pdfproducer}%
10488 \Hy@DisableOption{pdfkeywords}%
10489 \Hy@DisableOption{pdftrapped}%
10490 \Hy@DisableOption{pdfinfo}%
10491 }
10492 </vtx>

```

46.7 Fix for Adobe bug number 466320

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

```

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

```

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

```

10493 <dviwindo>\def\literalps@out#1{\special{ps:#1}}%
10494 <package>\providecommand*{\Hy@DistillerDestFix}{ }
10495 <*pdfmark | dviwindo>
10496 \def\Hy@DistillerDestFix{%
10497 \begingroup
10498 \let\x\literalps@out

```

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

```

10499 \ifnum \@ifundefined{OpMode}{0}{%
10500     \@ifundefined{gexmode}{0}{%
10501     \ifnum\gexmode>0 \OpMode\else 0\fi
10502     }>1 %
10503     \def\x###1{%
10504     \immediate\special{!=##1}%
10505     }%
10506 \fi
10507 \x{%
10508 /product where{%
10509     pop %
10510     product(Distiller)search{%
10511     pop pop pop %
10512     version(.)search{%
10513     exch pop exch pop%
10514     (3011)eq{%
10515         gsave %
10516         newpath 0 0 moveto closepath clip%
10517         /Courier findfont 10 scalefont setfont %
10518         72 72 moveto(.).show %
10519         grestore%
10520     }if%
10521     }{pop}ifelse%
10522     }{pop}ifelse%
10523     }if%
10524     }%
10525 \endgroup
10526 }
10527 </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

```

10528 <*pdfmark>
10529 \Hy@breaklinks@unsupported
10530 \def\HyPat@ObjRef{%
10531     \[~{~}+~}%
10532 }
10533 \Hy@WrapperDef\hyper@anchor#1{%
10534     \Hy@SaveLastskip
10535     \Hy@VerboseAnchor{#1}%
10536     \begingroup

```

```

10537 \pdfmark[\anchor@spot]{%
10538 pdfmark=/DEST,%
10539 linktype=anchor,%
10540 View=/\@pdfview \@pdfviewparams,%
10541 DestAnchor={#1}%
10542 }%
10543 \endgroup
10544 \Hy@RestoreLastskip
10545 }
10546 \ltx@ifundefined{hyper@anchorstart}{-}{\endinput}
10547 \Hy@WrapperDef\hyper@anchorstart#1{%
10548 \Hy@SaveLastskip
10549 \Hy@VerboseAnchor{#1}%
10550 \literalps@out{H.S}%
10551 \Hy@AllowHyphens
10552 \xdef\hyper@currentanchor{#1}%
10553 \Hy@activeanchortrue
10554 }
10555 \def\hyper@anchorend{%
10556 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.A}%
10557 \pdfmark{%
10558 pdfmark=/DEST,%
10559 linktype=anchor,%
10560 View=/\@pdfview \@pdfviewparams,%
10561 DestAnchor=\hyper@currentanchor,%
10562 }%
10563 \Hy@activeanchorfalse
10564 \Hy@RestoreLastskip
10565 }
10566 \def\hyper@linkstart#1#2{%
10567 \Hy@VerboseLinkStart{#1}{#2}%
10568 \ifHy@breaklinks
10569 \else
10570 \leavevmode
10571 \Hy@SaveSpaceFactor
10572 \hbox\bgroup
10573 \Hy@RestoreSpaceFactor
10574 \fi
10575 \expandafter\Hy@colorlink\csname @#1color\endcsname
10576 \literalps@out{H.S}%
10577 \Hy@AllowHyphens
10578 \xdef\hyper@currentanchor{#2}%
10579 \gdef\hyper@currentlinktype{#1}%
10580 }
10581 \def\hyper@linkend{%
10582 \literalps@out{\strip@pt@and@otherjunk\baselineskip\space H.L}%
10583 \ltx@ifundefined{@\hyper@currentlinktype bordercolor}{%
10584 \let\Hy@tempcolor\relax
10585 }{%
10586 \edef\Hy@tempcolor{%
10587 \csname @\hyper@currentlinktype bordercolor\endcsname
10588 }%
10589 }%
10590 \pdfmark{%
10591 pdfmark=/ANN,%
10592 linktype=link,%
10593 Subtype=/Link,%

```



```

10594   PDFAFlags=4,%
10595   Dest=\hyper@currentanchor,%
10596   AcroHighlight=\@pdfhighlight,%
10597   Border=\@pdfborder,%
10598   BorderStyle=\@pdfborderstyle,%
10599   Color=\Hy@tempcolor,%
10600   Raw=H.B%
10601 }%
10602 \Hy@endcolorlink
10603 \ifHy@breaklinks
10604 \else
10605   \Hy@SaveSpaceFactor
10606   \egroup
10607   \Hy@RestoreSpaceFactor
10608 \fi
10609 }

```

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.

```

10610 \begingroup
10611   \catcode'P=12 %
10612   \catcode'T=12 %
10613   \lowercase{\endgroup
10614   \gdef\rem@ptetc#1.#2PT#3!{#1\ifnum#2>\z@.#2\fi}%
10615 }
10616 \def\strip@pt@and@otherjunk#1{\expandafter\rem@ptetc\the#1!}

```

\hyper@pagetransition

```

10617 \def\hyper@pagetransition{%
10618   \ifx\@pdfpagetransition\relax
10619   \else
10620     \ifx\@pdfpagetransition\@empty
10621       % 1. Does an old entry have to be deleted?
10622       % 2. If 1=yes, how to delete?
10623     \else
10624       \pdfmark{%
10625         pdfmark=/PUT,%
10626         Raw={%
10627           \string{ThisPage\string}%
10628           <</Trans << /S /\@pdfpagetransition\space >> >>%
10629         }%
10630       }%
10631     \fi
10632   \fi
10633 }

```

\hyper@pageduration

```

10634 \def\hyper@pageduration{%
10635   \ifx\@pdfpageduration\relax
10636   \else
10637     \ifx\@pdfpageduration\@empty
10638       % 1. Does an old entry have to be deleted?
10639       % 2. If 1=yes, how to delete?
10640     \else
10641       \pdfmark{%
10642         pdfmark=/PUT,%

```

```

10643     Raw={%
10644         \string{ThisPage\string}%
10645         <</Dur \@pdfpageduration>>%
10646     }%
10647 }%
10648 \fi
10649 \fi
10650 }

```

\hyper@pagehidden

```

10651 \def\hyper@pagehidden{%
10652     \ifHy@useHidKey
10653         \pdfmark{%
10654             pdfmark=/PUT,%
10655             Raw={%
10656                 \string{ThisPage\string}%
10657                 <</Hid \ifHy@pdfpagehidden true\else false\fi>>%
10658             }%
10659         }%
10660     \fi
10661 }

10662 \g@addto@macro\Hy@EveryPageBoxHook{%
10663     \hyper@pagetransition
10664     \hyper@pageduration
10665     \hyper@pagehidden
10666 }

10667 \def\hyper@image#1#2{%
10668     \hyper@linkurl{#2}{#1}%
10669 }

10670 \def\Hy@undefinedname{UNDEFINED}
10671 \def\hyper@link#1#2#3{%
10672     \Hy@VerboseLinkStart{#1}{#2}%
10673     \ltx@ifundefined{@#1bordercolor}{%
10674         \let\Hy@tempcolor\relax
10675     }{%
10676         \edef\Hy@tempcolor{\csname @#1bordercolor\endcsname}%
10677     }%
10678     \begingroup
10679     \protected@edef\Hy@testname{#2}%
10680     \ifx\Hy@testname\@empty
10681         \Hy@Warning{%
10682             Empty destination name,\MessageBreak
10683             using '\Hy@undefinedname'%
10684         }%
10685         \let\Hy@testname\Hy@undefinedname
10686     \fi
10687     \pdfmark[{#3}]{%
10688         Color=\Hy@tempcolor,%
10689         linktype={#1},%
10690         AcroHighlight=\@pdfhighlight,%
10691         Border=\@pdfborder,%
10692         BorderStyle=\@pdfborderstyle,%
10693         pdfmark=/ANN,%
10694         Subtype=/Link,%
10695         PDFAFlags=4,%
10696         Dest=\Hy@testname

```

```

10697 }%
10698 \endgroup
10699 }
10700 \newtoks\pdf@docset
10701 \def\PDF@FinishDoc{%
10702   \Hy@UseMaketitleInfos
10703   \HyInfo@GenerateAddons
10704   \let\Hy@temp\@empty
10705   \ifx\@pdfcreationdate\@empty
10706   \else
10707     \def\Hy@temp{CreationDate=\@pdfcreationdate,}%
10708   \fi
10709   \ifx\@pdfmoddate\@empty
10710   \else
10711     \expandafter\def\expandafter\Hy@temp\expandafter{%
10712       \Hy@temp
10713       ModDate=\@pdfmoddate,%
10714     }%
10715   \fi
10716   \ifx\@pdfproducer\relax
10717   \else
10718     \expandafter\def\expandafter\Hy@temp\expandafter{%
10719       \Hy@temp
10720       Producer=\@pdfproducer,%
10721     }%
10722   \fi
10723   \expandafter
10724   \pdfmark\expandafter{%
10725     \Hy@temp
10726     pdfmark=/DOCINFO,%
10727     Title=\@pdftitle,%
10728     Subject=\@pdfsubject,%
10729     Creator=\@pdfcreator,%
10730     Author=\@pdfauthor,%
10731     Keywords=\@pdfkeywords,%
10732     Trapped=\@pdftrapped
10733   }%
10734   \ifx\HyInfo@Addons\@empty
10735   \else
10736     \pdfmark{%
10737       pdfmark=/DOCINFO,%
10738       Raw={\HyInfo@Addons}%
10739     }%
10740   \fi
10741   \Hy@DisableOption{pdfauthor}%
10742   \Hy@DisableOption{pdftitle}%
10743   \Hy@DisableOption{pdfsubject}%
10744   \Hy@DisableOption{pdfcreator}%
10745   \Hy@DisableOption{pdfcreationdate}%
10746   \Hy@DisableOption{pdfmoddate}%
10747   \Hy@DisableOption{pdfproducer}%
10748   \Hy@DisableOption{pdfkeywords}%
10749   \Hy@DisableOption{pdftrapped}%
10750   \Hy@DisableOption{pdfinfo}%
10751 }
10752 \def\PDF@SetupDoc{%
10753   \def\Hy@temp{}%

```

```

10754 \ifx\@pdfstartpage\@empty
10755 \else
10756 \ifx\@pdfstartview\@empty
10757 \else
10758 \edef\Hy@temp{%
10759 ,Page=\@pdfstartpage
10760 ,View=\@pdfstartview
10761 }%
10762 \fi
10763 \fi
10764 \edef\Hy@temp{%
10765 \noexpand\pdfmark{%
10766 pdfmark=/DOCVIEW,%
10767 PageMode=/\@pdfpagemode
10768 \Hy@temp
10769 }%
10770 }%
10771 \Hy@temp
10772 \ifx\@pdfpagescrop\@empty
10773 \else
10774 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
10775 \fi
10776 \edef\Hy@temp{%
10777 \ifHy@toolbar\else /HideToolbar true\fi
10778 \ifHy@menubar\else /HideMenubar true\fi
10779 \ifHy>windowui\else /HideWindowUI true\fi
10780 \ifHy@fitwindow /FitWindow true\fi
10781 \ifHy@centerwindow /CenterWindow true\fi
10782 \ifHy@displaydoctitle /DisplayDocTitle true\fi
10783 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
10784 \Hy@UseNameKey{Direction}\@pdfdirection
10785 \Hy@UseNameKey{ViewArea}\@pdfviewarea
10786 \Hy@UseNameKey{ViewClip}\@pdfviewclip
10787 \Hy@UseNameKey{PrintArea}\@pdfprintarea
10788 \Hy@UseNameKey{PrintClip}\@pdfprintclip
10789 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
10790 \Hy@UseNameKey{Duplex}\@pdfduplex
10791 \ifx\@pdfpicktraybypdfsize\@empty
10792 \else
10793 /PickTrayByPDFSize \@pdfpicktraybypdfsize
10794 \fi
10795 \ifx\@pdfprintpagerange\@empty
10796 \else
10797 /PrintPageRange[\@pdfprintpagerange]%
10798 \fi
10799 \ifx\@pdfnumcopies\@empty
10800 \else
10801 /NumCopies \@pdfnumcopies
10802 \fi
10803 }%
10804 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
10805 \pdfmark{%
10806 pdfmark=/PUT,%
10807 Raw={%
10808 \string{Catalog\string}<<%
10809 \ifx\Hy@temp\@empty
10810 \else

```

```

10811      /ViewerPreferences<<\Hy@temp>>%
10812      \fi
10813      \Hy@UseNameKey{PageLayout}\@pdfpagelayout
10814      \ifx\@pdflang\@empty
10815      \else
10816      /Lang(\@pdflang)%
10817      \fi
10818      \ifx\@baseurl\@empty
10819      \else
10820      /URI<</Base(\Hy@pstringB)>>%
10821      \fi
10822      >>%
10823    }%
10824  }%
10825 }
10826 </pdfmark>
10827 <*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.

```

10828 \newif\ifHy@pdfmarkerror
10829 \def\pdfmark{\@ifnextchar[{\pdfmark@}{\pdfmark@[]}}
10830 \def\pdfmark@[#1]#2{%
10831   \Hy@pdfmarkerrorfalse
10832   \edef\@processme{\noexpand\pdf@toks={\the\pdf@defaulttoks}}%
10833   \@processme
10834   \let\pdf@type\relax
10835   \kvsetkeys{PDF}{#2}%
10836   \ifHy@pdfmarkerror
10837   \else
10838     \ifx\pdf@type\relax
10839       \Hy@WarningNoLine{no pdfmark type specified in #2!!}%
10840       \ifx\#1\%
10841       \else
10842         \pdf@rect{#1}%
10843         \fi
10844       \else
10845         \ifx\#1\%
10846         \literalps@out{%
10847           [\the\pdf@toks\space\pdf@type\space pdfmark%
10848           }%
10849         \else
10850           \ltx@ifundefined{@\pdf@linktype color}{%
10851             \Hy@colorlink\@linkcolor
10852           }{%
10853             \expandafter\Hy@colorlink
10854             \csname @\pdf@linktype color\endcsname
10855           }%
10856           \pdf@rect{#1}%
10857           \literalps@out{%
10858             [\the\pdf@toks\space\pdf@type\space pdfmark%
10859             }%
10860           \Hy@endcolorlink
10861         \fi

```

```

10862 \fi
10863 \fi
10864 }

```

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}

```

```

10865 \newsavebox{\pdf@box}
10866 \providecommand*{\Hy@setouterhbox}{\sbox}
10867 \providecommand*{\Hy@breaklinksunhbox}{\unhbox}
10868 \def\Hy@DEST{/DEST}
10869 \def\pdf@rect#1{%
10870   \begingroup
10871   \chardef\x=1 %
10872   \def\Hy@temp{#1}%
10873   \ifx\Hy@temp\ltx@empty
10874     \chardef\x=0 %
10875   \else
10876     \def\y{\anchor@spot}%
10877     \ifx\Hy@temp\y
10878       \def\y{\relax}%
10879       \ifx\anchor@spot\y
10880         \chardef\x=0 %
10881       \fi
10882     \fi
10883   \fi
10884 \expandafter\endgroup
10885 \ifcase\x
10886   \literalps@out{H.S}%
10887   \literalps@out{H.R}%
10888 \else
10889   \leavevmode
10890   \Hy@SaveSpaceFactor
10891   \ifHy@breaklinks
10892     \Hy@setouterhbox\pdf@box{%
10893       \Hy@RestoreSpaceFactor
10894       \Hy@AllowHyphens#1%
10895       \Hy@SaveSpaceFactor
10896     }%
10897   \else
10898     \sbox\pdf@box{%
10899       \Hy@RestoreSpaceFactor
10900       #1%
10901       \Hy@SaveSpaceFactor
10902     }%
10903   \fi
10904   \dimen@ht\pdf@box
10905   \ifdim\dp\pdf@box=\z@
10906     \literalps@out{H.S}%
10907   \else

```

```

10908 \lower\dp\pdf@box\hbox{\literalps@out{H.S}}}%
10909 \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...).

```

10910 \ifHy@breaklinks
10911 \expandafter\Hy@breaklinksunhbox
10912 \else
10913 \expandafter\box
10914 \fi
10915 \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

10916 \ifdim\dimen@=\z@
10917 \literalps@out{H.R.}%
10918 \else
10919 \raise\dimen@\hbox{\literalps@out{H.R.}}%
10920 \fi
10921 \Hy@RestoreSpaceFactor
10922 \fi
10923 \ifx\pdf@type\Hy@DEST
10924 \else
10925 \pdf@addtoksx{H.B}%
10926 \fi
10927 }

```

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.

```

10928 \newtoks\pdf@toks
10929 \newtoks\pdf@defaulttoks
10930 \pdf@defaulttoks={}%
10931 \def\pdf@addtoks#1#2{%
10932 \edef\@processme{\pdf@toks{\the\pdf@toks/#2 #1}}%
10933 \@processme
10934 }
10935 \def\pdf@addtoksx#1{%
10936 \edef\@processme{\pdf@toks{\the\pdf@toks\space #1}}%
10937 \@processme
10938 }
10939 \def\PDFdefaults#1{%
10940 \pdf@defaulttoks={#1}%
10941 }

```

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

```

10942 % what is the type of pdfmark?
10943 \define@key{PDF}{pdfmark}{\def\pdf@type{#1}}
10944 % what is the link type?
10945 \define@key{PDF}{linktype}{\def\pdf@linktype{#1}}
10946 \def\pdf@linktype{link}
10947 % parameter is a stream of PDF
10948 \define@key{PDF}{Raw}{\pdf@addtoksx{#1}}
10949 % parameter is a name
10950 \define@key{PDF}{Action}{\pdf@addtoks{#1}{Action}}
10951 % parameter is a array

```

```

10952 \define@key{PDF}{Border}{%
10953   \edef\Hy@temp{#1}%
10954   \ifx\Hy@temp\@empty
10955     \else
10956       \pdf@addtoks{[#1]\Hy@BorderArrayPatch}{Border}% hash-ok
10957     \fi
10958 }
10959 \let\Hy@BorderArrayPatch\@empty
10960 % parameter is a dictionary
10961 \define@key{PDF}{BorderStyle}{%
10962   \edef\Hy@temp{#1}%
10963   \ifx\Hy@temp\@empty
10964     \else
10965       \pdf@addtoks{<<#1>>}{BS}%
10966     \fi
10967 }
10968 % parameter is a array
10969 \define@key{PDF}{Color}{%
10970   \ifx\relax#1\relax
10971     \else
10972       \pdf@addtoks{[#1]}{Color}% hash-ok
10973     \fi
10974 }
10975 % parameter is a string
10976 \define@key{PDF}{Contents}{\pdf@addtoks{(#1)}{Contents}}
10977 % parameter is a integer
10978 \define@key{PDF}{Count}{\pdf@addtoks{#1}{Count}}
10979 % parameter is a array
10980 \define@key{PDF}{CropBox}{\pdf@addtoks{[#1]}{CropBox}}% hash-ok
10981 % parameter is a string
10982 \define@key{PDF}{DOSFile}{\pdf@addtoks{(#1)}{DOSFile}}
10983 % parameter is a string or file
10984 \define@key{PDF}{DataSource}{\pdf@addtoks{(#1)}{DataSource}}
10985 % parameter is a destination
10986 \define@key{PDF}{Dest}{%
10987   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10988   \ifx\Hy@pstringDest\@empty
10989     \Hy@pdfmarkerrortrue
10990     \Hy@Warning{Destination with empty name ignored}%
10991   \else
10992     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
10993   \fi
10994 }
10995 \define@key{PDF}{DestAnchor}{%
10996   \Hy@pstringdef\Hy@pstringDest{\HyperDestNameFilter{#1}}%
10997   \ifx\Hy@pstringDest\@empty
10998     \Hy@pdfmarkerrortrue
10999     \Hy@Warning{Destination with empty name ignored}%
11000   \else
11001     \pdf@addtoks{(\Hy@pstringDest) cvn}{Dest}%
11002   \fi
11003 }
11004 % parameter is a string
11005 \define@key{PDF}{Dir}{\pdf@addtoks{(#1)}{Dir}}
11006 % parameter is a string
11007 \define@key{PDF}{File}{\pdf@addtoks{(#1)}{File}}
11008 % parameter is a int

```



```

11009 \define@key{PDF}{Flags}{\pdf@addtoks{#1}{Flags}}
11010 \define@key{PDF}{PDFAFlags}{%
11011   \ifHy@pdfa
11012     \pdf@addtoks{#1}{F}%
11013   \fi
11014 }
11015 % parameter is a name
11016 \define@key{PDF}{AcroHighlight}{%
11017   \begingroup
11018     \edef\x{#1}%
11019     \expandafter\endgroup\ifx\x@empty
11020     \else
11021       \pdf@addtoks{#1}{H}%
11022     \fi
11023 }
11024 % parameter is a string
11025 \define@key{PDF}{ID}{\pdf@addtoks{#1}{ID}}% hash-ok
11026 % parameter is a string
11027 \define@key{PDF}{MacFile}{\pdf@addtoks{#1}{MacFile}}
11028 % parameter is a string
11029 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
11030 % parameter is a string
11031 \define@key{PDF}{Op}{\pdf@addtoks{#1}{Op}}
11032 % parameter is a Boolean
11033 \define@key{PDF}{Open}{\pdf@addtoks{#1}{Open}}
11034 % parameter is an integer or name
11035 \define@key{PDF}{Page}{\pdf@addtoks{#1}{Page}}
11036 % parameter is a name
11037 \define@key{PDF}{PageMode}{\pdf@addtoks{#1}{PageMode}}
11038 % parameter is a string
11039 \define@key{PDF}{Params}{\pdf@addtoks{#1}{Params}}
11040 % parameter is an array
11041 \define@key{PDF}{Rect}{\pdf@addtoks{#1}{Rect}}% hash-ok
11042 % parameter is an integer
11043 \define@key{PDF}{SrcPg}{\pdf@addtoks{#1}{SrcPg}}
11044 % parameter is a name
11045 \define@key{PDF}{Subtype}{\pdf@addtoks{#1}{Subtype}}
11046 % parameter is a string
11047 \define@key{PDF}{Title}{\pdf@addtoks{#1}{Title}}
11048 % parameter is a string
11049 \define@key{PDF}{Unix}{\pdf@addtoks{#1}{Unix}}
11050 % parameter is a string
11051 \define@key{PDF}{UnixFile}{\pdf@addtoks{#1}{UnixFile}}
11052 % parameter is an array
11053 \define@key{PDF}{View}{\pdf@addtoks{#1}{View}}% hash-ok
11054 % parameter is a string
11055 \define@key{PDF}{WinFile}{\pdf@addtoks{#1}{WinFile}}

```

These are the keys used in the DOCINFO section.

```

11056 \define@key{PDF}{Author}{\pdf@addtoks{#1}{Author}}
11057 \define@key{PDF}{Creator}{\pdf@addtoks{#1}{Creator}}
11058 \define@key{PDF}{CreationDate}{\pdf@addtoks{#1}{CreationDate}}
11059 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
11060 \define@key{PDF}{Producer}{\pdf@addtoks{#1}{Producer}}
11061 \define@key{PDF}{Subject}{\pdf@addtoks{#1}{Subject}}
11062 \define@key{PDF}{Keywords}{\pdf@addtoks{#1}{Keywords}}
11063 \define@key{PDF}{ModDate}{\pdf@addtoks{#1}{ModDate}}
11064 \define@key{PDF}{Base}{\pdf@addtoks{#1}{Base}}

```

```

11065 \define@key{PDF}{URI}{\pdf@addtoks{#1}{URI}}
11066 \define@key{PDF}{Trapped}{%
11067   \edef\Hy@temp{#1}%
11068   \ifx\Hy@temp\@empty
11069   \else
11070     \pdf@addtoks{/#1}{Trapped}%
11071   \fi
11072 }
11073
11074 </pdfmarkbase>
11075 <*pdfmark>
11076 \def\Acrobatmenu#1#2{%
11077   \Hy@Acrobatmenu{#1}{#2}{%
11078     \pdfmark[{#2}]{%
11079       linktype=menu,%
11080       pdfmark=/ANN,%
11081       AcroHighlight=\@pdfhighlight,%
11082       Border=\@pdfborder,%
11083       BorderStyle=\@pdfborderstyle,%
11084       Action={<< /Subtype /Named /N /#1 >>},%
11085       Subtype=/Link,%
11086       PDFAFlags=4%
11087     }%
11088   }%
11089 }

```

And now for some useful examples:

```

11090 \def\PDFNextPage{\@ifnextchar[{\PDFNextPage@}{\PDFNextPage@[]}}
11091 \def\PDFNextPage@[#1]#2{%
11092   \pdfmark[{#2}]{%
11093     #1,%
11094     Border=\@pdfborder,%
11095     BorderStyle=\@pdfborderstyle,%
11096     Color=.2 .1 .5,%
11097     pdfmark=/ANN,%
11098     Subtype=/Link,%
11099     PDFAFlags=4,%
11100     Page=/Next%
11101   }%
11102 }
11103 \def\PDFPreviousPage{%
11104   \@ifnextchar[{\PDFPreviousPage@}{\PDFPreviousPage@[]}%
11105 }
11106 \def\PDFPreviousPage@[#1]#2{%
11107   \pdfmark[{#2}]{%
11108     #1,%
11109     Border=\@pdfborder,%
11110     BorderStyle=\@pdfborderstyle,%
11111     Color=.4 .4 .1,%
11112     pdfmark=/ANN,%
11113     Subtype=/Link,%
11114     PDFAFlags=4,%
11115     Page=/Prev%
11116   }%
11117 }
11118 \def\PDFOpen#1{%
11119   \pdfmark{#1,pdfmark=/DOCVIEW}%
11120 }

```

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

```
11121 \def\hyper@linkurl#1#2{%
11122   \begingroup
11123   \Hy@pstringdef\Hy@pstringURI{#2}%
11124   \hyper@chars
11125   \leavevmode
11126   \pdfmark[{#1}]{%
11127     pdfmark=/ANN,%
11128     linktype=url,%
11129     AcroHighlight=\@pdfhighlight,%
11130     Border=\@pdfborder,%
11131     BorderStyle=\@pdfborderstyle,%
11132     Color=\@urlbordercolor,%
11133     Action={<<%
11134       /Subtype/URI%
11135       /URI(\Hy@pstringURI)%
11136       \ifHy@href@ismap
11137         /IsMap true%
11138       \fi
11139     >>},%
11140     Subtype=/Link,%
11141     PDFAFlags=4%
11142   }%
11143   \endgroup
11144 }
11145 \def\hyper@linkfile#1#2#3{%
11146   \begingroup
11147   \def\Hy@pstringF{#2}%
11148   \Hy@CleanupFile\Hy@pstringF
11149   \Hy@pstringdef\Hy@pstringF\Hy@pstringF
11150   \Hy@pstringdef\Hy@pstringD{#3}%
11151   \Hy@MakeRemoteAction
11152   \leavevmode
11153   \pdfmark[{#1}]{%
11154     pdfmark=/ANN,%
11155     Subtype=/Link,%
11156     PDFAFlags=4,%
11157     AcroHighlight=\@pdfhighlight,%
11158     Border=\@pdfborder,%
11159     BorderStyle=\@pdfborderstyle,%
11160     linktype=file,%
11161     Color=\@filebordercolor,%
11162     Action={%
11163       <<%
11164       /S/GoToR.%
11165       \Hy@SetNewWindow
11166       /F(\Hy@pstringF)%
11167       /D%
11168       \ifx\#3\%
11169         [\Hy@href@page\@pdfremotestartview]%
11170       \else
11171         (\Hy@pstringD)cvn%
11172       \fi
11173       \Hy@href@nextactionraw
11174     >>%
11175   }%
11176 }
```

```

11177 \endgroup
11178 }
11179 \def\@hyper@launch run:#1\|#2#3{%
11180 \begingroup
11181 \Hy@pstringdef\Hy@pstringF{#1}%
11182 \Hy@pstringdef\Hy@pstringP{#3}%
11183 \leavevmode
11184 \pdfmark[{#2}]{%
11185 pdfmark=/ANN,%
11186 Subtype=/Link,%
11187 PDFAFlags=4,%
11188 AcroHighlight=\@pdfhighlight,%
11189 Border=\@pdfborder,%
11190 BorderStyle=\@pdfborderstyle,%
11191 linktype=run,%
11192 Color=\@runbordercolor,%
11193 Action={%
11194 <<%
11195 /S/Launch%
11196 \Hy@SetNewWindow
11197 /F(\Hy@pstringF)%
11198 \ifx\|#3\| %
11199 \else
11200 /Win<</P(\Hy@pstringP)/F(\Hy@pstringF)>>%
11201 \fi
11202 \Hy@href@nextactionraw
11203 >>%
11204 }%
11205 }%
11206 \endgroup
11207 }
11208 </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.

```

11209 <*dvips>
11210 \providecommand*\XR@ext}{pdf}
11211 \def\Hy@raisedlink{}
11212 \def\literalps@out#1{\special{ps:SDict begin #1 end}}%
11213 \def\headerps@out#1{\special{! #1}}%
11214 \input{pdfmark.def}%
11215 \ifx\@pdfproducer\relax
11216 \def\@pdfproducer{dvips + Distiller}%
11217 \fi
11218 \providecommand*\@pdfborder{0 0 1}
11219 \providecommand*\@pdfborderstyle{}
11220 \providecommand*\@pdfview{XYZ}
11221 \providecommand*\@pdfviewparams{ H.V}
11222 \def\Hy@BorderArrayPatch{BorderArrayPatch}
11223 \g@addto@macro\Hy@FirstPageHook{%
11224 \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.

```
11225 /DvipsToPDF{72.27 mul Resolution div} def%
11226 /PDFToDvips{72.27 div Resolution mul} def%
11227 /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.

```
11228 /BorderArrayPatch{%
11229   [exch{%
11230     dup dup type/integertype eq exch type/realtype eq or%
11231     {BPToDvips}if%
11232   }forall]%
11233 }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.

```
11234 /HyperBorder {1 PDFToDvips} def%
11235 /H.V {pdf@hoff pdf@voff null} def%
11236 /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

```
11237 /H.S {%
11238   currentpoint %
11239   HyperBorder add /pdf@lly exch def %
11240   dup DvipsToPDF 72 add /pdf@hoff exch def %
11241   HyperBorder sub /pdf@llx exch def%
11242 } def%
```

The calculation of upper left *y* is done without raising the point in \TeX , by simply adding on the current \backslash 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

```
11243 /H.L {%
11244   2 sub dup%
11245   /HyperBasePt exch def %
11246   PDFToDvips /HyperBaseDvips exch def %
11247   currentpoint %
11248   HyperBaseDvips sub /pdf@ury exch def%
11249   /pdf@urx exch def%
11250 } def%
11251 /H.A {%
```

```

11252      H.L %
11253 % | /pdf@voff| = the distance from the top of the page to a point
11254 % | \baselineskip| above the current point in PDF coordinates
11255      currentpoint exch pop %
11256      vsize 72 sub exch DvipsToPDF %
11257      HyperBasePt sub % baseline skip
11258      sub /pdf@voff exch def%
11259    } def%
11260  /H.R {%
11261      currentpoint %
11262      HyperBorder sub /pdf@ury exch def %
11263      HyperBorder add /pdf@urx exch def %
11264 % | /pdf@voff| = the distance from the top of the page to the current point, in
11265 % PDF coordinates
11266      currentpoint exch pop vsize 72 sub %
11267      exch DvipsToPDF sub /pdf@voff exch def%
11268    } def%
11269  }%
11270 }
11271 \AtBeginShipoutFirst{%
11272   \ifHy@setpagesize
11273     \begingroup
11274     \ifundefined{stockwidth}{%
11275       \ifdim\paperwidth>\z@
11276         \ifdim\paperheight>\z@
11277           \special{papersize=\the\paperwidth,\the\paperheight}%
11278         \fi
11279       \fi
11280     }{%
11281       \ifdim\stockwidth>\z@
11282         \ifdim\stockheight>\z@
11283           \special{papersize=\the\stockwidth,\the\stockheight}%
11284         \fi
11285       \fi
11286     }%
11287   \endgroup
11288 \fi
11289 \Hy@DisableOption{setpagesize}%
11290 }
11291 \</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.

```

11292 \<*vtexpdfmark>
11293 \providecommand*{\XR@ext}{pdf}
11294 \def\Hy@raisedlink{}
11295 \def\literalps@out#1{\special{pS:#1}}%
11296 \def\headerps@out#1{\immediate\special{pS:#1}}%
11297 \input{pdfmark.def}%
11298 \ifx\@pdfproducer\relax
11299   \ifnum\OpMode=\@ne
11300     \def\@pdfproducer{VTeX}%

```

```

11301 \else
11302   \def\@pdfproducer{VTeX + Distiller}%
11303 \fi
11304 \fi
11305 \providecommand*\@pdfborder{0 0 1}
11306 \providecommand*\@pdfborderstyle{}
11307 \providecommand*\@pdfview{XYZ}
11308 \providecommand*\@pdfviewparams{ H.V}

11309 \g@addto@macro\Hy@FirstPageHook{%
11310   \headerps@out{%
11311     /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.

```

11312   /HyperBorder {1} def%
11313   /H.V {pdf@hoff pdf@voff null} def%
11314   /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: $\text{pdf@lly} = Y_c - \text{HyperBorder}$, $\text{pdf@hoff} = X_c + 72$, $\text{pdf@llx} = X_c - \text{HyperBorder}$

```

11315   /H.S {%
11316     currentpoint %
11317     HyperBorder sub%
11318     /pdf@lly exch def %
11319     dup 72 add /pdf@hoff exch def %
11320     HyperBorder sub%
11321     /pdf@llx exch def%
11322   } def%

```

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

```

11323   /H.L {%
11324     2 sub%
11325     /HyperBasePt exch def %
11326     currentpoint %
11327     HyperBasePt add HyperBorder add%
11328     /pdf@ury exch def %
11329     HyperBorder add%
11330     /pdf@urx exch def%
11331   } def%
11332   /H.A {%
11333     H.L %
11334     currentpoint exch pop %
11335     vsize 72 sub exch %
11336     HyperBasePt add add%
11337     /pdf@voff exch def%
11338   } def%

```

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

```

11339   /H.R {%
11340     currentpoint %
11341     HyperBorder add%
11342     /pdf@ury exch def %
11343     HyperBorder add%
11344     /pdf@urx exch def %
11345     currentpoint exch pop vsize 72 sub add%
11346     /pdf@voff exch def%

```

```

11347   } def%
11348   }%
11349 }
11350 </vtxpdfmark>

```

46.11 Textures

```

11351 <*textures>
11352 \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.

```

11353 \begingroup
11354   \obeylines %
11355   \gdef\Hy@ps@CR{\noexpand
11356     }%
11357 \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`.

```

11358 \def\literalps@out#1{%
11359   \special{postscript 0 0 transform}%
11360   \special{rawpostscript itransform moveto\Hy@ps@CR #1}%
11361 }%
11362 %

```

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.

```

11363 \def\headerps@out#1{%
11364   \special{%
11365     prepostscript TeXdict begin\Hy@ps@CR
11366       #1\Hy@ps@CR
11367     end%
11368   }%
11369 }%
11370 %

```

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.

```

11371 \g@addto@macro\Hy@FirstPageHook{%
11372   \headerps@out{%
11373     /betterpdfmark {%

```



```

11374    systemdict begin %
11375        dup /BP eq%
11376        {cleartomark gsave nulldevice []}%
11377        {dup /EP eq%
11378            {cleartomark cleartomark grestore}%
11379            {cleartomark}%
11380            ifelse%
11381        }ifelse %
11382    end%
11383    }def\Hy@ps@CR
11384    ____pdfmark__ not{/pdfmark /betterpdfmark load def}if%
11385    }% end of \headerps@out
11386    }% end of \AtBeginShipoutFirst
11387    %
11388    \input{pdfmark.def}%
11389    %
11390    \ifx\@pdfproducer\relax
11391        \def\@pdfproducer{Textures + Distiller}%
11392    \fi
11393    \providecommand*\@pdfborder{0 0 1}
11394    \providecommand*\@pdfborderstyle{}
11395    \providecommand*\@pdfview{XYZ}
11396    \providecommand*\@pdfviewparams{ H.V}
11397    %

```

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 .

```

11398 \Hy@AtBeginDocument{%
11399   \headerps@out{%

```

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

```

11400   /vsize {\Hy@pageheight} def%
11401   /DvipsToPDF {} def%
11402   /PDFToDvips {} def%
11403   /BPTToDvips {} def%
11404   /HyperBorder { 1 PDFToDvips } def\Hy@ps@CR
11405   /H.V {pdf@hoff pdf@voff null} def\Hy@ps@CR
11406   /H.B {/Rect[pdf@llx pdf@lly pdf@urx pdf@ury]} def\Hy@ps@CR
11407   /H.S {%
11408       currentpoint %
11409       HyperBorder add /pdf@lly exch def %
11410       dup DvipsToPDF 72 add /pdf@hoff exch def %
11411       HyperBorder sub /pdf@llx exch def%
11412   } def\Hy@ps@CR
11413   /H.L {%
11414       2 sub %
11415       PDFToDvips /HyperBase exch def %
11416       currentpoint %
11417       HyperBase sub /pdf@ury exch def%
11418       /pdf@urx exch def%
11419   } def\Hy@ps@CR
11420   /H.A {%
11421       H.L %
11422       currentpoint exch pop %
11423       vsize 72 sub exch DvipsToPDF %

```

```

11424   HyperBase sub % baseline skip
11425   sub /pdf@voff exch def%
11426 } def\Hy@ps@CR
11427 /H.R {%
11428   currentpoint %
11429   HyperBorder sub /pdf@ury exch def %
11430   HyperBorder add /pdf@urx exch def %
11431   currentpoint exch pop vsize 72 sub %
11432   exch DvipsToPDF sub /pdf@voff exch def%
11433 } def\Hy@ps@CR
11434 }%
11435 }

11436 \Hy@AtBeginDocument{%
11437   \ifHy@colorlinks
11438     \headerps@out{/PDFBorder{/Border [0 0 0]}def}%
11439   \fi
11440 }

```

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.

```

11441 \expandafter\let\expandafter\keepPDF@SetupDoc
11442   \csname PDF@SetupDoc\endcsname
11443 \def\PDF@SetupDoc{%
11444   \ifx\@baseurl\@empty
11445     \else
11446       \special{html:<base href="\@baseurl">}%
11447     \fi
11448   \keepPDF@SetupDoc
11449 }

11450 \Hy@WrapperDef\hyper@anchor#1{%
11451   \Hy@SaveLastskip
11452   \Hy@VerboseAnchor{#1}%
11453   \begingroup
11454     \let\protect=\string
11455     \special{html:<a name=%
11456       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11457   \endgroup
11458   \Hy@activeanchortrue
11459   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11460   \special{html:</a>}%
11461   \Hy@activeanchorfalse
11462   \Hy@RestoreLastskip
11463 }

11464 \Hy@WrapperDef\hyper@anchorstart#1{%
11465   \Hy@SaveLastskip
11466   \Hy@VerboseAnchor{#1}%
11467   \begingroup
11468     \hyper@chars
11469     \special{html:<a name=%
11470       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11471   \endgroup
11472   \Hy@activeanchortrue
11473 }

11474 \def\hyper@anchorend{%
11475   \special{html:</a>}%
11476   \Hy@activeanchorfalse
11477   \Hy@RestoreLastskip

```

```

11478 }
11479 \def\@urltype{url}
11480 \def\hyper@linkstart#1#2{%
11481   \Hy@VerboseLinkStart{#1}{#2}%
11482   \expandafter\Hy@colorlink\csname @#1color\endcsname
11483   \def\Hy@tempa{#1}%
11484   \ifx\Hy@tempa\@urltype
11485     \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11486   \else
11487     \begingroup
11488       \hyper@chars
11489       \special{%
11490         html:<a href=
11491         \hyper@quote\# \HyperDestNameFilter{#2}\hyper@quote>%
11492       }%
11493     \endgroup
11494   \fi
11495 }
11496 \def\hyper@linkend{%
11497   \special{html:</a>}%
11498   \Hy@endcolorlink
11499 }
11500 \def\hyper@linkfile#1#2#3{%
11501   \hyper@linkurl{#1}{%
11502     \Hy@linkfileprefix#2\ifx\\#3\\\else\##3\fi
11503   }%
11504 }
11505 \def\hyper@linkurl#1#2{%
11506   \leavevmode
11507   \ifHy@raiselinks
11508     \Hy@SaveSpaceFactor
11509     \Hy@SaveSavedSpaceFactor
11510     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11511     \Hy@RestoreSavedSpaceFactor
11512     \@linkdim\dp\@tempboxa
11513     \lower\@linkdim\hbox{%
11514       \hyper@chars
11515       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11516     }%
11517     \Hy@colorlink\@urlcolor
11518     \Hy@RestoreSpaceFactor
11519     #1%
11520     \Hy@SaveSpaceFactor
11521     \@linkdim\ht\@tempboxa
11522     \advance\@linkdim by -6.5\p@
11523     \raise\@linkdim\hbox{\special{html:</a>}}%
11524     \Hy@endcolorlink
11525     \Hy@RestoreSpaceFactor
11526   \else
11527     \begingroup
11528       \hyper@chars
11529       \special{html:<a href=\hyper@quote#2\hyper@quote>}%
11530       \Hy@colorlink\@urlcolor#1%
11531       \special{html:</a>}%
11532       \Hy@endcolorlink
11533     \endgroup
11534   \fi

```

11535 }

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

11536 \def\hyper@link#1#2#3{%

11537 \Hy@VerboseLinkStart{#1}{#2}%

11538 \hyper@linkurl{#3}{\# \HyperDestNameFilter{#2}}%

11539 }

11540 \def\hyper@image#1#2{%

11541 \begingroup

11542 \hyper@chars

11543 \special{html:}%

11544 \endgroup

11545 }

11546 </textures>

46.12 dvipsone

11547 % \subsection{dvipsone driver}

11548 % Over-ride the default setup macro in pdfmark driver to use Y\&Y

11549 % |\special| commands.

11550 <*dvipsone>

11551 \providecommand*{\XR@ext}{pdf}

11552 \def\Hy@raisedlink{}

11553 \providecommand*\@pdfborder{0 0 1}

11554 \providecommand*\@pdfborderstyle{}

11555 \def\literalps@out#1{\special{ps:#1}}%

11556 \def\headerps@out#1{\special{headertext=#1}}%

11557 \input{pdfmark.def}%

11558 \ifx\@pdfproducer\relax

11559 \def\@pdfproducer{dvipsone + Distiller}%

11560 \fi

11561 \HyInfo@AddonUnsupportedtrue

11562 \def\PDF@FinishDoc{%

11563 \Hy@UseMaketitleInfos

11564 \HyInfo@TrappedUnsupported

11565 \special{PDF: Keywords \@pdfkeywords}%

11566 \special{PDF: Title \@pdftitle}%

11567 \special{PDF: Creator \@pdfcreator}%

11568 \ifx\@pdfcreationdate\@empty

11569 \else

11570 \special{PDF: CreationDate \@pdfcreationdate}%

11571 \fi

11572 \ifx\@pdfmoddate\@empty

11573 \else

11574 \special{PDF: ModDate \@pdfmoddate}%

11575 \fi

11576 \special{PDF: Author \@pdfauthor}%

11577 \ifx\@pdfproducer\relax

11578 \else

11579 \special{PDF: Producer \@pdfproducer}%

11580 \fi

11581 \special{PDF: Subject \@pdfsubject}%

11582 \Hy@DisableOption{pdfauthor}%

11583 \Hy@DisableOption{pdftitle}%

11584 \Hy@DisableOption{pdfsubject}%

11585 \Hy@DisableOption{pdfcreator}%

11586 \Hy@DisableOption{pdfcreationdate}%

11587 \Hy@DisableOption{pdfmoddate}%

```

11588 \Hy@DisableOption{pdfproducer}%
11589 \Hy@DisableOption{pdfkeywords}%
11590 \Hy@DisableOption{pdftrapped}%
11591 \Hy@DisableOption{pdfinfo}%
11592 }
11593 \def\PDF@SetupDoc{%
11594 \def\Hy@temp{}%
11595 \ifx\@pdfstartpage\@empty
11596 \else
11597 \ifx\@pdfstartview\@empty
11598 \else
11599 \edef\Hy@temp{%
11600 ,Page=\@pdfstartpage
11601 ,View=\@pdfstartview
11602 }%
11603 \fi
11604 \fi
11605 \edef\Hy@temp{%
11606 \noexpand\pdfmark{%
11607 pdfmark=/DOCVIEW,%
11608 PageMode=/\@pdfpagemode
11609 \Hy@temp
11610 }%
11611 }%
11612 \Hy@temp
11613 \ifx\@pdfpagescrop\@empty
11614 \else
11615 \pdfmark{pdfmark=/PAGES,CropBox=\@pdfpagescrop}%
11616 \fi
11617 \edef\Hy@temp{%
11618 \ifHy@toolbar\else /HideToolbar true\fi
11619 \ifHy@menubar\else /HideMenubar true\fi
11620 \ifHy>windowui\else /HideWindowUI true\fi
11621 \ifHy@fitwindow /FitWindow true\fi
11622 \ifHy@centerwindow /CenterWindow true\fi
11623 \ifHy@displaydoctitle /DisplayDocTitle true\fi
11624 \Hy@UseNameKey{NonFullScreenPageMode}\@pdfnonfullscreenpagemode
11625 \Hy@UseNameKey{Direction}\@pdfdirection
11626 \Hy@UseNameKey{ViewArea}\@pdfviewarea
11627 \Hy@UseNameKey{ViewClip}\@pdfviewclip
11628 \Hy@UseNameKey{PrintArea}\@pdfprintarea
11629 \Hy@UseNameKey{PrintClip}\@pdfprintclip
11630 \Hy@UseNameKey{PrintScaling}\@pdfprintscaling
11631 \Hy@UseNameKey{Duplex}\@pdfduplex
11632 \ifx\@pdfpicktraybypdfsize\@empty
11633 \else
11634 /PickTrayByPDFSize \@pdfpicktraybypdfsize
11635 \fi
11636 \ifx\@pdfprintpagerange\@empty
11637 \else
11638 /PrintPageRange[\@pdfprintpagerange]%
11639 \fi
11640 \ifx\@pdfnumcopies\@empty
11641 \else
11642 /NumCopies \@pdfnumcopies
11643 \fi
11644 }%

```

```

11645 \Hy@pstringdef\Hy@pstringB{\@baseurl}%
11646 \pdfmark{%
11647   pdfmark=/PUT,%
11648   Raw={%
11649     \string{Catalog\string}<<%
11650     \ifx\Hy@temp\@empty
11651     \else
11652       /ViewerPreferences<<\Hy@temp>>%
11653     \fi
11654     \Hy@UseNameKey{PageLayout}\@pdfpagelayout
11655     \ifx\@pdflang\@empty
11656     \else
11657       /Lang(\@pdflang)%
11658     \fi
11659     \ifx\@baseurl\@empty
11660     \else
11661       /URI<</Base(\Hy@pstringB)>>%
11662     \fi
11663   >>%
11664 }%
11665 }%
11666 }
11667 \providecommand*\@pdfview{XYZ}
11668 \providecommand*\@pdfviewparams{ %
11669   gsave revscl currentpoint grestore %
11670   72 add exch pop null exch null%
11671 }
11672 \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 .

```

11673 \g@addto@macro\Hy@FirstPageHook{%
11674   \headerps@out{%

```

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

```

11675   /DvipsToPDF { 65781 div } def%
11676   /PDFToDvips { 65781 mul } def%
11677   /BPTToDvips{65781 mul}def%
11678   /HyperBorder { 1 PDFToDvips } def%
11679   /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.

```

11680   /BorderArrayPatch{%
11681     [exch{%
11682       dup dup type/integertype eq exch type/realtype eq or%
11683       {BPTToDvips}if%
11684     }forall]%
11685   }def%
11686   /H.S {%
11687     currentpoint %
11688     HyperBorder add /pdf@lly exch def %
11689     dup DvipsToPDF 72 add /pdf@hoff exch def %
11690     HyperBorder sub /pdf@llx exch def%
11691   } def%

```

```

11692 /H.L {%
11693   2 sub %
11694   PDFToDvips /HyperBase exch def %
11695   currentpoint %
11696   HyperBase sub /pdf@ury exch def%
11697   /pdf@urx exch def%
11698 } def%
11699 /H.A {%
11700   H.L %
11701   currentpoint exch pop %
11702   HyperBase sub % baseline skip
11703   DvipsToPDF /pdf@voff exch def%
11704 } def%
11705 /H.R {%
11706   currentpoint %
11707   HyperBorder sub /pdf@ury exch def %
11708   HyperBorder add /pdf@urx exch def %
11709   currentpoint exch pop DvipsToPDF /pdf@voff exch def%
11710 } def%
11711 }%
11712 }
11713 </dvipsone>

```

46.13 TeX4ht

```

11714 <*tex4ht>
11715 \providecommand*{\XR@ext}{html}
11716 \def\Hy@raisedlink{}
11717 \@ifpackageloaded{tex4ht}{%
11718   \Hy@InfoNoLine{tex4ht is already loaded}%
11719 }{%
11720   \RequirePackage[hTeX4ht]{tex4ht}%
11721 }
11722 \hyperlinkfileprefix{}
11723 \def\PDF@FinishDoc{}
11724 \def\PDF@SetupDoc{%
11725   \ifx\@baseurl\@empty
11726   \else
11727     \special{t4ht=<base href="\@baseurl">}%
11728   \fi
11729 }
11730 \Hy@WrapperDef\hyper@anchor#1{%
11731   \Hy@SaveLastskip
11732   \Hy@VerboseAnchor{#1}%
11733   \begingroup
11734     \let\protect=\string
11735     \special{t4ht=<a name=%
11736       \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}%
11737   \endgroup
11738   \Hy@activeanchortrue
11739   \Hy@colorlink\@anchorcolor\anchor@spot\Hy@endcolorlink
11740   \special{t4ht=</a>}%
11741   \Hy@activeanchorfalse
11742   \Hy@RestoreLastskip
11743 }
11744 \Hy@WrapperDef\hyper@anchorstart#1{%
11745   \Hy@SaveLastskip
11746   \Hy@VerboseAnchor{#1}%

```

```

11747 \begingroup
11748   \hyper@chars\special{t4ht=<a name=%
11749     \hyper@quote\HyperDestNameFilter{#1}\hyper@quote>}}%
11750 \endgroup
11751 \Hy@activeanchortrue
11752 }
11753 \def\hyper@anchorend{%
11754   \special{t4ht=</a>}}%
11755 \Hy@activeanchorfalse
11756 \Hy@RestoreLastskip
11757 }
11758 \def\@urltype{url}
11759 \def\hyper@linkstart#1#2{%
11760   \Hy@VerboseLinkStart{#1}{#2}%
11761   \expandafter\Hy@colorlink\csname @#1color\endcsname
11762   \def\Hy@tempa{#1}%
11763   \ifx\Hy@tempa\@urltype
11764     \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}}%
11765   \else
11766     \begingroup
11767       \hyper@chars
11768       \special{t4ht=<a href=%
11769         \hyper@quote\#\HyperDestNameFilter{#2}\hyper@quote>}}%
11770     \endgroup
11771   \fi
11772 }
11773 \def\hyper@linkend{%
11774   \special{t4ht=</a>}}%
11775 \Hy@endcolorlink
11776 }
11777 \def\hyper@linkfile#1#2#3{%
11778   \hyper@linkurl{#1}\Hy@linkfileprefix#2\ifx\\#3\\\else\\#3\fi}%
11779 }
11780 \def\hyper@linkurl#1#2{%
11781   \leavevmode
11782   \ifHy@raiselinks
11783     \Hy@SaveSpaceFactor
11784     \Hy@SaveSavedSpaceFactor
11785     \sbox\@tempboxa{\Hy@RestoreSpaceFactor#1}%
11786     \Hy@RestoreSavedSpaceFactor
11787     \@linkdim\dp\@tempboxa
11788     \lower\@linkdim\hbox{%
11789       \begingroup
11790         \hyper@chars
11791         \special{%
11792           t4ht=<a href=\hyper@quote#2\hyper@quote>%
11793         }%
11794       \endgroup
11795     }%
11796     \Hy@colorlink\@urlcolor
11797     \Hy@RestoreSpaceFactor
11798     #1%
11799     \Hy@SaveSpaceFactor
11800   \Hy@endcolorlink
11801   \@linkdim\ht\@tempboxa
11802   \advance\@linkdim by -6.5\p@
11803   \raise\@linkdim\hbox{\special{t4ht=</a>}}}%

```



```

11804 \Hy@RestoreSpaceFactor
11805 \else
11806 \begingroup
11807 \hyper@chars
11808 \special{t4ht=<a href=\hyper@quote#2\hyper@quote>}%
11809 \Hy@colorlink\@urlcolor#1\Hy@endcolorlink
11810 \special{t4ht=</a>}%
11811 \endgroup
11812 \fi
11813 }

```

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

```

11814 \def\hyper@link#1#2#3{%
11815 \Hy@VerboseLinkStart{#1}{#2}%
11816 \hyper@linkurl{#3}{\#\Hy@DestNameFilter{#2}}%
11817 }
11818 \def\hyper@image#1#2{%
11819 \begingroup
11820 \hyper@chars
11821 \special{t4ht=<img src=\hyper@quote#1\hyper@quote>}%
11822 \endgroup
11823 }
11824 \let\autoref\ref
11825 \ifx \rEfLiNK \UnDef
11826 \def\rEfLiNK #1#2{#2}%
11827 \fi
11828 \def\backref#1{}

```

Fix for tex4ht.

```

11829 \AtBeginDocument{%
11830 \expandafter\let\expandafter\Hy@OrgMakeLabel\csname Make:Label\endcsname
11831 \expandafter\def\csname Make:Label\endcsname#1#2{%
11832 \ifhmode
11833 \Hy@SaveSpaceFactor
11834 \else
11835 \global\Hy@SavedSpaceFactor=1000 %
11836 \fi
11837 \Hy@OrgMakeLabel{#1}{%
11838 \Hy@RestoreSpaceFactor
11839 #2%
11840 \Hy@SaveSpaceFactor
11841 }%
11842 \Hy@RestoreSpaceFactor
11843 }%
11844 }
11845 </tex4ht>
11846 <*tex4htcfg>
11847 \IfFileExists{\jobname.cfg}{\endinput}{}
11848 \Preamble{html}
11849 \begin{document}%
11850 \EndPreamble
11851 \def\TeX{\TeX}
11852 \def\OMEGA{\Omega}
11853 \def\LaTeX{\LaTeX}
11854 \def\LaTeXe{\LaTeXe}
11855 \def\TeXe{\TeX}
11856 \def\MF{Metafont}
11857 \def\MP{MetaPost}
11858 </tex4htcfg>

```

47 Driver-specific form support

47.1 pdfmarks

```
11859 (<*pdfmark>
11860 \long\def\@Form[#1]{%
11861 \g@addto@macro\Hy@FirstPageHook{%
11862 \headerps@out{%
11863 [%
11864 /__objdef{pdfDocEncoding}%
11865 /type/dict%
11866 /OBJ pdfmark%
11867 [%
11868 {pdfDocEncoding}%
11869 <<%
11870 /Type/Encoding%
11871 /Differences[%
11872 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring%
11873 /tilde %
11874 39/quotesingle %
11875 96/grave %
11876 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
11877 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
11878 /quotedblbase/quotedblleft/quotedblright/quoteleft%
11879 /quoteright/quotesinglbase/trademark/fl/fl/Lslash/OE/Scaron%
11880 /Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
11881 164/currency %
11882 166/brokenbar %
11883 168/dieresis/copyright/ordfeminine %
11884 172/logicalnot/.notdef/registered/macron/degree/plusminus%
11885 /twosuperior/threesuperior/acute/mu %
11886 183/periodcentered/cedilla/onesuperior/ordmasculine %
11887 188/onequarter/onehalf/threequarters %
11888 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
11889 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
11890 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
11891 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
11892 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
11893 /agrave/aacute/acircumflex/atilde/adieresis/aring/ae%
11894 /ccedilla/egrave/eacute/ecircumflex/edieresis/igrave%
11895 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
11896 /ocircumflex/otilde/odieresis/divide/oslash/ugrave/uacute%
11897 /ucircumflex/udieresis/yacute/thorn/ydieresis%
11898 ]%
11899 >>%
11900 /PUT pdfmark%
11901 [%
11902 /__objdef{ZaDb}%
11903 /type/dict%
11904 /OBJ pdfmark%
11905 [%
11906 {ZaDb}%
11907 <<%
11908 /Type/Font%
11909 /Subtype/Type1%
11910 /Name/ZaDb%
11911 /BaseFont/ZapfDingbats%
```

```

11912 >>%
11913 /PUT pdfmark%
11914 [%
11915   /__objdef{Helv}%
11916   /type/dict%
11917 /OBJ pdfmark%
11918 [%
11919   {Helv}%
11920 <<%
11921   /Type/Font%
11922   /Subtype/Type1%
11923   /Name/Helv%
11924   /BaseFont/Helvetica%
11925   /Encoding{pdfDocEncoding}%
11926 >>%
11927 /PUT pdfmark%
11928 [%
11929   /__objdef{aform}%
11930   /type/dict%
11931 /OBJ pdfmark%
11932 [%
11933   /__objdef{afields}%
11934   /type/array%
11935 /OBJ pdfmark%
11936 {%
11937   [%
11938     /BBox[0 0 100 100]%
11939     /__objdef{Check}%
11940   /BP pdfmark %
11941   1 0 0 setrgbcolor%
11942   /ZapfDingbats 80 selectfont %
11943   20 20 moveto%
11944   (4)show%
11945   [/EP pdfmark%
11946   [%
11947     /BBox[0 0 100 100]%
11948     /__objdef{Cross}%
11949   /BP pdfmark %
11950   1 0 0 setrgbcolor%
11951   /ZapfDingbats 80 selectfont %
11952   20 20 moveto%
11953   (8)show%
11954   [/EP pdfmark%
11955   [%
11956     /BBox[0 0 250 100]%
11957     /__objdef{Submit}%
11958   /BP pdfmark %
11959   0.6 setgray %
11960   0 0 250 100 rectfill %
11961   1 setgray %
11962   2 2 moveto %
11963   2 98 lineto %
11964   248 98 lineto %
11965   246 96 lineto %
11966   4 96 lineto %
11967   4 4 lineto %
11968   fill %

```

```

11969 0.34 setgray %
11970 248 98 moveto %
11971 248 2 lineto %
11972 2 2 lineto %
11973 4 4 lineto %
11974 246 4 lineto %
11975 246 96 lineto %
11976 fill%
11977 /Helvetica 76 selectfont %
11978 0 setgray %
11979 8 22.5 moveto%
11980 (Submit)show%
11981 [/EP pdfmark%
11982 [%
11983   /BBox[0 0 250 100]%
11984   /_objdef{SubmitP}%
11985 /BP pdfmark %
11986 0.6 setgray %
11987 0 0 250 100 rectfill %
11988 0.34 setgray %
11989 2 2 moveto %
11990 2 98 lineto %
11991 248 98 lineto %
11992 246 96 lineto %
11993 4 96 lineto %
11994 4 4 lineto %
11995 fill %
11996 1 setgray %
11997 248 98 moveto %
11998 248 2 lineto %
11999 2 2 lineto %
12000 4 4 lineto %
12001 246 4 lineto %
12002 246 96 lineto %
12003 fill%
12004 /Helvetica 76 selectfont %
12005 0 setgray %
12006 10 20.5 moveto%
12007 (Submit)show%
12008 [/EP pdfmark%
12009 } ?pdfmark%
12010 [%
12011 {aform}%
12012 <<%
12013   /Fields{afields}%
12014   /DR<<%
12015     /Font<<%
12016       /ZaDb{ZaDb}%
12017       /Helv{Helv}%
12018     >>%
12019   >>%
12020 /DA(/Helv 10 Tf 0 g)%
12021 /CO{corder}%
12022 \ifHy@pdfa
12023 \else
12024   /NeedAppearances true%
12025 \fi

```

```

12026 >>%
12027 /PUT pdfmark%
12028 [%
12029 {Catalog}%
12030 <<%
12031 /AcroForm{aform}%
12032 >>%
12033 /PUT pdfmark%
12034 [%
12035 /__objdef{corder}%
12036 /type/array%
12037 /OBJ pdfmark% dps
12038 }}%
12039 \kvsetkeys{Form}{#1}%
12040 }
12041 \def\@endForm{}
12042 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12043 \Hy@Message{Sorry, pdfmark drivers do not support FORM gauges}%
12044 }
12045 \def\@TextField[#1]#2{% parameters, label
12046 \def\Fld@name{#2}%
12047 \def\Fld@default{}%
12048 \let\Fld@value\empty
12049 \def\Fld@width{\DefaultWidthofText}%
12050 \def\Fld@height{%
12051 \ifFld@multiline
12052 \DefaultHeightofTextMultiline
12053 \else
12054 \DefaultHeightofText
12055 \fi
12056 }%
12057 \begingroup
12058 \expandafter\HyField@SetKeys\expandafter{%
12059 \DefaultOptionsofText,#1%
12060 }%
12061 \HyField@FlagsText
12062 \ifFld@hidden\def\Fld@width{1sp}\fi
12063 \ifx\Fld@value\empty\def\Fld@value{\Fld@default}\fi
12064 \LayoutTextField{#2}{%
12065 \Hy@escapeform\PDFForm@Text
12066 \pdfmark[\MakeTextField{\Fld@width}{\Fld@height}]{%
12067 pdfmark=/ANN,Raw={\PDFForm@Text}%
12068 }%
12069 }%
12070 \endgroup
12071 }
12072 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12073 \def\Fld@name{#2}%
12074 \let\Fld@default\relax
12075 \let\Fld@value\relax
12076 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12077 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12078 \begingroup
12079 \Fld@menulength=0 %
12080 \@tempdima\z@
12081 \@for\@curropt:=#3\do{%
12082 \expandafter\Fld@checkequals\@curropt==\%

```

```

12083 \Hy@StepCount\Fld@menulength
12084 \settowidth{\@tempdimb}{\@currDisplay}%
12085 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12086 }%
12087 \advance\@tempdima by 15\p@
12088 \begingroup
12089 \HyField@SetKeys{#1}%
12090 \edef\x{\endgroup
12091 \noexpand\expandafter
12092 \noexpand\HyField@SetKeys
12093 \noexpand\expandafter{%
12094 \expandafter\noexpand\csname DefaultOptionsof%
12095 \ifFld@radio
12096 Radio%
12097 \else
12098 \ifFld@combo
12099 \ifFld@popdown
12100 PopdownBox%
12101 \else
12102 ComboBox%
12103 \fi
12104 \else
12105 ListBox%
12106 \fi
12107 \fi
12108 \endcsname
12109 }%
12110 }\x
12111 \HyField@SetKeys{#1}%
12112 \ifFld@hidden\def\Fld@width{1sp}\fi
12113 \ifx\Fld@value\relax
12114 \let\Fld@value\Fld@default
12115 \fi
12116 \LayoutChoiceField{#2}{%
12117 \ifFld@radio
12118 \HyField@FlagsRadioButton
12119 \@@Radio{#3}%
12120 \else
12121 \begingroup
12122 \HyField@FlagsChoice
12123 \ifdim\Fld@width<\@tempdima
12124 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12125 \edef\Fld@width{\the\@tempdima}%
12126 \fi
12127 \ifFld@combo
12128 \else
12129 \@tempdima=\the\Fld@menulength\Fld@charsize
12130 \advance\@tempdima by \Fld@borderwidth bp %
12131 \advance\@tempdima by \Fld@borderwidth bp %
12132 \edef\Fld@height{\the\@tempdima}%
12133 \fi
12134 \@@ListBox{#3}%
12135 \endgroup
12136 \fi
12137 }%
12138 \endgroup
12139 }

```

```

12140 \def\@@Radio#1{%
12141   \Fld@listcount=0 %
12142   \EdefEscapeName\Fld@default{\Fld@default}%
12143   \@for\@curropt:=#1\do{%
12144     \expandafter\Fld@checkequals\@curropt==\%
12145     \EdefEscapeName\@currValue{\@currValue}%
12146     \Hy@StepCount\Fld@listcount
12147     \@currDisplay\space
12148     \Hy@escapeform\PDFForm@Radio
12149     \pdfmark[\MakeRadioField{\Fld@width}{\Fld@height}]{%
12150       pdfmark=/ANN,%
12151       Raw={%
12152         \PDFForm@Radio /AP <</N <</\@currValue\space {Check}>> >>%
12153       }%
12154     } % deliberate space between radio buttons
12155   }%
12156 }
12157 \newcount\Fld@listcount
12158 \def\@@ListBox#1{%
12159   \HyField@PDFChoices{#1}%
12160   \Hy@escapeform\PDFForm@List
12161   \pdfmark[\MakeChoiceField{\Fld@width}{\Fld@height}]{%
12162     pdfmark=/ANN,Raw={\PDFForm@List}%
12163   }%
12164 }
12165 \def\@PushButton[#1]#2{% parameters, label
12166   \def\Fld@name{#2}%
12167   \begingroup
12168     \expandafter\HyField@SetKeys\expandafter{%
12169       \DefaultOptionsofPushButton,#1%
12170     }%
12171     \ifHy@pdfa
12172       \Hy@Error{%
12173         PDF/A: Push button with JavaScript is prohibited%
12174       }\@ehc
12175       \LayoutPushButtonField{%
12176         \leavevmode
12177         \MakeButtonField{#2}%
12178       }%
12179     \else
12180       \HyField@FlagsPushButton
12181       \ifFld@hidden\def\Fld@width{1sp}\fi
12182       \LayoutPushButtonField{%
12183         \leavevmode
12184         \Hy@escapeform\PDFForm@Push
12185         \pdfmark[\MakeButtonField{#2}]{%
12186           pdfmark=/ANN,Raw={\PDFForm@Push}%
12187         }%
12188       }%
12189     \fi
12190   \endgroup
12191 }
12192 \def\@Submit[#1]#2{%
12193   \def\Fld@width{\DefaultWidthofSubmit}%
12194   \def\Fld@height{\DefaultHeightofSubmit}%
12195   \begingroup
12196     \expandafter\HyField@SetKeys\expandafter{%

```

```

12197     \DefaultOptionsofSubmit,#1%
12198 }%
12199 \HyField@FlagsPushButton
12200 \HyField@FlagsSubmit
12201 \ifFld@hidden\def\Fld@width{1sp}\fi
12202 \Hy@escapeform\PDFForm@Submit
12203 \pdfmark[\MakeButtonField{#2}]{%
12204     pdfmark=/ANN,%
12205     Raw={\PDFForm@Submit /AP << /N {Submit} /D {SubmitP} >>}%
12206 }%
12207 \endgroup
12208 }
12209 \def\@Reset[#1]#2{%
12210     \def\Fld@width{\DefaultWidthofReset}%
12211     \def\Fld@height{\DefaultHeightofReset}%
12212     \begingroup
12213     \expandafter\HyField@SetKeys\expandafter{%
12214         \DefaultOptionsofReset,#1%
12215     }%
12216     \leavevmode
12217     \ifHy@pdfa
12218         \Hy@Error{%
12219             PDF/A: Reset action is prohibited%
12220         }\@ehc
12221         \MakeButtonField{#2}%
12222     \else
12223         \HyField@FlagsPushButton
12224         \ifFld@hidden\def\Fld@width{1sp}\fi
12225         \Hy@escapeform\PDFForm@Reset
12226         \pdfmark[\MakeButtonField{#2}]{%
12227             pdfmark=/ANN,Raw={\PDFForm@Reset}%
12228         }%
12229         \fi
12230     \endgroup
12231 }%
12232 \def\@CheckBox[#1]#2{% parameters, label
12233     \def\Fld@name{#2}%
12234     \def\Fld@default{0}%
12235     \begingroup
12236     \def\Fld@width{\DefaultWidthofCheckBox}%
12237     \def\Fld@height{\DefaultHeightofCheckBox}%
12238     \expandafter\HyField@SetKeys\expandafter{%
12239         \DefaultOptionsofCheckBox,#1%
12240     }%
12241     \HyField@FlagsCheckBox
12242     \ifFld@hidden\def\Fld@width{1sp}\fi
12243     \LayoutCheckField{#2}{%
12244         \Hy@escapeform\PDFForm@Check
12245         \pdfmark[\MakeCheckField{\Fld@width}{\Fld@height}]{%
12246             pdfmark=/ANN,Raw={\PDFForm@Check}%
12247         }%
12248     }%
12249     \endgroup
12250 }
12251 \pdfmark

```

47.2 HyperTeX


```

12252 <*hypertex>
12253 \def\@Form[#1]{\Hy@Message{Sorry, HyperTeX does not support FORMs}}
12254 \def\@endForm{}
12255 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12256 \Hy@Message{Sorry, HyperTeX does not support FORM gauges}%
12257 }
12258 \def\@TextField[#1]#2{% parameters, label
12259 \Hy@Message{Sorry, HyperTeX does not support FORM text fields}%
12260 }
12261 \def\@CheckBox[#1]#2{% parameters, label
12262 \Hy@Message{Sorry, HyperTeX does not support FORM checkboxes}%
12263 }
12264 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12265 \Hy@Message{Sorry, HyperTeX does not support FORM choice menus}%
12266 }
12267 \def\@PushButton[#1]#2{% parameters, label
12268 \Hy@Message{Sorry, HyperTeX does not support FORM pushbuttons}%
12269 }
12270 \def\@Reset[#1]#2{\Hy@Message{Sorry, HyperTeX does not support FORMs}}
12271 \def\@Submit[#1]#2{\Hy@Message{Sorry, HyperTeX does not support FORMs}}
12272 </hypertex>

```

47.3 TeX4ht

```

12273 <*tex4ht>
12274 \def\@Form[#1]{%
12275 \kvsetkeys{Form}{#1}%
12276 \HCode{<form action="\Form@action" method="\Form@method">}%
12277 }
12278 \def\@endForm{\HCode{</form>}}
12279 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
12280 \Hy@Message{Sorry, TeX4ht does not support gauges}%
12281 }
12282 \def\@TextField[#1]#2{% parameters, label
12283 \let\Hy@reserved@a\@empty
12284 \def\Fld@name{#2}%
12285 \def\Fld@default{}%
12286 \bgroup
12287 \Field@toks={}%
12288 \kvsetkeys{Field}{#1}%
12289 \HCode{<label for="\Fld@name">#2</label>}%
12290 \ifFld@password
12291 \@@PasswordField
12292 \else
12293 \@@TextField
12294 \fi
12295 \egroup
12296 }
12297 \def\@@PasswordField{%
12298 \HCode{%
12299 <input type="password" %
12300 id="\Fld@name" %
12301 name="\Fld@name" %
12302 \ifFld@hidden type="hidden" \fi
12303 value="\Fld@default" %
12304 \the\Field@toks
12305 >%
12306 }%

```

```

12307 }
12308 \def\@@TextField{%
12309   \ifFld@multiline
12310     \HCode{<textarea %
12311       \ifFld@readonly readonly \fi
12312       id="\Fld@name" %
12313       name="\Fld@name" %
12314       \ifFld@hidden type="hidden" \fi
12315       \the\Field@toks>%
12316     }%
12317     \Fld@default
12318     \HCode{</textarea>}%
12319   \else
12320     \HCode{<input type="text" %
12321       \ifFld@readonly readonly \fi
12322       id="\Fld@name" %
12323       name="\Fld@name" %
12324       \ifFld@hidden type="hidden" \fi
12325       value="\Fld@default" %
12326       \the\Field@toks>%
12327     }%
12328   \fi
12329 }
12330 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12331   \def\Fld@name{#2}%
12332   \def\Fld@default{#3}%
12333   \let\Hy@reserved@a\relax
12334   \begingroup
12335     \expandafter\Fld@findlength#3\\%
12336     \Field@toks={ }%
12337     \kvsetkeys{Field}{#1}%
12338     #2%
12339     \ifFld@radio
12340       \expandafter\@@Radio#3\\%
12341     \else
12342       \expandafter\@@Menu#3\\%
12343     \fi
12344   \endgroup
12345 }
12346 \def\Fld@findlength#1\\{%
12347   \Fld@menulength=0 %
12348   \@for\@curropt:=#1\do{\Hy@StepCount\Fld@menulength}%
12349 }
12350 \def\@@Menu#1\\{%
12351   \HCode{<select size="\the\Fld@menulength" %
12352     name="\Fld@name" %
12353     \the\Field@toks>%
12354   }%
12355   \@for\@curropt:=#1\do{%
12356     \expandafter\Fld@checkequals\@curropt==\\%
12357     \HCode{<option %
12358       \ifx\@curropt\Fld@default selected \fi
12359       value="\@currValue">\@currDisplay</option>%
12360     }%
12361   }%
12362   \HCode{</select>}%
12363 }

```

```

12364 \def\@@Radio#1\{\%
12365   \for\@curropt:=#1\do{\%
12366     \expandafter\Fld@checkequals\@curropt==\%
12367     \HCode{<input type="radio" \%
12368       \ifx\@curropt\Fld@default checked \fi
12369       name="\Fld@name" \%
12370       value="\@currValue" \%
12371       \the\Field@toks>\%
12372     }%
12373     \@currDisplay
12374   }%
12375 }
12376 \def\@PushButton[#1]#2{\% parameters, label
12377   \def\Fld@name{#2}%
12378   \bgroup
12379   \Field@toks={ }%
12380   \kvsetkeys{Field}{#1}%
12381   \HCode{<input type="button" \%
12382     name="\Fld@name" \%
12383     value="#2" \%
12384     \the\Field@toks>\%
12385   }%
12386   \HCode{</button>}%
12387   \egroup
12388 }
12389 \def\@Submit[#1]#2{\%
12390   \HCode{<button type="submit">#2</button>}%
12391 }
12392 \def\@Reset[#1]#2{\%
12393   \HCode{<button type="reset">#2</button>}%
12394 }
12395 \def\@CheckBox[#1]#2{\% parameters, label
12396   \let\Hy@reserved@a\@empty
12397   \def\Fld@name{#2}%
12398   \def\Fld@default{0}%
12399   \bgroup
12400   \Field@toks={ }%
12401   \kvsetkeys{Field}{#1}%
12402   \HCode{<input type="checkbox" \%
12403     \ifFld@checked checked \fi
12404     \ifFld@disabled disabled \fi
12405     \ifFld@readonly readonly \fi
12406     name="\Fld@name" \%
12407     \ifFld@hidden type="hidden" \fi
12408     value="\Fld@default" \%
12409     \the\Field@toks>\%
12410     #2%
12411   }%
12412   \egroup
12413 }
12414 </tex4ht>

```

47.4 pdfTeX

```

12415 <*pdfTeX>
12416 \def\@Gauge[#1]#2#3#4{\% parameters, label, minimum, maximum
12417   \Hy@Message{Sorry, pdfTeX does not support FORM gauges}%
12418 }

```

```

12419 \def\MakeFieldObject#1#2{\sbox0{#1}%
12420 \immediate\pdfxform0 %
12421 \expandafter\edef\csname #2Object\endcsname{%
12422 \the\pdfastxform\space 0 R%
12423 }%
12424 % \hbox to 0pt{\hskip-\maxdimen{\pdfrefxform \the\pdfastxform}}}%
12425 }%
12426 \def\HyField@afields{}
12427 \begingroup\expandafter\expandafter\expandafter\endgroup
12428 \expandafter\ifx\csname pdfastlink\endcsname\relax
12429 \let\HyField@AddToFields\relax
12430 \PackageInfo{hyperref}{%
12431 You need pdfTeX 1.40.0 for setting the /Fields entry.%
12432 \MessageBreak
12433 Adobe Reader/Acrobat accepts an empty /Field array,%
12434 \MessageBreak
12435 but other PDF viewers might complain%
12436 }%
12437 \else
12438 \def\HyField@AuxAddToFields#1{%
12439 \def\HyField@AfterAuxOpen{\Hy@AtBeginDocument}%
12440 \Hy@AtBeginDocument{%
12441 \if@filesw
12442 \immediate\write\@mainaux{%
12443 \string\providecommand\string\HyField@AuxAddToFields[1]{}%
12444 }%
12445 \fi
12446 \let\HyField@AfterAuxOpen\@firstofone
12447 \def\HyField@AuxAddToFields#1{%
12448 \xdef\HyField@afields{%
12449 \ifx\HyField@afields\@empty
12450 \else
12451 \HyField@afields
12452 \space
12453 \fi
12454 #1 0 R%
12455 }%
12456 }%
12457 }%
12458 \def\HyField@AddToFields{%
12459 \expandafter\HyField@@AddToFields\expandafter{%
12460 \the\pdfastlink
12461 }%
12462 }%
12463 \def\HyField@@AddToFields#1{%
12464 \HyField@AfterAuxOpen{%
12465 \if@filesw
12466 \write\@mainaux{%
12467 \string\HyField@AuxAddToFields{#1}%
12468 }%
12469 \fi
12470 }%
12471 }%
12472 \fi
12473 \def\@Form[#1]{%
12474 \@ifundefined{textcolor}{\let\textcolor\@gobble}{}%
12475 \kvsetkeys{Form}{#1}%

```

```

12476 \Hy@FormObjects
12477 \ifnum\pdftexversion>13 %
12478 \pdfrefobj\OBJ@pdfdocencoding
12479 \pdfrefobj\OBJ@ZaDb
12480 \pdfrefobj\OBJ@Helv
12481 \fi
12482 \AtVeryEndDocument{%
12483 \immediate\pdfobj{%
12484 <<%
12485 /Fields[\HyField@afields]%
12486 /DR<<%
12487 /Font<<%
12488 /ZaDb \OBJ@ZaDb\space 0 R%
12489 /Helv \OBJ@Helv\space 0 R%
12490 >>%
12491 >>%
12492 /DA(/Helv 10 Tf 0 g)%
12493 \ifHy@pdfa
12494 \else
12495 /NeedAppearances true%
12496 \fi
12497 >>%
12498 }%
12499 \edef\OBJ@acroform{\the\pdflastobj}%
12500 \pdfcatalog{/AcroForm \OBJ@acroform\space 0 R}%
12501 }%
12502 \MakeFieldObject{%

```

Same as \ding{123} of package pifont.

```

12503 \begingroup
12504 \fontfamily{pzd}%
12505 \fontencoding{U}%
12506 \fontseries{m}%
12507 \fontshape{n}%
12508 \selectfont
12509 \char123 %
12510 \endgroup
12511 }{Ding}%
12512 \MakeFieldObject{%
12513 \fbox{\textcolor{yellow}{\textsf{Submit}}}%
12514 }{Submit}%
12515 \MakeFieldObject{%
12516 \fbox{\textcolor{yellow}{\textsf{SubmitP}}}%
12517 }{SubmitP}%
12518 }
12519 \def\@endForm{}
12520 \def\@TextField[#1]#2{% parameters, label
12521 \def\Fld@name{#2}%
12522 \def\Fld@default{}%
12523 \let\Fld@value\@empty
12524 \def\Fld@width{\DefaultWidthofText}%
12525 \def\Fld@height{%
12526 \ifFld@multiline
12527 \DefaultHeightofTextMultiline
12528 \else
12529 \DefaultHeightofText
12530 \fi
12531 }%

```

```

12532 \begingroup
12533 \expandafter\HyField@SetKeys\expandafter{%
12534 \DefaultOptionsofText,#1%
12535 }%
12536 \PDFForm@Name
12537 \HyField@FlagsText
12538 \ifFld@hidden\def\Fld@width{1sp}\fi
12539 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12540 \LayoutTextField{#2}{%
12541 \Hy@escapeform\PDFForm@Text
12542 \pdfstartlink user {\PDFForm@Text}\relax
12543 \MakeTextField{\Fld@width}{\Fld@height}\pdfendlink
12544 \HyField@AddToFields
12545 }%
12546 \endgroup
12547 }
12548 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12549 \def\Fld@name{#2}%
12550 \let\Fld@default\relax
12551 \let\Fld@value\relax
12552 \def\Fld@width{\DefaultWidthofChoiceMenu}%
12553 \def\Fld@height{\DefaultHeightofChoiceMenu}%
12554 \begingroup
12555 \Fld@menulength=0 %
12556 \@tempdima\z@
12557 \@for\@curropt:=#3\do{%
12558 \expandafter\Fld@checkequals\@curropt==\%
12559 \Hy@StepCount\Fld@menulength
12560 \settowidth{\@tempdimb}{\@currDisplay}%
12561 \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12562 }%
12563 \advance\@tempdima by 15\p@
12564 \begingroup
12565 \HyField@SetKeys{#1}%
12566 \edef\x{\endgroup
12567 \noexpand\expandafter
12568 \noexpand\HyField@SetKeys
12569 \noexpand\expandafter{%
12570 \expandafter\noexpand\csname DefaultOptionsof%
12571 \ifFld@radio
12572 Radio%
12573 \else
12574 \ifFld@combo
12575 \ifFld@popdown
12576 PopdownBox%
12577 \else
12578 ComboBox%
12579 \fi
12580 \else
12581 ListBox%
12582 \fi
12583 \fi
12584 \endcsname
12585 }%
12586 }\x
12587 \HyField@SetKeys{#1}%
12588 \PDFForm@Name

```

```

12589 \ifFld@hidden\def\Fld@width{1sp}\fi
12590 \ifx\Fld@value\relax
12591 \let\Fld@value\Fld@default
12592 \fi
12593 \LayoutChoiceField{#2}{%
12594 \ifFld@radio
12595 \HyField@FlagsRadioButton
12596 \@@Radio{#3}%
12597 \else
12598 \begingroup
12599 \HyField@FlagsChoice
12600 \ifdim\Fld@width<\@tempdima
12601 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12602 \edef\Fld@width{\the\@tempdima}%
12603 \fi
12604 \ifFld@combo
12605 \else
12606 \@tempdima=\the\Fld@menulength\Fld@charsize
12607 \advance\@tempdima by \Fld@borderwidth bp %
12608 \advance\@tempdima by \Fld@borderwidth bp %
12609 \edef\Fld@height{\the\@tempdima}%
12610 \fi
12611 \@@ListBox{#3}%
12612 \endgroup
12613 \fi
12614 }%
12615 \endgroup
12616 }
12617 \def\@@Radio#1{%
12618 \Fld@listcount=0 %
12619 \EdefEscapeName\Fld@default{\Fld@default}%
12620 \@for\@curropt:=#1\do{%
12621 \expandafter\Fld@checkequals\@curropt==\%
12622 \EdefEscapeName\@currValue{\@currValue}%
12623 \Hy@StepCount\Fld@listcount
12624 \@currDisplay\space
12625 \leavevmode
12626 \Hy@escapeform\PDFForm@Radio
12627 \pdfstartlink user {%
12628 \PDFForm@Radio
12629 /AP<<%
12630 /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.

```

12631 /\@currValue\space \DingObject
12632 >>%
12633 >>%
12634 }%
12635 \relax
12636 \MakeRadioField{\Fld@width}{\Fld@height}\pdfendlink
12637 \ifnum\Fld@listcount=1 %
12638 \HyField@AddToFields
12639 \fi
12640 \space % deliberate space between radio buttons
12641 }%
12642 }

```

```

12643 \newcount\Fld@listcount
12644 \def\@@ListBox#1{%
12645   \HyField@PDFChoices{#1}%
12646   \leavevmode
12647   \Hy@escapeform\PDFForm@List
12648   \pdfstartlink user {\PDFForm@List}\relax
12649   \MakeChoiceField{\Fld@width}{\Fld@height}%
12650   \pdfendlink
12651   \HyField@AddToFields
12652 }
12653 \def\@PushButton[#1]#2{% parameters, label
12654   \def\Fld@name{#2}%
12655   \begingroup
12656     \expandafter\HyField@SetKeys\expandafter{%
12657       \DefaultOptionsofPushButton,#1%
12658     }%
12659     \PDFForm@Name
12660     \ifHy@pdfa
12661       \Hy@Error{%
12662         PDF/A: Push button with JavaScript is prohibited%
12663       }\@ehc
12664       \LayoutPushButtonField{%
12665         \leavevmode
12666         \MakeButtonField{#2}%
12667       }%
12668     \else
12669       \HyField@FlagsPushButton
12670       \ifFld@hidden\def\Fld@width{1sp}\fi
12671       \LayoutPushButtonField{%
12672         \leavevmode
12673         \Hy@escapeform\PDFForm@Push
12674         \pdfstartlink user {\PDFForm@Push}\relax
12675         \MakeButtonField{#2}%
12676         \pdfendlink
12677         \HyField@AddToFields
12678       }%
12679     \fi
12680   \endgroup
12681 }
12682 \def\@Submit[#1]#2{%
12683   \def\Fld@width{\DefaultWidthofSubmit}%
12684   \def\Fld@height{\DefaultHeightofSubmit}%
12685   \begingroup
12686     \expandafter\HyField@SetKeys\expandafter{%
12687       \DefaultOptionsofSubmit,#1%
12688     }%
12689     \HyField@FlagsPushButton
12690     \HyField@FlagsSubmit
12691     \ifFld@hidden\def\Fld@width{1sp}\fi
12692     \leavevmode
12693     \Hy@escapeform\PDFForm@Submit
12694     \pdfstartlink user {%
12695       \PDFForm@Submit
12696       /AP<</N \SubmitObject/D \SubmitPObject>>%
12697     }%
12698     \relax
12699     \MakeButtonField{#2}%

```



```

12700 \pdfendlink
12701 \HyField@AddToFields
12702 \endgroup
12703 }
12704 \def\@Reset[#1]#2{%
12705 \def\Fld@width{\DefaultWidthofReset}%
12706 \def\Fld@height{\DefaultHeightofReset}%
12707 \begingroup
12708 \expandafter\HyField@SetKeys\expandafter{%
12709 \DefaultOptionsofReset,#1%
12710 }%
12711 \leavevmode
12712 \ifHy@pdfa
12713 \Hy@Error{%
12714 PDF/A: Reset action is prohibited%
12715 }\@ehc
12716 \MakeButtonField{#2}%
12717 \else
12718 \HyField@FlagsPushButton
12719 \ifFld@hidden\def\Fld@width{1sp}\fi
12720 \Hy@escapeform\PDFForm@Reset
12721 \pdfstartlink user {\PDFForm@Reset}\relax
12722 \MakeButtonField{#2}%
12723 \pdfendlink
12724 \HyField@AddToFields
12725 \fi
12726 \endgroup
12727 }
12728 \def\@CheckBox[#1]#2{% parameters, label
12729 \def\Fld@name{#2}%
12730 \def\Fld@default{0}%
12731 \begingroup
12732 \def\Fld@width{\DefaultWidthofCheckBox}%
12733 \def\Fld@height{\DefaultHeightofCheckBox}%
12734 \expandafter\HyField@SetKeys\expandafter{%
12735 \DefaultOptionsofCheckBox,#1%
12736 }%
12737 \PDFForm@Name
12738 \HyField@FlagsCheckBox
12739 \ifFld@hidden\def\Fld@width{1sp}\fi
12740 \LayoutCheckField{#2}{%
12741 \Hy@escapeform\PDFForm@Check
12742 \pdfstartlink user {\PDFForm@Check}\relax
12743 \MakeCheckField{\Fld@width}{\Fld@height}%
12744 \pdfendlink
12745 \HyField@AddToFields
12746 }%
12747 \endgroup
12748 }
12749 \def\Hy@FormObjects{%
12750 \pdfobj {%
12751 <<%
12752 /Type/Encoding%
12753 /Differences%
12754 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek%
12755 /ring/tilde %
12756 39/quotesingle %

```

```

12757 96/grave %
12758 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
12759 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
12760 /quotedblbase/quotedblleft/quotedblright/quoteleft%
12761 /quoteright/quotesinglbase/trademark/fi/fl/Lslash/OE%
12762 /Scaron/Ydieresis/Zcaron/dotlessi/lslash/oe/scaron/zcaron %
12763 164/currency %
12764 166/brokenbar %
12765 168/dieresis/copyright/ordfeminine %
12766 172/logicalnot/.notdef/registered/macron/degree/plusminus%
12767 /twosuperior/threesuperior/acute/mu %
12768 183/periodcentered/cedilla/onesuperior/ordmasculine %
12769 188/onequarter/onehalf/threequarters %
12770 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
12771 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave%
12772 /Iacute/Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute%
12773 /Ocircumflex/Otilde/Odieresis/multiply/Oslash/Ugrave%
12774 /Uacute/Ucircumflex/Udieresis/Yacute/Thorn/germandbls%
12775 /grave/acute/acircumflex/atilde/adieresis/aring/ae%
12776 /cedilla/egrave/eacute/ecircumflex/edieresis/igrave%
12777 /iacute/icircumflex/idieresis/eth/ntilde/ograde/oacute%
12778 /ocircumflex/otilde/odieresis/divide/oslash/ugrave%
12779 /uacute/ucircumflex/udieresis/yacute/thorn/ydieresis%
12780 ]%
12781 >>%
12782 }%
12783 \xdef\OBJ@pdfdocencoding{\the\pdflastobj}%
12784 \pdfobj{%
12785 <<%
12786 /Type/Font%
12787 /Subtype/Type1%
12788 /Name/ZaDb%
12789 /BaseFont/ZapfDingbats%
12790 >>%
12791 }%
12792 \xdef\OBJ@ZaDb{\the\pdflastobj}%
12793 \pdfobj{%
12794 <<%
12795 /Type/Font%
12796 /Subtype/Type1%
12797 /Name/Helv%
12798 /BaseFont/Helvetica%
12799 /Encoding \OBJ@pdfdocencoding\space 0 R%
12800 >>%
12801 }%
12802 \xdef\OBJ@Helv{\the\pdflastobj}%
12803 \global\let\Hy@FormObjects\relax
12804 }
12805 </pdftex>

```

47.5 dvipdfm, xetex

D. P. Story adapted the pdf_T_EX forms part for dvipdfm, of which version 0.12.7b or higher is required because of a bug.

```
12806 (*dvipdfm | xetex)
```

```
\@Gauge
```

```
12807 \def\@Gauge[#1]#2#3#4{% parameters, label, minimum, maximum
```

```

12808 \Hy@Message{Sorry, dvipdfm/XeTeX does not support FORM gauges}%
12809 }

```

\@Form

```

12810 \def\@Form[#1]{%
12811 \ifundefined{textcolor}{\let\textcolor\@gobble}{}}%
12812 \kvsetkeys{Form}{#1}%
12813 \Hy@FormObjects
12814 \@pdfm@mark{obj @afields []}%
12815 \@pdfm@mark{obj @corder []}%
12816 \@pdfm@mark{%
12817   obj @aform <<%
12818     /Fields @afields%
12819     /DR<<%
12820     /Font<<%
12821     /ZaDb @OBJZaDb%
12822     /Helv @OBJHelv%
12823     >>%
12824     >>%
12825     /DA(/Helv 10 Tf 0 g)%
12826     /CO @corder%
12827     \ifHy@pdfa
12828     \else
12829     /NeedAppearances true%
12830     \fi
12831     >>%
12832   }%
12833 \@pdfm@mark{put @catalog <</AcroForm @aform>>}}%
12834 }

```

\@endForm

```

12835 \def\@endForm{}

```

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

```

12836 \def\dvipdfm@setdim{%
12837   height \the\ht\pdfm@box\space
12838   width \the\wd\pdfm@box\space
12839   depth \the\dp\pdfm@box\space
12840 }

```

\HyField@AnnotCount

```

12841 \newcount\HyField@AnnotCount
12842 \HyField@AnnotCount=\z@

```

\HyField@AdvanceAnnotCount

```

12843 \def\HyField@AdvanceAnnotCount{%
12844 \global\advance\HyField@AnnotCount\@ne
12845 }

```

\HyField@TheAnnotCount

```

12846 \def\HyField@TheAnnotCount{%
12847 \the\HyField@AnnotCount
12848 }

```

\@TextField

```

12849 \def\@TextField[#1]#2{% parameters, label

```

```

12850 \def\Fld@name{#2}%
12851 \def\Fld@default{}%
12852 \let\Fld@value\@empty
12853 \def\Fld@width{\DefaultWidthofText}%
12854 \def\Fld@height{%
12855   \ifFld@multiline
12856     \DefaultHeightofTextMultiline
12857   \else
12858     \DefaultHeightofText
12859   \fi
12860 }%
12861 \begingroup
12862 \expandafter\HyField@SetKeys\expandafter{%
12863   \DefaultOptionsofText,#1%
12864 }%
12865 \PDFForm@Name
12866 \HyField@FlagsText
12867 \ifFld@hidden\def\Fld@width{1sp}\fi
12868 \ifx\Fld@value\@empty\def\Fld@value{\Fld@default}\fi
12869 \setbox\pdfm@box=\hbox{%
12870   \MakeTextField{\Fld@width}{\Fld@height}%
12871 }%
12872 \HyField@AdvanceAnnotCount
12873 \LayoutTextField{#2}{%
12874   \Hy@escapeform\PDFForm@Text
12875   \@pdfm@mark{%
12876     ann @text\HyField@TheAnnotCount\space
12877     \dvipdfm@setdim << \PDFForm@Text >>%
12878   }%
12879 }%
12880 \unhbox\pdfm@box
12881 \@pdfm@mark{put @afields @text\HyField@TheAnnotCount}%
12882 % record in @afields array
12883 \endgroup
12884 }

```

\@ChoiceMenu

```

12885 \def\@ChoiceMenu[#1]#2#3{% parameters, label, choices
12886   \def\Fld@name{#2}%
12887   \let\Fld@default\relax
12888   \let\Fld@value\relax
12889   \def\Fld@width{\DefaultWidthofChoiceMenu}%
12890   \def\Fld@height{\DefaultHeightofChoiceMenu}%
12891   \begingroup
12892     \Fld@menulength=0 %
12893     \@tempdima\z@
12894     \@for\@curropt:=#3\do{%
12895       \expandafter\Fld@checkequals\@curropt==\%
12896       \Hy@StepCount\Fld@menulength
12897       \settowidth{\@tempdimb}{\@currDisplay}%
12898       \ifdim\@tempdimb>\@tempdima\@tempdima\@tempdimb\fi
12899     }%
12900     \advance\@tempdima by 15\p@
12901     \begingroup
12902       \HyField@SetKeys{#1}%
12903     \edef\x{\endgroup
12904       \noexpand\expandafter

```

```

12905 \noexpand\HyField@SetKeys
12906 \noexpand\expandafter{%
12907 \expandafter\noexpand\csname DefaultOptionsof%
12908 \ifFld@radio
12909 Radio%
12910 \else
12911 \ifFld@combo
12912 \ifFld@popdown
12913 PopdownBox%
12914 \else
12915 ComboBox%
12916 \fi
12917 \else
12918 ListBox%
12919 \fi
12920 \fi
12921 \endcsname
12922 }%
12923 }\x
12924 \HyField@SetKeys{#1}%
12925 \PDFForm@Name
12926 \ifFld@hidden\def\Fld@width{1sp}\fi
12927 \ifx\Fld@value\relax
12928 \let\Fld@value\Fld@default
12929 \fi
12930 \LayoutChoiceField{#2}{%
12931 \ifFld@radio
12932 \HyField@FlagsRadioButton
12933 \@@Radio{#3}%
12934 \else
12935 \beginngroup
12936 \HyField@FlagsChoice
12937 \ifdim\Fld@width<\@tempdima
12938 \ifdim\@tempdima<1cm\@tempdima1cm\fi
12939 \edef\Fld@width{\the\@tempdima}%
12940 \fi
12941 \ifFld@combo
12942 \else
12943 \@tempdima=\the\Fld@menulength\Fld@charsize
12944 \advance\@tempdima by \Fld@borderwidth bp %
12945 \advance\@tempdima by \Fld@borderwidth bp %
12946 \edef\Fld@height{\the\@tempdima}%
12947 \fi
12948 \@@ListBox{#3}%
12949 \endgroup
12950 \fi
12951 }%
12952 \endgroup
12953 }

```

\@@Radio

```

12954 \def\@@Radio#1{%
12955 \Fld@listcount=0 %
12956 \EdefEscapeName\Fld@default{\Fld@default}%
12957 \setbox\pdfm@box=\hbox{%
12958 \MakeRadioField{\Fld@width}{\Fld@height}%
12959 }%

```

```

12960 \@for\@curropt:=#1\do{%
12961 \expandafter\Fld@checkequals\@curropt==\%
12962 \EdefEscapeName\@currValue{\@currValue}%
12963 \Hy@StepCount\Fld@listcount
12964 \@currDisplay\space
12965 \leavevmode
12966 \Hy@escapeform\PDFForm@Radio
12967 \ifnum\Fld@listcount=1 %
12968 \HyField@AdvanceAnnotCount
12969 \fi
12970 \@pdfm@mark{%
12971 ann %
12972 \ifnum\Fld@listcount=1 %
12973 @radio\HyField@TheAnnotCount%
12974 \space
12975 \fi
12976 \dvipdfm@setdim
12977 <<%
12978 \PDFForm@Radio
12979 /AP<</N<</\@currValue /null>>>>%
12980 >>%
12981 }%
12982 \unhcopy\pdfm@box\space% deliberate space between radio buttons
12983 \ifnum\Fld@listcount=1 %
12984 \@pdfm@mark{%
12985 put @afields @radio\HyField@TheAnnotCount
12986 }%
12987 \fi
12988 }%
12989 }

```

\Fld@listcount

```

12990 \newcount\Fld@listcount

```

\@@ListBox

```

12991 \def\@@ListBox#1{%
12992 \HyField@PDFChoices{#1}%
12993 \setbox\pdfm@box=\hbox{%
12994 \MakeChoiceField{\Fld@width}{\Fld@height}%
12995 }%
12996 \leavevmode
12997 \Hy@escapeform\PDFForm@List
12998 \HyField@AdvanceAnnotCount
12999 \@pdfm@mark{%
13000 ann @list\HyField@TheAnnotCount\space
13001 \dvipdfm@setdim
13002 <<\PDFForm@List>>%
13003 }%
13004 \unhbox\pdfm@box
13005 \@pdfm@mark{put @afields @list\HyField@TheAnnotCount}%
13006 }

```

\@PushButton

```

13007 \def\@PushButton[#1]#2{% parameters, label
13008 \def\Fld@name{#2}%
13009 \begingroup
13010 \expandafter\HyField@SetKeys\expandafter{%

```

```

13011     \DefaultOptionsofPushButton,#1%
13012 }%
13013 \PDFForm@Name
13014 \ifHy@pdfa
13015     \Hy@Error{%
13016         PDF/A: Push button with JavaScript is prohibited%
13017     }\@ehc
13018     \LayoutPushButtonField{%
13019         \leavevmode
13020         \MakeButtonField{#2}%
13021     }%
13022 \else
13023     \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13024     \HyField@FlagsPushButton
13025     \ifFld@hidden\def\Fld@width{1sp}\fi
13026     \HyField@AdvanceAnnotCount
13027     \LayoutPushButtonField{%
13028         \leavevmode
13029         \Hy@escapeform\PDFForm@Push
13030         \@pdfm@mark{%
13031             ann @push\HyField@TheAnnotCount\space
13032             \dvi pdfm@setdim
13033             <<\PDFForm@Push>>%
13034         }%
13035     }%
13036     \unhbox\pdfm@box
13037     \@pdfm@mark{put @afields @push\HyField@TheAnnotCount}%
13038 \fi
13039 \endgroup
13040 }

\@Submit
13041 \def\@Submit[#1]#2{%
13042     \def\Fld@width{\DefaultWidthofSubmit}%
13043     \def\Fld@height{\DefaultHeightofSubmit}%
13044     \begingroup
13045         \expandafter\HyField@SetKeys\expandafter{%
13046             \DefaultOptionsofSubmit,#1%
13047         }%
13048         \HyField@FlagsPushButton
13049         \HyField@FlagsSubmit
13050         \ifFld@hidden\def\Fld@width{1sp}\fi
13051         \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13052         \leavevmode
13053         \Hy@escapeform\PDFForm@Submit
13054         \HyField@AdvanceAnnotCount
13055         \@pdfm@mark{%
13056             ann @submit\HyField@TheAnnotCount\space
13057             \dvi pdfm@setdim
13058             <<\PDFForm@Submit>>%
13059         }%
13060         \unhbox\pdfm@box%
13061         \@pdfm@mark{put @afields @submit\HyField@TheAnnotCount}%
13062     \endgroup
13063 }

\@Reset

```

```

13064 \def\@Reset[#1]#2{%
13065   \def\Fld@width{\DefaultWidthofReset}%
13066   \def\Fld@height{\DefaultHeightofReset}%
13067   \begingroup
13068     \expandafter\HyField@SetKeys\expandafter{%
13069       \DefaultOptionsofReset,#1%
13070     }%
13071     \leavevmode
13072     \ifHy@pdfa
13073       \Hy@Error{%
13074         PDF/A: Reset action is prohibited%
13075       }\@ehc
13076       \MakeButtonField{#2}%
13077     \else
13078       \HyField@FlagsPushButton
13079       \ifFld@hidden\def\Fld@width{1sp}\fi
13080       \setbox\pdfm@box=\hbox{\MakeButtonField{#2}}%
13081       \Hy@escapeform\PDFForm@Reset
13082       \HyField@AdvanceAnnotCount
13083       \@pdfm@mark{%
13084         ann @reset\HyField@TheAnnotCount\space
13085         \dvipdfm@setdim
13086         <<\PDFForm@Reset>>%
13087       }%
13088       \unhbox\pdfm@box
13089       \@pdfm@mark{put @afields @reset\HyField@TheAnnotCount}%
13090     \fi
13091   \endgroup
13092 }

```

\@CheckBox

```

13093 \def\@CheckBox[#1]#2{% parameters, label
13094   \def\Fld@name{#2}%
13095   \def\Fld@default{0}%
13096   \begingroup
13097     \def\Fld@width{\DefaultWidthofCheckBox}%
13098     \def\Fld@height{\DefaultHeightofCheckBox}%
13099     \expandafter\HyField@SetKeys\expandafter{%
13100       \DefaultOptionsofCheckBox,#1%
13101     }%
13102     \PDFForm@Name
13103     \HyField@FlagsCheckBox
13104     \ifFld@hidden\def\Fld@width{1sp}\fi
13105     \setbox\pdfm@box=\hbox{%
13106       \MakeCheckField{\Fld@width}{\Fld@height}%
13107     }%
13108     \HyField@AdvanceAnnotCount
13109     \LayoutCheckField{#2}{%
13110       \Hy@escapeform\PDFForm@Check
13111       \@pdfm@mark{%
13112         ann @check\HyField@TheAnnotCount\space
13113         \dvipdfm@setdim
13114         <<\PDFForm@Check>>%
13115       }%
13116       \unhbox\pdfm@box
13117       \@pdfm@mark{put @afields @check\HyField@TheAnnotCount}%
13118     }%

```



```

13119 \endgroup
13120 }

13121 \def\Hy@FormObjects{%
13122 \@pdfm@mark{obj @OBJpdfdocencoding%
13123 <<%
13124 /Type/Encoding%
13125 /Differences[%
13126 24/breve/caron/circumflex/dotaccent/hungarumlaut/ogonek/ring/tilde %
13127 39/quotesingle %
13128 96/grave %
13129 128/bullet/dagger/daggerdbl/ellipsis/emdash/endash/florin%
13130 /fraction/guilsinglleft/guilsinglright/minus/perthousand%
13131 /quotedblbase/quotedblleft/quotedblright/quoteleft/quoteright%
13132 /quotesinglbase/trademark/fi/fl/Lslash/OE/Scaron/Ydieresis%
13133 /Zcaron/dotlessi/lslash/oe/scaron/zcaron %
13134 164/currency %
13135 166/brokenbar %
13136 168/dieresis/copyright/ordfeminine %
13137 172/logicalnot/.notdef/registered/macron/degree/plusminus%
13138 /twosuperior/threesuperior/acute/mu %
13139 183/periodcentered/cedilla/onesuperior/ordmasculine %
13140 188/onequarter/onehalf/threequarters %
13141 192/Agrave/Aacute/Acircumflex/Atilde/Adieresis/Aring/AE%
13142 /Ccedilla/Egrave/Eacute/Ecircumflex/Edieresis/Igrave/Iacute%
13143 /Icircumflex/Idieresis/Eth/Ntilde/Ograve/Oacute/Ocircumflex%
13144 /Otilde/Odieresis/multiply/Oslash/Ugrave/Uacute/Ucircumflex%
13145 /Udieresis/Yacute/Thorn/germandbls/agrave/aacute/acircumflex%
13146 /atilde/adieresis/aring/ae/ccedilla/egrave/eacute%
13147 /ecircumflex/edieresis/igrave/iacute/icircumflex/idieresis%
13148 /eth/ntilde/ograve/oacute/ocircumflex/otilde/odieresis%
13149 /divide/oslash/ugrave/uacute/ucircumflex/udieresis/yacute%
13150 /thorn/ydieresis%
13151 ]%
13152 >>%
13153 }%
13154 \@pdfm@mark{obj @OBJZaDb%
13155 <<%
13156 /Type/Font%
13157 /Subtype/Type1%
13158 /Name/ZaDb%
13159 /BaseFont/ZapfDingbats%
13160 >>%
13161 }%
13162 \@pdfm@mark{obj @OBJHelv%
13163 <<%
13164 /Type/Font%
13165 /Subtype/Type1%
13166 /Name/Helv%
13167 /BaseFont/Helvetica%
13168 /Encoding @OBJpdfdocencoding%
13169 >>%
13170 }%
13171 \global\let\Hy@FormObjects\relax
13172 }
13173 </dvipdfm | xetex>

```

47.6 Common forms part

13174 \langle *pdfform \rangle

\Hy@escapestring

```
13175 \begingroup\expandafter\expandafter\expandafter\endgroup
13176 \expandafter\ifx\csname pdfescapestring\endcsname\relax
13177 \let\Hy@escapestring\@firstofone
13178 \def\Hy@escapeform#1{%
13179   \ifHy@escapeform
13180     \def\Hy@escapestring##1{%
13181       \noexpand\Hy@escapestring{\noexpand##1}%
13182     }%
13183     \edef\Hy@temp{#1}%
13184     \expandafter\Hy@@@escapeform\Hy@temp\Hy@escapestring{}\@nil
13185   \def\Hy@escapestring##1{%
13186     \ifundefined{Hy@esc@\string##1}{%
13187       ##1%
13188       \ThisShouldNotHappen
13189     }{%
13190       \csname Hy@esc@\string##1\endcsname
13191     }%
13192   }%
13193 \else
13194   \let\Hy@escapestring\@firstofone
13195 \fi
13196 }%
13197 \def\Hy@@@escapeform#1\Hy@escapestring#2#3\@nil{%
13198   \ifx\#3\%
13199   \else
13200     \expandafter
13201     \Hy@pstringdef\csname Hy@esc@\string#2\endcsname{#2}%
13202     \Hy@ReturnAfterFi{%
13203       \Hy@@@escapeform#3\@nil
13204     }%
13205   \fi
13206 }%
13207 \else
13208   \def\Hy@escapeform#1{%
13209     \ifHy@escapeform
13210       \let\Hy@escapestring\pdfescapestring
13211     \else
13212       \let\Hy@escapestring\@firstofone
13213     \fi
13214   }%
13215   \Hy@escapeform{}%
13216 \fi
```

\PDFForm@Name

```
13217 \def\PDFForm@Name{%
13218   \PDFForm@@Name\Fld@name
13219   \ifx\Fld@altname\relax
13220   \else
13221     \PDFForm@@Name\Fld@altname
13222   \fi
13223   \ifx\Fld@mappingname\relax
13224   \else
13225     \PDFForm@@Name\Fld@mappingname
```

```

13226 \fi
13227 }

```

\PDFForm@@Name

```

13228 \def\PDFForm@@Name#1{%
13229 \begingroup
13230 \ifnum\Hy@pdfversion<5 % implementation note 117, PDF spec 1.7
13231 \ifHy@unicode
13232 \Hy@unicodetrue
13233 \fi
13234 \fi
13235 \HyPsd@XeTeXBigCharstrue
13236 \pdfstringdef\Hy@gtemp#1%
13237 \endgroup
13238 \let#1\Hy@gtemp
13239 }

```

\Fld@additionalactions

```

13240 \def\Fld@@additionalactions{%
K input (keystroke) format
13241 \ifx\Fld@keystroke@code\@empty
13242 \else
13243 /K<</S/JavaScript/JS(\Hy@escapestring{\Fld@keystroke@code})>>%
13244 \fi
F display format
13245 \ifx\Fld@format@code\@empty
13246 \else
13247 /F<</S/JavaScript/JS(\Hy@escapestring{\Fld@format@code})>>%
13248 \fi
V validation
13249 \ifx\Fld@validate@code\@empty
13250 \else
13251 /V<</S/JavaScript/JS(\Hy@escapestring{\Fld@validate@code})>>%
13252 \fi
C calculation
13253 \ifx\Fld@calculate@code\@empty
13254 \else
13255 /C<</S/JavaScript/JS(\Hy@escapestring{\Fld@calculate@code})>>%
13256 \fi
Fo receiving the input focus
13257 \ifx\Fld@onfocus@code\@empty
13258 \else
13259 /Fo<</S/JavaScript/JS(\Hy@escapestring{\Fld@onfocus@code})>>%
13260 \fi
Bl losing the input focus (blurred)
13261 \ifx\Fld@onblur@code\@empty
13262 \else
13263 /Bl<</S/JavaScript/JS(\Hy@escapestring{\Fld@onblur@code})>>%
13264 \fi
D pressing the mouse button (down)
13265 \ifx\Fld@onmousedown@code\@empty
13266 \else
13267 /D<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmousedown@code})>>%
13268 \fi

```

U releasing the mouse button (up)

```
13269 \ifx\Fld@onmouseup@code\@empty
13270 \else
13271 /U<</S/JavaScript/JS(\Hy@escapestring{\Fld@onmouseup@code})>>%
13272 \fi
```

E cursor enters the annotation's active area.

```
13273 \ifx\Fld@onenter@code\@empty
13274 \else
13275 /E<</S/JavaScript/JS(\Hy@escapestring{\Fld@onenter@code})>>%
13276 \fi
```

X cursor exits the annotation's active area.

```
13277 \ifx\Fld@onexit@code\@empty
13278 \else
13279 /X<</S/JavaScript/JS(\Hy@escapestring{\Fld@onexit@code})>>%
13280 \fi
13281 }
13282 \def\Fld@additionalactions{%
13283 \if\Fld@@additionalactions-%
13284 \else
13285 \ifHy@pdfa
13286 \else
13287 /AA<<\Fld@@additionalactions>>%
13288 \fi
13289 \fi
13290 }
```

\Fld@annotnames

```
13291 \def\Fld@annotnames{%
13292 /T(\Fld@name)%
13293 \ifx\Fld@altname\relax
13294 \else
13295 /TU(\Fld@altname)%
13296 \fi
13297 \ifx\Fld@mappingname\relax
13298 \else
13299 /TM(\Fld@mappingname)%
13300 \fi
13301 }
```

\PDFForm@Check

```
13302 \def\PDFForm@Check{%
13303 /Subtype/Widget%
13304 \Fld@annotflags
13305 \Fld@annotnames
13306 /FT/Btn%
13307 \Fld@flags
13308 /Q \Fld@align
13309 /BS<</W \Fld@borderwidth /S/\Fld@borderstyle>>%
13310 /MK<<%
13311 \ifnum\Fld@rotation=\z@
13312 \else
13313 /R \Fld@rotation
13314 \fi
13315 \ifx\Fld@bordercolor\relax
13316 \else
13317 /BC[\Fld@bordercolor]%

```

```

13318 \fi
13319 \ifx\Fld@bcolor\relax
13320 \else
13321 /BG[\Fld@bcolor]%
13322 \fi
13323 /CA(\Hy@escapestring{\Fld@cbsymbol})%
13324 >>%
13325 /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
13326 \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13327 /H/P%
13328 \ifFld@checked /V/Yes\else /V/Off\fi
13329 \Fld@additionalactions
13330 }

```

\PDFForm@Push

```

13331 \ifHy@pdfa
13332 \else
13333 \def\PDFForm@Push{%
13334 /Subtype/Widget%
13335 \Fld@annotflags
13336 \Fld@annotnames
13337 /FT/Btn%
13338 \Fld@flags
13339 /H/P%
13340 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13341 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13342 \ifx\Fld@bordercolor\relax\else 1\fi
13343 \space
13344 \else
13345 /MK<<%
13346 \ifnum\Fld@rotation=\z@
13347 \else
13348 /R \Fld@rotation
13349 \fi
13350 \ifx\Fld@bordercolor\relax
13351 \else
13352 /BC[\Fld@bordercolor]%
13353 \fi
13354 >>%
13355 \fi
13356 /A<</S/JavaScript/JS(\Hy@escapestring{\Fld@onclick@code})>>%
13357 \Fld@additionalactions
13358 }%
13359 \fi

```

\PDFForm@List

```

13360 \def\PDFForm@List{%
13361 /Subtype/Widget%
13362 \Fld@annotflags
13363 \Fld@annotnames
13364 /FT/Ch%
13365 \Fld@flags
13366 /Q \Fld@align
13367 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13368 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13369 \ifx\Fld@bordercolor\relax\else 1\fi
13370 \ifx\Fld@bcolor\relax \else 1\fi

```

```

13371         \space
13372     \else
13373         /MK<<%
13374         \ifnum\Fld@rotation=\z@
13375         \else
13376             /R \Fld@rotation
13377         \fi
13378         \ifx\Fld@bordercolor\relax
13379         \else
13380             /BC[\Fld@bordercolor]%
13381         \fi
13382         \ifx\Fld@bcolor\relax
13383         \else
13384             /BG[\Fld@bcolor]%
13385         \fi
13386     >>%
13387 \fi
13388 /DA(/Helv \strip@pt\Fld@charsize\space Tf%
13389     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13390 \Fld@choices
13391 \Fld@additionalactions
13392 }

```

\PDFForm@Radio

```

13393 \def\PDFForm@Radio{%
13394     /Subtype/Widget%
13395     \Fld@annotflags
13396     \Fld@annotnames
13397     /FT/Btn%
13398     \Fld@flags
13399     /H/P%
13400     /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13401     /MK<<%
13402         \ifnum\Fld@rotation=\z@
13403         \else
13404             /R \Fld@rotation
13405         \fi
13406         \ifx\Fld@bordercolor\relax
13407         \else
13408             /BC[\Fld@bordercolor]%
13409         \fi
13410         \ifx\Fld@bcolor\relax
13411         \else
13412             /BG[\Fld@bcolor]%
13413         \fi
13414         /CA(\Fld@radiosymbol)%
13415     >>%
13416     /DA(/ZaDb \strip@pt\Fld@charsize\space Tf%
13417         \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13418     \ifx\@currValue\Fld@default
13419         /V/\Fld@default
13420         /DV/\Fld@default
13421     \else
13422         /V/Off%
13423         /DV/Off%
13424     \fi
13425     \Fld@additionalactions

```

13426 }

\PDFForm@Text

```
13427 \def\PDFForm@Text{%
13428   /Subtype/Widget%
13429   \Fld@annotflags
13430   \Fld@annotnames
13431   /FT/Tx%
13432   \Fld@flags
13433   /Q \Fld@align
13434   /BS<</W \Fld@borderwidth\space /S /\Fld@borderstyle>>%
13435   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13436     \ifx\Fld@bordercolor\relax\else 1\fi
13437     \ifx\Fld@bcolor\relax \else 1\fi
13438     \space
13439   \else
13440     /MK<<%
13441     \ifnum\Fld@rotation=\z@
13442     \else
13443       /R \Fld@rotation
13444     \fi
13445     \ifx\Fld@bordercolor\relax
13446     \else
13447       /BC[\Fld@bordercolor]%
13448     \fi
13449     \ifx\Fld@bcolor\relax
13450     \else
13451       /BG[\Fld@bcolor]%
13452     \fi
13453     >>%
13454   \fi
13455   /DA(/Helv \strip@pt\Fld@charsize\space Tf%
13456     \ifx\Fld@color\@empty\else\space\Fld@color\fi)%
13457   /DV(\Hy@escapestring{\Fld@default})%
13458   /V(\Hy@escapestring{\Fld@value})%
13459   \Fld@additionalactions
13460   \ifnum\Fld@maxlen>\z@/MaxLen \Fld@maxlen \fi
13461 }
```

\PDFForm@Submit

```
13462 \def\PDFForm@Submit{%
13463   /Subtype/Widget%
13464   \Fld@annotflags
13465   \Fld@annotnames
13466   /FT/Btn%
13467   \Fld@flags
13468   /H/P%
13469   /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13470   \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13471     \ifx\Fld@bordercolor\relax\else 1\fi
13472     \space
13473   \else
13474     /MK<<%
13475     \ifnum\Fld@rotation=\z@
13476     \else
13477       /R \Fld@rotation
13478     \fi
```

```

13479 \ifx\Fld@bordercolor\relax
13480 \else
13481 /BC[\Fld@bordercolor]%
13482 \fi
13483 >>%
13484 \fi
13485 /A<<%
13486 /S/SubmitForm%
13487 /F<<%
13488 /FS/URL%
13489 /F(\Hy@escapestring{\Form@action})%
13490 >>%
13491 \Fld@submitflags
13492 >>%
13493 \Fld@additionalactions
13494 }

```

\PDFForm@Reset

```

13495 \ifHy@pdfa
13496 \else
13497 \def\PDFForm@Reset{%
13498 /Subtype/Widget%
13499 \Fld@annotflags
13500 \Fld@annotnames
13501 /FT/Btn%
13502 \Fld@flags
13503 /H/P%
13504 /DA(/Helv \strip@pt\Fld@charsize\space Tf 0 0 1 rg)%
13505 \ifcase0\ifnum\Fld@rotation=\z@ \else 1\fi
13506 \ifx\Fld@bordercolor\relax\else 1\fi
13507 \space
13508 \else
13509 /MK<<%
13510 \ifnum\Fld@rotation=\z@
13511 \else
13512 /R \Fld@rotation
13513 \fi
13514 \ifx\Fld@bordercolor\relax
13515 \else
13516 /BC[\Fld@bordercolor]%
13517 \fi
13518 % /CA (Clear)
13519 % /AC (Done)
13520 >>%
13521 \fi
13522 /BS<</W \Fld@borderwidth/S/\Fld@borderstyle>>%
13523 /A<</S/ResetForm>>%
13524 \Fld@additionalactions
13525 }%
13526 \fi

13527 </pdfform>
13528 <*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`

```
13529 \def\phantomsection{%
13530   \Hy@MakeCurrentHrefAuto{section*}%
13531   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
13532 }
13533 \</package>
```

48.1 Bookmarks

```
13534 \<*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.

```
13535 \def\Hy@writebookmark#1#2#3#4#5{%
13536   % section number, text, label, level, file
13537   \ifx\WriteBookmarks\relax%
13538     \else
13539     \ifnum#4>\Hy@bookmarksdepth\relax
13540     \else
13541       \@@writetorep{#1}{#2}{#3}{#4}{#5}%
13542     \fi
13543   \fi
13544 }
13545 \def\Hy@currentbookmarklevel{0}
13546 \def\Hy@numberline#1{#1 }
13547 \def\@@writetorep#1#2#3#4#5{%
13548   \begingroup
13549   \edef\Hy@tempa{#5}%
13550   \ifx\Hy@tempa\Hy@bookmarkstype
13551     \edef\Hy@level{#4}%
13552     \ifx\Hy@levelcheck Y%
13553       \@tempcnta\Hy@level\relax
13554       \advance\@tempcnta by -1 %
13555       \ifnum\Hy@currentbookmarklevel<\@tempcnta
13556         \advance\@tempcnta by -\Hy@currentbookmarklevel\relax
13557       \advance\@tempcnta by 1 %
```

```

13558     \Hy@Warning{%
13559         Difference (\the\@tempcnta) between bookmark levels is %
13560         greater \MessageBreak than one, level fixed%
13561     }%
13562     \@tempcnta\Hy@currentbookmarklevel
13563     \advance\@tempcnta by 1 %
13564     \edef\Hy@level{\the\@tempcnta}%
13565 \fi
13566 \else
13567     \global\let\Hy@levelcheck Y%
13568 \fi
13569 \global\let\Hy@currentbookmarklevel\Hy@level
13570 \@tempcnta\Hy@level\relax
13571 \expandafter\xdef\csname Parent\Hy@level\endcsname{#3}%
13572 \advance\@tempcnta by -1 %
13573 \edef\Hy@tempa{#3}%
13574 \edef\Hy@tempb{\csname Parent\the\@tempcnta\endcsname}%
13575 \ifx\Hy@tempa\Hy@tempb
13576     \Hy@Warning{%
13577         The anchor of a bookmark and its parent's must not%
13578         \MessageBreak be the same. Added a new anchor%
13579     }%
13580     \phantomsection
13581 \fi
13582 \ifHy@bookmarksnumbered
13583     \let\numberline\Hy@numberline
13584     \let\booknumberline\Hy@numberline
13585     \let\partnumberline\Hy@numberline
13586     \let\chapternumberline\Hy@numberline
13587 \else
13588     \let\numberline\@gobble
13589     \let\booknumberline\@gobble
13590     \let\partnumberline\@gobble
13591     \let\chapternumberline\@gobble
13592 \fi
13593 \HyPsd@XeTeXBigCharstrue
13594 \pdfstringdef\Hy@tempa{#2}%
13595 \HyPsd@SanitizeForOutFile\Hy@tempa
13596 \if@filesw
13597     \stepcounter{bookmark@seq@number}%
13598     \ifundefined{@outlinefile}{%
13599     }{%
13600         \protected@write\@outlinefile{}{%
13601             \protect\BOOKMARK
13602             [\Hy@level][\@bookmarkopenstatus{\Hy@level}]{#3}%
13603             {\Hy@tempa}{\Hy@tempb}%
13604             \@percentchar\space\thebookmark@seq@number
13605         }%
13606     }%
13607 \fi
13608 \fi
13609 \endgroup
13610 }
13611 \newcounter{bookmark@seq@number}
13612 \begingroup
13613 \lccode'='{'%
13614 \lccode'='}%

```

```

13615 \lccode'1=\z@
13616 \lccode'2=\z@
13617 \lccode'3=\z@
13618 \lccode'5=\z@
13619 \lccode'7=\z@
13620 \lccode'\#=\z@
13621 \lccode'\'=\z@
13622 \lccode'\{=\z@
13623 \lccode'\}=\z@
13624 \lowercase{%
13625 \endgroup
13626 \def\HyPsd@SanitizeForOutFile#1{%
13627   \@onelevel@sanitize\Hy@tempa
13628   \escapechar'\%
13629   \edef\Hy@tempa{%
13630     \expandafter\HyPsd@SanitizeOut@BraceLeft\Hy@tempa(\@nil
13631   }%
13632   \edef\Hy@tempa{%
13633     \expandafter\HyPsd@SanitizeOut@BraceRight\Hy@tempa)\@nil
13634   }%
13635 }%
13636 \def\HyPsd@SanitizeOut@BraceLeft#1(#2\@nil{%
13637   #1%
13638   \ifx\#2\\%
13639     \expandafter\ltx@gobble
13640   \else
13641     \expandafter\ltx@firstofone
13642   \fi
13643   {%
13644     \string\173%
13645     \HyPsd@SanitizeOut@BraceLeft#2\@nil
13646   }%
13647 }%
13648 \def\HyPsd@SanitizeOut@BraceRight#1)#2\@nil{%
13649   #1%
13650   \ifx\#2\\%
13651     \expandafter\ltx@gobble
13652   \else
13653     \expandafter\ltx@firstofone
13654   \fi
13655   {%
13656     \string\175%
13657     \HyPsd@SanitizeOut@BraceRight#2\@nil
13658   }%
13659 }%
13660 }

```

In the call of \BOOKMARK the braces around #4 are omitted, because it is not likely, that the level number contains].

```

13661 \newcommand{\currentpdfbookmark}{%
13662   \pdfbookmark[\Hy@currentbookmarklevel]%
13663 }
13664 \newcommand{\subpdfbookmark}{%
13665   \@tempcnta\Hy@currentbookmarklevel
13666   \Hy@StepCount\@tempcnta
13667   \expandafter\pdfbookmark\expandafter[\the\@tempcnta]%
13668 }
13669 \newcommand{\belowpdfbookmark}[2]{%

```

```

13670 \@tempcnta\Hy@currentbookmarklevel
13671 \Hy@StepCount\@tempcnta
13672 \expandafter\pdfbookmark\expandafter[\the\@tempcnta]{#1}{#2}%
13673 \advance\@tempcnta by -1 %
13674 \xdef\Hy@currentbookmarklevel{\the\@tempcnta}%
13675 }

```

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.

```

13676 \renewcommand\pdfbookmark[3][0]{%
13677   \Hy@writebookmark{#2}{#3.#1}{#1}{toc}%
13678   \hyper@anchorstart{#3.#1}\hyper@anchorend
13679 }
13680 \def\BOOKMARK{%
13681   \@ifnextchar[\@BOOKMARK]{\@@BOOKMARK[1][-]}%
13682 }
13683 \def\@BOOKMARK[#1]{%
13684   \@ifnextchar[\@BOOKMARK[{#1}]]{\@@BOOKMARK[{#1}][-]}%
13685 }

```

The macros for calculating structure of outlines are derived from those by Petr Olsak used in the `texinfo` macros.

48.1.1 Rerun warning

`\Hy@OutlineRerunCheck`

```

13686 \RequirePackage{rerunfilecheck}[2009/12/10]
13687 \def\Hy@OutlineRerunCheck{%
13688   \RerunFileCheck{\jobname.out}{%
13689     \immediate\closeout\@outlinefile
13690   }{%
13691     Rerun to get outlines right\MessageBreak
13692     or use package 'bookmark'%
13693   }%
13694 }

```

48.1.2 Driver stuff

The VTEX section was written originally by VTEX, but then amended by Denis Girou (denis.girou@idris.fr), then by by Taco Hoekwater (taco.hoekwater@wkap.nl). The problem is that VTEX, with its close integration of the PDF backend, does look at the contents of bookmarks, escaping `\` and the like.

```

13695 \<vtex>
13696 \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.

```

13697 \begingroup
13698 \catcode'\'=12 %
13699 \ifnum\Hy@VTeXversion<650 %
13700   \catcode'\ "=12 %
13701   \gdef\hv@pdf@char#1#2#3{%
13702     \char
13703     \ifcase'#1#2#3 %
13704       "00\or"01\or"02\or"03\or"04\or"05\or"06\or"07%
13705       \or"08\or"09\or"0A\or"0B\or"0C\or"0D\or"0E\or"0F%

```

```

13706 \or"10\or"11\or"12\or"13\or"14\or"15\or"16\or"17%
13707 \or"18\or"19\or"1A\or"1B\or"1C\or"1D\or"1E\or"1F%
13708 \or"20\or"21\or"22\or"23\or"24\or"25\or"26\or"27%
13709 \or"28\or"29\or"2A\or"2B\or"2C\or"2D\or"2E\or"2F%
13710 \or"30\or"31\or"32\or"33\or"34\or"35\or"36\or"37%
13711 \or"38\or"39\or"3A\or"3B\or"3C\or"3D\or"3E\or"3F%
13712 \or"40\or"41\or"42\or"43\or"44\or"45\or"46\or"47%
13713 \or"48\or"49\or"4A\or"4B\or"4C\or"4D\or"4E\or"4F%
13714 \or"50\or"51\or"52\or"53\or"54\or"55\or"56\or"57%
13715 \or"58\or"59\or"5A\or"5B\or"5C\or"5D\or"5E\or"5F%
13716 \or"60\or"61\or"62\or"63\or"64\or"65\or"66\or"67%
13717 \or"68\or"69\or"6A\or"6B\or"6C\or"6D\or"6E\or"6F%
13718 \or"70\or"71\or"72\or"73\or"74\or"75\or"76\or"77%
13719 \or"78\or"79\or"7A\or"7B\or"7C\or"7D\or"7E\or"7F%
13720 \or"80\or"81\or"82\or"83\or"84\or"85\or"86\or"87%
13721 \or"88\or"89\or"8A\or"8B\or"8C\or"8D\or"8E\or"8F%
13722 \or"90\or"91\or"92\or"93\or"94\or"95\or"96\or"97%
13723 \or"98\or"99\or"9A\or"9B\or"9C\or"9D\or"9E\or"9F%
13724 \or"A0\or"A1\or"A2\or"A3\or"A4\or"A5\or"A6\or"A7%
13725 \or"A8\or"A9\or"AA\or"AB\or"AC\or"AD\or"AE\or"AF%
13726 \or"B0\or"B1\or"B2\or"B3\or"B4\or"B5\or"B6\or"B7%
13727 \or"B8\or"B9\or"BA\or"BB\or"BC\or"BD\or"BE\or"BF%
13728 \or"C0\or"C1\or"C2\or"C3\or"C4\or"C5\or"C6\or"C7%
13729 \or"C8\or"C9\or"CA\or"CB\or"CC\or"CD\or"CE\or"CF%
13730 \or"D0\or"D1\or"D2\or"D3\or"D4\or"D5\or"D6\or"D7%
13731 \or"D8\or"D9\or"DA\or"DB\or"DC\or"DD\or"DE\or"DF%
13732 \or"E0\or"E1\or"E2\or"E3\or"E4\or"E5\or"E6\or"E7%
13733 \or"E8\or"E9\or"EA\or"EB\or"EC\or"ED\or"EE\or"EF%
13734 \or"F0\or"F1\or"F2\or"F3\or"F4\or"F5\or"F6\or"F7%
13735 \or"F8\or"F9\or"FA\or"FB\or"FC\or"FD\or"FE\or"FF%
13736 \fi
13737 }%
13738 \else
13739 \gdef\hv@pdf@char{\char'}%
13740 \fi
13741 \endgroup

```

\@@BOOKMARK

```

13742 \def\@@BOOKMARK[#1][#2]#3#4#5{%
13743 \expandafter\edef\csname @count@#3\endcsname{%
13744 \the\@serial@counter
13745 }%
13746 \edef\@mycount{\the\@serial@counter}%
13747 \Hy@StepCount\@serial@counter
13748 \edef\@parcount{%
13749 \expandafter\ifx\csname @count@#5\endcsname\relax
13750 0%
13751 \else
13752 \csname @count@#5\endcsname
13753 \fi
13754 }%
13755 \immediate\special{%
13756 !outline \HyperDestNameFilter{#3};p=\@parcount,i=\@mycount,%
13757 s=\ifx#2-c\else o\fi,t=#4%
13758 }%
13759 }%

```

\ReadBookmarks

```

13760 \def\ReadBookmarks{%
13761   \begingroup
13762   \def\0{\hv@pdf@char 0}%
13763   \def\1{\hv@pdf@char 1}%
13764   \def\2{\hv@pdf@char 2}%
13765   \def\3{\hv@pdf@char 3}%
13766   \def\({}%
13767   \def\)}%
13768   \def\do##1{%
13769     \ifnum\catcode'##1=\active
13770       \@makeother##1%
13771     \else
13772       \ifnum\catcode'##1=6 %
13773         \@makeother##1%
13774       \fi
13775     \fi
13776   }%
13777   \dospecials
13778   \Hy@safe@activetrue
13779   \InputIfFileExists{\jobname.out}{-}{-}%
13780 \endgroup
13781 \ifx\WriteBookmarks\relax
13782 \else
13783   \if@filesw
13784     \newwrite\@outlinefile
13785     \Hy@OutlineRerunCheck
13786     \immediate\openout\@outlinefile=\jobname.out\relax
13787     \ifHy@typexml
13788       \immediate\write\@outlinefile{<relaxxml>\relax}%
13789     \fi
13790   \fi
13791 \fi
13792 }

13793 </vtex>
13794 <!*vtex>
13795 \def\ReadBookmarks{%
13796   \begingroup
13797   \def\do##1{%
13798     \ifnum\catcode'##1=\active
13799       \@makeother##1%
13800     \else
13801       \ifnum\catcode'##1=6 %
13802         \@makeother##1%
13803       \fi
13804     \fi
13805   }%
13806   \dospecials
13807   \Hy@safe@activetrue
13808   \escapechar='\%
13809   \def\@@BOOKMARK[##1][##2]##3##4##5{%
13810     \calc@bm@number{##5}%
13811   }%
13812   \InputIfFileExists{\jobname.out}{-}{-}%
13813   \ifx\WriteBookmarks\relax
13814     \global\let\WriteBookmarks\relax

```

```

13815 \fi
13816 \def\@@BOOKMARK[##1][##2]##3##4##5{%
13817 \def\Hy@temp{##4}%
13818 (*pdfTex)
13819 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13820 \Hy@OutlineName{\Hy@pstringName{%
13821 ##2\check@bm@number{##3}}%
13822 }{%
13823 \expandafter\strip@prefix\meaning\Hy@temp
13824 }%
13825 \pdfTex)
13826 (*pdfmark)
13827 \pdfmark{%
13828 pdfmark=/OUT,%
13829 Count={##2\check@bm@number{##3}},%
13830 Dest={##3},%
13831 Title=\expandafter\strip@prefix\meaning\Hy@temp
13832 }%
13833 \pdfmark)
13834 (*dvipdfm | xetex)
13835 \Hy@pstringdef\Hy@pstringName{\HyperDestNameFilter{##3}}%
13836 \@pdfm@mark{%
13837 outline \ifHy@DvipdfmxOutlineOpen
13838 [%
13839 \ifnum##21>\z@
13840 \else
13841 -%
13842 \fi
13843 ] %
13844 \fi
13845 ##1<<%
13846 /Title(\expandafter\strip@prefix\meaning\Hy@temp)%
13847 /A<<%
13848 /S/GoTo%
13849 /D(\Hy@pstringName)%
13850 >>%
13851 >>%
13852 }%
13853 \dvipdfm | xetex)
13854 }%
13855 {%
13856 \def\WriteBookmarks{0}%
13857 \InputIfFileExists{\jobname.out}{\relax}%
13858 }%
13859 %{\escapechar\m@ne\InputIfFileExists{\jobname.out}{\relax}}%
13860 \ifx\WriteBookmarks\relax
13861 \else
13862 \if@filesW
13863 \newwrite\@outlinefile
13864 \Hy@OutlineRerunCheck
13865 \immediate\openout\@outlinefile=\jobname.out\relax
13866 \ifHy@typexml
13867 \immediate\write\@outlinefile{<relaxxml>\relax}%
13868 \fi
13869 \fi
13870 \fi
13871 \endgroup

```

```

13872 }
13873 <*pdfTex>
13874 \def\Hy@OutlineName#1#2#3#4{%
13875   \pdfoutline goto name{#2}count#3{#4}%
13876 }
13877 </pdfTex>
13878 \def\check@bm@number#1{%
13879   \expandafter\ifx\csname B_#1\endcsname\relax
13880     0%
13881   \else
13882     \csname B_#1\endcsname
13883   \fi
13884 }
13885 \def\calc@bm@number#1{%
13886   \@tempcnta=\check@bm@number{#1}\relax
13887   \advance\@tempcnta by 1 %
13888   \expandafter\xdef\csname B_#1\endcsname{\the\@tempcnta}%
13889 }
13890 </!vtex>

13891 \ifHy@implicit
13892 \else
13893   \expandafter\endinput
13894 \fi

13895 </outlines>
13896 <*outlines | hypertex>

13897 \newlength\Hy@SectionHShift
13898 \def\Hy@SectionAnchorHref#1{%
13899   \ifx\protect\@typeset@protect
13900     \Hy@@@SectionAnchor{#1}%
13901   \fi
13902 }
13903 \DeclareRobustCommand*\Hy@@@SectionAnchor[1]{%
13904   \leavevmode
13905   \hbox to 0pt{%
13906     \kern-\Hy@SectionHShift
13907     \Hy@raisedlink{%
13908       \hyper@anchorstart{#1}\hyper@anchorend
13909     }%
13910     \hss
13911   }%
13912 }
13913 \let\H@old@ssect\@ssect
13914 \def\@ssect#1#2#3#4#5{%
13915   \Hy@MakeCurrentHrefAuto{section*}%
13916   \setlength\Hy@SectionHShift{#1}%
13917   \begingroup
13918     \toks@{\H@old@ssect{#1}{#2}{#3}{#4}}%
13919     \toks\tw@\expandafter{%
13920       \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13921       #5%
13922     }%
13923   \edef\x{\endgroup
13924     \the\toks@{\the\toks\tw@}}%
13925   }\x
13926 }
13927 \let\H@old@schapter\@schapter

```



```

13928 \def\@schapter#1{%
13929   \begingroup
13930   \let\@mkboth\@gobbletwo
13931   \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13932   \Hy@raisedlink{%
13933     \hyper@anchorstart{\@currentHref}\hyper@anchorend
13934   }%
13935   \endgroup
13936   \H@old@schapter{#1}%
13937 }

```

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:

```

13938 \ltx@ifundefined{@chapter}{}{%
13939   \let\Hy@org@chapter\@chapter
13940   \def\@chapter{%
13941     \def\Hy@next{%
13942       \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
13943       \Hy@raisedlink{%
13944         \hyper@anchorstart{\@currentHref}\hyper@anchorend
13945       }%
13946     }%
13947     \ifnum\c@secnumdepth>\m@ne
13948       \ltx@ifundefined{if@mainmatter}%
13949       \iftrue{\csname if@mainmatter\endcsname}%
13950       \let\Hy@next\relax
13951     \fi
13952     \fi
13953     \Hy@next
13954     \Hy@org@chapter
13955   }%
13956 }

13957 \let\H@old@part\@part
13958 \begingroup\expandafter\expandafter\expandafter\endgroup
13959 \expandafter\ifx\csname chapter\endcsname\relax
13960   \let\Hy@secnum@part\z@
13961 \else
13962   \let\Hy@secnum@part\m@ne
13963 \fi
13964 \def\@part{%
13965   \ifnum\Hy@secnum@part>\c@secnumdepth
13966     \phantomsection
13967   \fi
13968   \H@old@part
13969 }

13970 \let\H@old@spart\@spart
13971 \def\@spart#1{%
13972   \Hy@MakeCurrentHrefAuto{part*}%
13973   \Hy@raisedlink{%
13974     \hyper@anchorstart{\@currentHref}\hyper@anchorend
13975   }%
13976   \H@old@spart{#1}%
13977 }

13978 \let\H@old@sect\@sect
13979 \def\@sect#1#2#3#4#5#6[#7]#8{%
13980   \ifnum #2>\c@secnumdepth

```

```

13981 \expandafter\@firstoftwo
13982 \else
13983 \expandafter\@secondoftwo
13984 \fi
13985 {%
13986 \Hy@MakeCurrentHrefAuto{section*}%
13987 \setlength{\Hy@SectionHShift}{#3}%
13988 \begingroup
13989 \toks@{\H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}}%
13990 \toks\tw@\expandafter{%
13991 \expandafter\Hy@SectionAnchorHref\expandafter{\@currentHref}%
13992 #8%
13993 }%
13994 \edef\x{\endgroup
13995 \the\toks@\the\toks\tw@}%
13996 }\x
13997 }{%
13998 \H@old@sect{#1}{#2}{#3}{#4}{#5}{#6}{#7}{#8}%
13999 }%
14000 }

14001 </outlines | hypertex>
14002 <*outlines>

14003 \expandafter\def\csname Parent-4\endcsname{}
14004 \expandafter\def\csname Parent-3\endcsname{}
14005 \expandafter\def\csname Parent-2\endcsname{}
14006 \expandafter\def\csname Parent-1\endcsname{}
14007 \expandafter\def\csname Parent0\endcsname{}
14008 \expandafter\def\csname Parent1\endcsname{}
14009 \expandafter\def\csname Parent2\endcsname{}
14010 \expandafter\def\csname Parent3\endcsname{}
14011 \expandafter\def\csname Parent4\endcsname{}
14012 </outlines>

```

49 Compatibility with koma-script classes

```
14013 <*outlines | hypertex>
```

Hard-wire in an unpleasant over-ride of komascript ‘scrbook’ class for Tobias Isenberg (Tobias.Isenberg@gmx.de). With version 6.71b the hack is also applied to ‘scrreprt’ class and is removed for koma-script versions since 2001/01/01, because Markus Kohm supports hyperref in komascript.

```

14014 \def\Hy@tempa{%
14015 \def\@addchap[##1]##2{%
14016 \typeout{##2}%
14017 \if@twoside
14018 \@mkboth{##1}{}%
14019 \else
14020 \@mkboth{}{##1}%
14021 \fi
14022 \addtocontents{lof}{\protect\addvspace{10\p@}}%
14023 \addtocontents{lot}{\protect\addvspace{10\p@}}%
14024 \Hy@MakeCurrentHrefAuto{\Hy@chapapp*}%
14025 \Hy@raisedlink{%
14026 \hyper@anchorstart{\@currentHref}\hyper@anchorend
14027 }%

```

```

14028 \if@twocolumn
14029 \topnewpage[\@makeschapterhead{##2}]%
14030 \else
14031 \@makeschapterhead{##2}%
14032 \afterheading
14033 \fi
14034 \addcontentsline{toc}{chapter}{##1}%
14035 }%
14036 }
14037 \ifclassloaded{scrbook}{%
14038 \ifclasslater{scrbook}{2001/01/01}{%
14039 \let\Hy@tempa\@empty
14040 }{}%
14041 }{%
14042 \ifclassloaded{scrreprt}{%
14043 \ifclasslater{scrreprt}{2001/01/01}{%
14044 \let\Hy@tempa\@empty
14045 }{}%
14046 }{%
14047 \let\Hy@tempa\@empty
14048 }%
14049 }%
14050 \Hy@tempa
14051 </outlines | hypertext>

```

50 Encoding definition files for encodings of PDF strings

This was contributed by Heiko Oberdiek.

50.1 PD1 encoding

```

14052 (*pd1enc)
14053 \DeclareFontEncoding{PD1}{}{}

```

Accents

```

14054 \DeclareTextAccent{\`}{PD1}{\textasciigrave}
14055 \DeclareTextAccent{\'}{PD1}{\textacute}
14056 \DeclareTextAccent{\~}{PD1}{\textasciicircum}
14057 \DeclareTextAccent{\~}{PD1}{\texttilde}
14058 \DeclareTextAccent{\"}{PD1}{\textasciidieresis}
14059 \DeclareTextAccent{\r}{PD1}{\textring}
14060 \DeclareTextAccent{\v}{PD1}{\textasciicaron}
14061 \DeclareTextAccent{\.}{PD1}{\textdotaccent}
14062 \DeclareTextAccent{\c}{PD1}{\textcedilla}
14063 \DeclareTextAccent{\=}{PD1}{\textasciimacron}
14064 \DeclareTextAccent{\b}{PD1}{\textmacronbelow}
14065 \DeclareTextAccent{\d}{PD1}{\textdotbelow}
14066 \DeclareTextCompositeCommand{\`}{PD1}{\@empty}{\textasciigrave}
14067 \DeclareTextCompositeCommand{\'}{PD1}{\@empty}{\textacute}
14068 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\textasciicircum}
14069 \DeclareTextCompositeCommand{\~}{PD1}{\@empty}{\texttilde}
14070 \DeclareTextCompositeCommand{\"}{PD1}{\@empty}{\textasciidieresis}
14071 \DeclareTextCompositeCommand{\r}{PD1}{\@empty}{\textring}
14072 \DeclareTextCompositeCommand{\v}{PD1}{\@empty}{\textasciicaron}
14073 \DeclareTextCompositeCommand{\.}{PD1}{\@empty}{\textdotaccent}
14074 \DeclareTextCompositeCommand{\c}{PD1}{\@empty}{\textcedilla}
14075 \DeclareTextCompositeCommand{\=}{PD1}{\@empty}{\textasciimacron}

```

```

14076 \DeclareTextCompositeCommand{\b}{PD1}{\@empty}{\textmacronbelow}
14077 \DeclareTextCompositeCommand{\d}{PD1}{\@empty}{\textdotbelow}
14078 \DeclareTextCompositeCommand{\'}{PD1}{\ }{\textasciigrave}
14079 \DeclareTextCompositeCommand{\`}{PD1}{\ }{\textacute}
14080 \DeclareTextCompositeCommand{\^}{PD1}{\ }{\textasciicircum}
14081 \DeclareTextCompositeCommand{\~}{PD1}{\ }{\texttilde}
14082 \DeclareTextCompositeCommand{\"}{PD1}{\ }{\textasciidieresis}
14083 \DeclareTextCompositeCommand{\r}{PD1}{\ }{\textring}
14084 \DeclareTextCompositeCommand{\v}{PD1}{\ }{\textasciicaron}
14085 \DeclareTextCompositeCommand{\.}{PD1}{\ }{\textdotaccent}
14086 \DeclareTextCompositeCommand{\c}{PD1}{\ }{\textcedilla}
14087 \DeclareTextCompositeCommand{\=}{PD1}{\ }{\textasciimacron}
14088 \DeclareTextCompositeCommand{\b}{PD1}{\ }{\textmacronbelow}
14089 \DeclareTextCompositeCommand{\d}{PD1}{\ }{\textdotbelow}
14090 \DeclareTextCommand{\k}{PD1}[1]{\TextSymbolUnavailable{\k{#1}}#1}
14091 \DeclareTextCommand{\t}{PD1}[1]{\TextSymbolUnavailable{\t{#1}}#1}
14092 \DeclareTextCommand{\newtie}{PD1}[1]{%
14093   \TextSymbolUnavailable{\newtie{#1}}#1%
14094 }

```

Special white space escape characters not for use in bookmarks but for other PDF strings.

```

14095 % U+0009 (CHARACTER TABULATION)
14096 \DeclareTextCommand{\textHT}{PD1}{\011}% U+0009
14097 % U+000A (LINE FEED)
14098 \DeclareTextCommand{\textLF}{PD1}{\012}% U+000A
14099 % U+000D (CARRIAGE RETURN)
14100 \DeclareTextCommand{\textCR}{PD1}{\015}% U+000D

```

Accent glyph names

```

14101 % U+02D8 BREVE; breve
14102 \DeclareTextCommand{\textasciibreve}{PD1}{\030}% U+02D8
14103 % U+02C7 CARON; caron
14104 \DeclareTextCommand{\textasciicaron}{PD1}{\031}% U+02C7
14105 % U+02C6 MODIFIER LETTER CIRCUMFLEX ACCENT; circumflex
14106 \DeclareTextCommand{\textcircumflex}{PD1}{\032}% U+02C6
14107 % U+02D9 DOT ABOVE; dotaccent
14108 \DeclareTextCommand{\textdotaccent}{PD1}{\033}% U+02D9
14109 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
14110 \DeclareTextCommand{\texthungarumlaut}{PD1}{\034}% U+02DD
14111 % U+02DB OGONEK; ogonek
14112 \DeclareTextCommand{\textogonek}{PD1}{\035}% U+02DB
14113 % U+02DA RING ABOVE; ring
14114 \DeclareTextCommand{\textring}{PD1}{\036}% U+02DA
14115 % U+02DC SMALL TILDE; ilde, *tilde
14116 \DeclareTextCommand{\texttilde}{PD1}{\037}% U+02DC

```

\040: U+0020 SPACE; *space, spacehackarabic

\041: U+0021 EXCLAMATION MARK; exclam

```

14117 % U+0022 QUOTATION MARK; quotedbl
14118 \DeclareTextCommand{\textquotedbl}{PD1}{\string"}% \042 U+0022
14119 % U+0023 NUMBER SIGN; numbersign
14120 \DeclareTextCommand{\textnumbersign}{PD1}{\043}% U+0023
14121 % U+0024 DOLLAR SIGN; dollar
14122 \DeclareTextCommand{\textdollar}{PD1}{\044}% U+0024
14123 % U+0025 PERCENT SIGN; percent
14124 \DeclareTextCommand{\textpercent}{PD1}{\045}% U+0025
14125 % U+0026 AMPERSAND; ampersand
14126 \DeclareTextCommand{\textampersand}{PD1}{\046}% U+0026

```

\047: U+0027 APOSTROPHE; quotesingle

 14127 % U+0028 LEFT PARENTHESIS; parenleft
 14128 \DeclareTextCommand{\textparenleft}{PD1}{\string\{ }% \050 U+0028
 14129 % U+0029 RIGHT PARENTHESIS; parenright
 14130 \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
 14131 % U+002E FULL STOP; period
 14132 \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
 14133 % U+003C LESS-THAN SIGN; less
 14134 \DeclareTextCommand{\textless}{PD1}{<}% \074 U+003C

 \075: U+003D EQUALS SIGN; equal
 14135 % U+003E GREATER-THAN SIGN; greater
 14136 \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
 14137 % U+005C REVERSE SOLIDUS; backslash
 14138 \DeclareTextCommand{\textbackslash}{PD1}{\134}% U+005C

 \135: U+005D RIGHT SQUARE BRACKET; bracketright
 14139 % U+005E CIRCUMFLEX ACCENT; asciicircum
 14140 \DeclareTextCommand{\textasciicircum}{PD1}{\136}% U+005E
 14141 % U+005F LOW LINE; underscore
 14142 \DeclareTextCommand{\textunderscore}{PD1}{\137}% U+005F
 14143 \DeclareTextCommand{\textmacronbelow}{PD1}{\137}% U+005F
 14144 % U+0060 GRAVE ACCENT; grave
 14145 \DeclareTextCommand{\textasciigrave}{PD1}{\140}% U+0060

 \141: U+0061 LATIN SMALL LETTER A; a

 ...
 \150: U+0068 LATIN SMALL LETTER H; h
 14146 % U+0069 LATIN SMALL LETTER I; i
 14147 \DeclareTextCompositeCommand{\.}{PD1}{i}{i}% \151 U+0069

 \152: U+006A LATIN SMALL LETTER J; j

 ...
 \172: U+007A LATIN SMALL LETTER Z; z
 14148 % U+007B LEFT CURLY BRACKET; braceleft
 14149 \DeclareTextCommand{\textbraceleft}{PD1}{\173}% U+007B
 14150 % U+007C VERTICAL LINE; *bar, verticalbar
 14151 \DeclareTextCommand{\textbar}{PD1}{|}% U+007C
 14152 % U+007D RIGHT CURLY BRACKET; braceright

14153 \DeclareTextCommand{\textbraceright}{PD1}{\175}% U+007D
14154 % U+007E TILDE; asciitilde
14155 \DeclareTextCommand{\textasciitilde}{PD1}{\176}% U+007E
Slot \177 (0x7F) is undefined in PDFDocEncoding.
14156 % U+2022 BULLET; bullet
14157 \DeclareTextCommand{\textbullet}{PD1}{\200}% U+2022
14158 % U+2020 DAGGER; dagger
14159 \DeclareTextCommand{\textdagger}{PD1}{\201}% U+2020
14160 % U+2021 DOUBLE DAGGER; daggerdbl
14161 \DeclareTextCommand{\textdaggerdbl}{PD1}{\202}% U+2021
14162 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
14163 \DeclareTextCommand{\textellipsis}{PD1}{\203}% U+2026
14164 % U+2014 EM DASH; emdash
14165 \DeclareTextCommand{\textemdash}{PD1}{\204}% U+2014
14166 % U+2013 EN DASH; endash
14167 \DeclareTextCommand{\textendash}{PD1}{\205}% U+2013
14168 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
14169 \DeclareTextCommand{\textflorin}{PD1}{\206}% U+0192
14170 % U+2044 FRACTION SLASH; fraction
14171 \DeclareTextCommand{\textfractionsolidus}{PD1}{\207}% U+2044
14172 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
ingleft
14173 \DeclareTextCommand{\guilsingleft}{PD1}{\210}% U+2039
14174 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guils-
ingright
14175 \DeclareTextCommand{\guilsingright}{PD1}{\211}% U+203A
14176 % U+2212 MINUS SIGN; minus
14177 \DeclareTextCommand{\textminus}{PD1}{\212}% U+2212
14178 % U+2030 PER MILLE SIGN; perthousand
14179 \DeclareTextCommand{\textperthousand}{PD1}{\213}% U+2030
14180 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
14181 \DeclareTextCommand{\quotedblbase}{PD1}{\214}% U+201E
14182 % U+201C LEFT DOUBLE QUOTATION MARK; quotedblleft
14183 \DeclareTextCommand{\textquotedblleft}{PD1}{\215}% U+201C
14184 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedblright
14185 \DeclareTextCommand{\textquotedblright}{PD1}{\216}% U+201D
14186 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
14187 \DeclareTextCommand{\textquoteleft}{PD1}{\217}% U+2018
14188 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
14189 \DeclareTextCommand{\textquoteright}{PD1}{\220}% U+2019
14190 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
14191 \DeclareTextCommand{\quotesinglbase}{PD1}{\221}% U+201A
14192 % U+2122 TRADE MARK SIGN; trademark
14193 \DeclareTextCommand{\texttrademark}{PD1}{\222}% U+2122
14194 % U+FB01 LATIN SMALL LIGATURE FI; fi
14195 \DeclareTextCommand{\textfi}{PD1}{\223}% U+FB01
14196 % U+FB02 LATIN SMALL LIGATURE FL; fl
14197 \DeclareTextCommand{\textfl}{PD1}{\224}% U+FB02
14198 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
14199 \DeclareTextCommand{\L}{PD1}{\225}% U+0141
14200 % U+0152 LATIN CAPITAL LIGATURE OE; OE
14201 \DeclareTextCommand{\OE}{PD1}{\226}% U+0152
14202 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
14203 \DeclareTextCompositeCommand{\v}{PD1}{S}{\227}% U+0160
14204 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
14205 \DeclareTextCompositeCommand{\Y}{PD1}{Y}{\230}% U+0178
14206 \DeclareTextCommand{\IJ}{PD1}{\230}

14207 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 14208 \DeclareTextCompositeCommand{\v}{PD1}{Z}{\231}% U+017D
 14209 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 14210 \DeclareTextCommand{\i}{PD1}{\232}% U+0131
 14211 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 14212 \DeclareTextCommand{\l}{PD1}{\233}% U+0142
 14213 % U+0153 LATIN SMALL LIGATURE OE; oe
 14214 \DeclareTextCommand{\oe}{PD1}{\234}% U+0153
 14215 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron
 14216 \DeclareTextCompositeCommand{\v}{PD1}{s}{\235}% U+0161
 14217 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 14218 \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.
 14219 % U+20AC EURO SIGN; *Euro, euro
 14220 \DeclareTextCommand{\texteuro}{PD1}{\240}% U+20AC
 14221 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 14222 \DeclareTextCommand{\textexclamdown}{PD1}{\241}% U+00A1
 14223 % U+00A2 CENT SIGN; cent
 14224 \DeclareTextCommand{\textcent}{PD1}{\242}% U+00A2
 14225 % U+00A3 POUND SIGN; sterling
 14226 \DeclareTextCommand{\textsterling}{PD1}{\243}% U+00A3
 14227 % U+00A4 CURRENCY SIGN; currency
 14228 \DeclareTextCommand{\textcurrency}{PD1}{\244}% U+00A4
 14229 % U+00A5 YEN SIGN; yen
 14230 \DeclareTextCommand{\textyen}{PD1}{\245}% U+00A5
 14231 % U+00A6 BROKEN BAR; brokenbar
 14232 \DeclareTextCommand{\textbrokenbar}{PD1}{\246}% U+00A6
 14233 % U+00A7 SECTION SIGN; section
 14234 \DeclareTextCommand{\textsection}{PD1}{\247}% U+00A7
 14235 % U+00A8 DIAERESIS; dieresis
 14236 \DeclareTextCommand{\textasciidieresis}{PD1}{\250}% U+00A8
 14237 % U+00A9 COPYRIGHT SIGN; copyright
 14238 \DeclareTextCommand{\textcopyright}{PD1}{\251}% U+00A9
 14239 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
 14240 \DeclareTextCommand{\textordfeminine}{PD1}{\252}% U+00AA
 14241 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motleft
 14242 \DeclareTextCommand{\guillemotleft}{PD1}{\253}% U+00AB
 14243 % U+00AC NOT SIGN; logicalnot
 14244 \DeclareTextCommand{\textlogicalnot}{PD1}{\254}% U+00AC
 14245 \DeclareTextCommand{\textlnot}{PD1}{\254}% logical not
 No glyph \255 in PDFDocEncoding.
 14246 % U+00AE REGISTERED SIGN; registered
 14247 \DeclareTextCommand{\textregistered}{PD1}{\256}% U+00AE
 14248 % U+00AF MACRON; *macron, overscore
 14249 \DeclareTextCommand{\textasciimacron}{PD1}{\257}% U+00AF
 14250 % U+00B0 DEGREE SIGN; degree
 14251 \DeclareTextCommand{\textdegree}{PD1}{\260}% U+00B0
 14252 % U+00B1 PLUS-MINUS SIGN; plusminus
 14253 \DeclareTextCommand{\textplusminus}{PD1}{\261}% U+00B1
 14254 % U+00B2 SUPERScript TWO; twosuperior
 14255 \DeclareTextCommand{\texttwosuperior}{PD1}{\262}% U+00B2
 14256 % U+00B3 SUPERScript THREE; threesuperior
 14257 \DeclareTextCommand{\textthreesuperior}{PD1}{\263}% U+00B3
 14258 % U+00B4 ACUTE ACCENT; acute
 14259 \DeclareTextCommand{\textacute}{PD1}{\264}% U+00B4

14260 % U+00B5 MICRO SIGN; mu, mul
 14261 \DeclareTextCommand{\textmu}{PD1}{\265}% U+00B5
 14262 % U+00B6 PILCROW SIGN; paragraph
 14263 \DeclareTextCommand{\textparagraph}{PD1}{\266}% U+00B6
 14264 % U+00B7 MIDDLE DOT; middot, *periodcentered
 14265 \DeclareTextCommand{\textperiodcentered}{PD1}{\267}% U+00B7
 14266 % U+00B8 CEDILLA; cedilla
 14267 \DeclareTextCommand{\textcedilla}{PD1}{\270}% U+00B8
 14268 % U+00B9 SUPERSCRIPT ONE; onesuperior
 14269 \DeclareTextCommand{\textonesuperior}{PD1}{\271}% U+00B9
 14270 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
 14271 \DeclareTextCommand{\textordmasculine}{PD1}{\272}% U+00BA
 14272 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
 motright
 14273 \DeclareTextCommand{\guillemotright}{PD1}{\273}% U+00BB
 14274 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
 14275 \DeclareTextCommand{\textonequarter}{PD1}{\274}% U+00BC
 14276 % U+00BD VULGAR FRACTION ONE HALF; onehalf
 14277 \DeclareTextCommand{\textonehalf}{PD1}{\275}% U+00BD
 14278 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
 14279 \DeclareTextCommand{\textthreequarters}{PD1}{\276}% U+00BE
 14280 % U+00BF INVERTED QUESTION MARK; questiondown
 14281 \DeclareTextCommand{\textquestiondown}{PD1}{\277}% U+00BF
 14282 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
 14283 \DeclareTextCompositeCommand{\`}{PD1}{A}{\300}% U+00C0
 14284 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
 14285 \DeclareTextCompositeCommand{\'}{PD1}{A}{\301}% U+00C1
 14286 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
 14287 \DeclareTextCompositeCommand{\`}{PD1}{A}{\302}% U+00C2
 14288 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde
 14289 \DeclareTextCompositeCommand{\~}{PD1}{A}{\303}% U+00C3
 14290 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
 14291 \DeclareTextCompositeCommand{\"}{PD1}{A}{\304}% U+00C4
 14292 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
 14293 \DeclareTextCompositeCommand{\r}{PD1}{A}{\305}% U+00C5
 14294 % U+00C6 LATIN CAPITAL LETTER AE; AE
 14295 \DeclareTextCommand{\AE}{PD1}{\306}% U+00C6
 14296 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
 14297 \DeclareTextCompositeCommand{\c}{PD1}{C}{\307}% U+00C7
 14298 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
 14299 \DeclareTextCompositeCommand{\`}{PD1}{E}{\310}% U+00C8
 14300 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
 14301 \DeclareTextCompositeCommand{\'}{PD1}{E}{\311}% U+00C9
 14302 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
 14303 \DeclareTextCompositeCommand{\`}{PD1}{E}{\312}% U+00CA
 14304 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
 14305 \DeclareTextCompositeCommand{\"}{PD1}{E}{\313}% U+00CB
 14306 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
 14307 \DeclareTextCompositeCommand{\`}{PD1}{I}{\314}% U+00CC
 14308 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
 14309 \DeclareTextCompositeCommand{\'}{PD1}{I}{\315}% U+00CD
 14310 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
 14311 \DeclareTextCompositeCommand{\`}{PD1}{I}{\316}% U+00CE
 14312 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
 14313 \DeclareTextCompositeCommand{\"}{PD1}{I}{\317}% U+00CF
 14314 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
 14315 \DeclareTextCommand{\DH}{PD1}{\320}% U+00D0

14316 \DeclareTextCommand{\DJ}{PD1}{\320}% U+00D0
14317 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14318 \DeclareTextCompositeCommand{\~}{PD1}{N}{\321}% U+00D1
14319 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14320 \DeclareTextCompositeCommand{\`}{PD1}{O}{\322}% U+00D2
14321 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14322 \DeclareTextCompositeCommand{\'}{PD1}{O}{\323}% U+00D3
14323 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14324 \DeclareTextCompositeCommand{\^}{PD1}{O}{\324}% U+00D4
14325 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14326 \DeclareTextCompositeCommand{\~}{PD1}{O}{\325}% U+00D5
14327 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14328 \DeclareTextCompositeCommand{\"}{PD1}{O}{\326}% U+00D6
14329 % U+00D7 MULTIPLICATION SIGN; multiply
14330 \DeclareTextCommand{\textmultiply}{PD1}{\327}% U+00D7
14331 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14332 \DeclareTextCommand{\O}{PD1}{\330}% U+00D8
14333 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14334 \DeclareTextCompositeCommand{\`}{PD1}{U}{\331}% U+00D9
14335 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14336 \DeclareTextCompositeCommand{\'}{PD1}{U}{\332}% U+00DA
14337 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14338 \DeclareTextCompositeCommand{\^}{PD1}{U}{\333}% U+00DB
14339 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14340 \DeclareTextCompositeCommand{\"}{PD1}{U}{\334}% U+00DC
14341 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14342 \DeclareTextCompositeCommand{\'}{PD1}{Y}{\335}% U+00DD
14343 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
14344 \DeclareTextCommand{\TH}{PD1}{\336}% U+00DE
14345 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14346 \DeclareTextCommand{\ss}{PD1}{\337}% U+00DF
14347 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14348 \DeclareTextCompositeCommand{\`}{PD1}{a}{\340}% U+00E0
14349 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14350 \DeclareTextCompositeCommand{\'}{PD1}{a}{\341}% U+00E1
14351 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14352 \DeclareTextCompositeCommand{\^}{PD1}{a}{\342}% U+00E2
14353 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14354 \DeclareTextCompositeCommand{\~}{PD1}{a}{\343}% U+00E3
14355 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14356 \DeclareTextCompositeCommand{\"}{PD1}{a}{\344}% U+00E4
14357 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14358 \DeclareTextCompositeCommand{\r}{PD1}{a}{\345}% U+00E5
14359 % U+00E6 LATIN SMALL LETTER AE; ae
14360 \DeclareTextCommand{\ae}{PD1}{\346}% U+00E6
14361 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14362 \DeclareTextCompositeCommand{\c}{PD1}{c}{\347}% U+00E7
14363 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14364 \DeclareTextCompositeCommand{\`}{PD1}{e}{\350}% U+00E8
14365 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14366 \DeclareTextCompositeCommand{\'}{PD1}{e}{\351}% U+00E9
14367 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14368 \DeclareTextCompositeCommand{\^}{PD1}{e}{\352}% U+00EA
14369 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14370 \DeclareTextCompositeCommand{\"}{PD1}{e}{\353}% U+00EB
14371 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14372 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC

14373 \DeclareTextCompositeCommand{\`}{PD1}{i}{\354}% U+00EC
14374 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14375 \DeclareTextCompositeCommand{\'}{PD1}{i}{\355}% U+00ED
14376 \DeclareTextCompositeCommand{\`}{PD1}{i}{\355}% U+00ED
14377 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14378 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
14379 \DeclareTextCompositeCommand{\^}{PD1}{i}{\356}% U+00EE
14380 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14381 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
14382 \DeclareTextCompositeCommand{\"}{PD1}{i}{\357}% U+00EF
14383 % U+00F0 LATIN SMALL LETTER ETH; eth
14384 \DeclareTextCommand{\dh}{PD1}{\360}% U+00F0
14385 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14386 \DeclareTextCompositeCommand{\~}{PD1}{n}{\361}% U+00F1
14387 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14388 \DeclareTextCompositeCommand{\`}{PD1}{o}{\362}% U+00F2
14389 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14390 \DeclareTextCompositeCommand{\'}{PD1}{o}{\363}% U+00F3
14391 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14392 \DeclareTextCompositeCommand{\^}{PD1}{o}{\364}% U+00F4
14393 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
14394 \DeclareTextCompositeCommand{\~}{PD1}{o}{\365}% U+00F5
14395 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
14396 \DeclareTextCompositeCommand{\"}{PD1}{o}{\366}% U+00F6
14397 % U+00F7 DIVISION SIGN; divide
14398 \DeclareTextCommand{\textdivide}{PD1}{\367}% U+00F7
14399 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14400 \DeclareTextCommand{\o}{PD1}{\370}% U+00F8
14401 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14402 \DeclareTextCompositeCommand{\`}{PD1}{u}{\371}% U+00F9
14403 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute
14404 \DeclareTextCompositeCommand{\'}{PD1}{u}{\372}% U+00FA
14405 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
14406 \DeclareTextCompositeCommand{\^}{PD1}{u}{\373}% U+00FB
14407 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
14408 \DeclareTextCompositeCommand{\"}{PD1}{u}{\374}% U+00FC
14409 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
14410 \DeclareTextCompositeCommand{\'}{PD1}{y}{\375}% U+00FD
14411 % U+00FE LATIN SMALL LETTER THORN; thorn
14412 \DeclareTextCommand{\th}{PD1}{\376}% U+00FE
14413 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
14414 \DeclareTextCompositeCommand{\"}{PD1}{y}{\377}% U+00FF
14415 \DeclareTextCommand{\ij}{PD1}{\377}% U+00FF

Glyphs that consist of several characters.

14416 \DeclareTextCommand{\SS}{PD1}{SS}
14417 \DeclareTextCommand{\textcelsius}{PD1}{\textdegree C}

Aliases (german.sty)

14418 \DeclareTextCommand{\textglqq}{PD1}{\quotedblbase}
14419 \DeclareTextCommand{\textgrqq}{PD1}{\textquotedblleft}
14420 \DeclareTextCommand{\textglq}{PD1}{\quotesinglbase}
14421 \DeclareTextCommand{\textgrq}{PD1}{\textquoteleft}
14422 \DeclareTextCommand{\textflqq}{PD1}{\guillemotleft}
14423 \DeclareTextCommand{\textfrqq}{PD1}{\guillemotright}
14424 \DeclareTextCommand{\textflq}{PD1}{\guilsinglleft}
14425 \DeclareTextCommand{\textfrq}{PD1}{\guilsinglright}

Aliases (math names)

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14426 \DeclareTextCommand{\textneg}{PD1}{\textlogicalnot}
14427 \DeclareTextCommand{\texttimes}{PD1}{\textmultiply}
14428 \DeclareTextCommand{\textdiv}{PD1}{\textdivide}
14429 \DeclareTextCommand{\textpm}{PD1}{\textplusminus}
14430 \DeclareTextCommand{\textcdot}{PD1}{\textperiodcentered}
14431 \DeclareTextCommand{\textbeta}{PD1}{\ss}

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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).

```

14432 \DeclareTextCompositeCommand{\k}{PD1}{a}{a}% aogonek
14433 \DeclareTextCompositeCommand{\'}{PD1}{c}{c}% cacute
14434 \DeclareTextCompositeCommand{\k}{PD1}{e}{e}% eogonek
14435 \DeclareTextCompositeCommand{\'}{PD1}{n}{n}% nacute
14436 \DeclareTextCompositeCommand{\'}{PD1}{s}{s}% sacute
14437 \DeclareTextCompositeCommand{\'}{PD1}{z}{z}% zacute
14438 \DeclareTextCompositeCommand{\.}{PD1}{z}{z}% zdot
14439 \DeclareTextCompositeCommand{\k}{PD1}{A}{A}% Aogonek
14440 \DeclareTextCompositeCommand{\'}{PD1}{C}{C}% Cacute
14441 \DeclareTextCompositeCommand{\k}{PD1}{E}{E}% Eogonek
14442 \DeclareTextCompositeCommand{\'}{PD1}{N}{N}% Nacute
14443 \DeclareTextCompositeCommand{\'}{PD1}{S}{S}% Sacute
14444 \DeclareTextCompositeCommand{\'}{PD1}{Z}{Z}% Zacute
14445 \DeclareTextCompositeCommand{\.}{PD1}{Z}{Z}% Zdot
14446 </pdlenc>

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50.2 PU encoding

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14447 <*puenc>
14448 \DeclareFontEncoding{PU}{-}{-}

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50.2.1 NFSS2 accents

```

14449 % U+0300 COMBINING GRAVE ACCENT; gravecmb, *gravecomb
14450 \DeclareTextCommand{\'}{PU}[1]{#1\83\000}% U+0300
14451 % U+0301 COMBINING ACUTE ACCENT; acutecmb, *acutecomb
14452 \DeclareTextCommand{\'}{PU}[1]{#1\83\001}% U+0301
14453 % U+0302 COMBINING CIRCUMFLEX ACCENT; circumflexcmb
14454 \DeclareTextCommand{\^}{PU}[1]{#1\83\002}% U+0302
14455 % U+0303 COMBINING TILDE; tildecmb, *tildecmb
14456 \DeclareTextCommand{\~}{PU}[1]{#1\83\003}% U+0303
14457 % U+0304 COMBINING MACRON; macroncmb
14458 \DeclareTextCommand{\=}{PU}[1]{#1\83\004}% U+0304
14459 % U+0306 COMBINING BREVE; brevecmb
14460 \DeclareTextCommand{\u}{PU}[1]{#1\83\006}% U+0306
14461 \DeclareTextCommand{\U}{PU}[1]{#1\83\006}% U+0306
14462 % U+0307 COMBINING DOT ABOVE; dotaccentcmb
14463 \DeclareTextCommand{\.}{PU}[1]{#1\83\007}% U+0307
14464 % U+0308 COMBINING DIAERESIS; dieresiscmb
14465 \DeclareTextCommand{\"}{PU}[1]{#1\83\010}% U+0308
14466 % U+030A COMBINING RING ABOVE; ringcmb
14467 \DeclareTextCommand{\r}{PU}[1]{#1\83\012}% U+030A
14468 % U+030B COMBINING DOUBLE ACUTE ACCENT; hungarumlautcmb
14469 \DeclareTextCommand{\H}{PU}[1]{#1\83\013}% U+030B
14470 % U+030C COMBINING CARON; caroncmb
14471 \DeclareTextCommand{\v}{PU}[1]{#1\83\014}% U+030C
14472 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
14473 \DeclareTextCommand{\G}{PU}[1]{#1\83\017}% U+030F
14474 \DeclareTextCommand{\C}{PU}[1]{#1\83\017}% U+030F

```

```

14475 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
14476 \DeclareTextCommand{\newtie}{PU}[1]{#1\83\021}% U+0311
14477 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
14478 \DeclareTextCommand{\d}{PU}[1]{#1\83\043}% U+0323
14479 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
14480 \DeclareTextCommand{\b}{PU}[1]{#1\83\061}% U+0331
14481 % U+0327 COMBINING CEDILLA; cedillacmb
14482 \DeclareTextCommand{\c}{PU}[1]{#1\83\047}% U+0327
14483 % U+0328 COMBINING OGONEK; ogonekcmb
14484 \DeclareTextCommand{\k}{PU}[1]{#1\83\050}% U+0328
14485 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
14486 \DeclareTextCommand{\t}{PU}[1]{#1\83\141}% U+0361
14487 % U+20DD COMBINING ENCLOSING CIRCLE
14488 \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.

```

14489 \DeclareTextCompositeCommand{\`}{PU}{\@empty}{\textasciigrave}
14490 \DeclareTextCompositeCommand{\'}{PU}{\@empty}{\textacute}
14491 \DeclareTextCompositeCommand{\~}{PU}{\@empty}{\textasciicircum}
14492 \DeclareTextCompositeCommand{\-}{PU}{\@empty}{\texttilde}
14493 \DeclareTextCompositeCommand{\"}{PU}{\@empty}{\textasciidieresis}
14494 \DeclareTextCompositeCommand{\r}{PU}{\@empty}{\textring}
14495 \DeclareTextCompositeCommand{\v}{PU}{\@empty}{\textasciicaron}
14496 \DeclareTextCompositeCommand{\.}{PU}{\@empty}{\textdotaccent}
14497 \DeclareTextCompositeCommand{\c}{PU}{\@empty}{\textcedilla}
14498 \DeclareTextCompositeCommand{\u}{PU}{\@empty}{\textasciibreve}
14499 \DeclareTextCompositeCommand{\G}{PU}{\@empty}{\textdoublegrave}
14500 \DeclareTextCompositeCommand{\=}{PU}{\@empty}{\textasciimacron}
14501 \DeclareTextCompositeCommand{\H}{PU}{\@empty}{\texthungarumlaut}
14502 \DeclareTextCompositeCommand{\k}{PU}{\@empty}{\textogonek}
14503 \DeclareTextCompositeCommand{\b}{PU}{\@empty}{\textmacronbelow}
14504 \DeclareTextCompositeCommand{\d}{PU}{\@empty}{\textdotbelow}
14505 \DeclareTextCompositeCommand{\t}{PU}{\@empty}{\texttie}
14506 \DeclareTextCompositeCommand{\newtie}{PU}{\@empty}{\textnewtie}
14507 \DeclareTextCompositeCommand{\textcircled}{PU}{\@empty}{\textbigcircle}

14508 \DeclareTextCompositeCommand{\`}{PU}{\ }{\textasciigrave}
14509 \DeclareTextCompositeCommand{\'}{PU}{\ }{\textacute}
14510 \DeclareTextCompositeCommand{\~}{PU}{\ }{\textasciicircum}
14511 \DeclareTextCompositeCommand{\-}{PU}{\ }{\texttilde}
14512 \DeclareTextCompositeCommand{\"}{PU}{\ }{\textasciidieresis}
14513 \DeclareTextCompositeCommand{\r}{PU}{\ }{\textring}
14514 \DeclareTextCompositeCommand{\v}{PU}{\ }{\textasciicaron}
14515 \DeclareTextCompositeCommand{\.}{PU}{\ }{\textdotaccent}
14516 \DeclareTextCompositeCommand{\c}{PU}{\ }{\textcedilla}
14517 \DeclareTextCompositeCommand{\u}{PU}{\ }{\textasciibreve}
14518 \DeclareTextCompositeCommand{\G}{PU}{\ }{\textdoublegrave}
14519 \DeclareTextCompositeCommand{\=}{PU}{\ }{\textasciimacron}
14520 \DeclareTextCompositeCommand{\H}{PU}{\ }{\texthungarumlaut}
14521 \DeclareTextCompositeCommand{\k}{PU}{\ }{\textogonek}
14522 \DeclareTextCompositeCommand{\b}{PU}{\ }{\textmacronbelow}
14523 \DeclareTextCompositeCommand{\d}{PU}{\ }{\textdotbelow}
14524 \DeclareTextCompositeCommand{\t}{PU}{\ }{\texttie}
14525 \DeclareTextCompositeCommand{\newtie}{PU}{\ }{\textnewtie}
14526 \DeclareTextCompositeCommand{\textcircled}{PU}{\ }{\textbigcircle}

```

Accents for capitals (see encoding TS1)

```

14527 \DeclareTextCommand{\capitalcedilla}{PU}[1]{\c{#1}}

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```

14528 \DeclareTextCommand{\capitalogonek}{PU}[1]{\k{#1}}
14529 \DeclareTextCommand{\capitalgrave}{PU}[1]{\'{#1}}
14530 \DeclareTextCommand{\capitalacute}{PU}[1]{\'{#1}}
14531 \DeclareTextCommand{\capitalcircumflex}{PU}[1]{\^{#1}}
14532 \DeclareTextCommand{\capitaltilde}{PU}[1]{\~{#1}}
14533 \DeclareTextCommand{\capitaldieresis}{PU}[1]{\"{#1}}
14534 \DeclareTextCommand{\capitalhungarumlaut}{PU}[1]{\H{#1}}
14535 \DeclareTextCommand{\capitalring}{PU}[1]{\r{#1}}
14536 \DeclareTextCommand{\capitalcaron}{PU}[1]{\v{#1}}
14537 \DeclareTextCommand{\capitalbreve}{PU}[1]{\u{#1}}
14538 \DeclareTextCommand{\capitalmacron}{PU}[1]{\={#1}}
14539 \DeclareTextCommand{\capitaldotaccent}{PU}[1]{\.{#1}}
14540 \DeclareTextCommand{\capitaltie}{PU}[1]{\t{#1}}
14541 \DeclareTextCommand{\capitalnewtie}{PU}[1]{\newtie{#1}}

```

50.2.2 Basic Latin: U+0000 to U+007F

Special white space escape characters.

```

14542 % U+0009 (CHARACTER TABULATION)
14543 \DeclareTextCommand{\textHT}{PU}{\80\011}% U+0009
14544 % U+000A (LINE FEED)
14545 \DeclareTextCommand{\textLF}{PU}{\80\012}% U+000A
14546 % U+000D (CARRIAGE RETURN)
14547 \DeclareTextCommand{\textCR}{PU}{\80\015}% U+000D

\80\040: U+0020 SPACE; space, spacehackarabic
\80\041: U+0021 EXCLAMATION MARK; exclam

14548 % U+0022 QUOTATION MARK; quotedbl
14549 \DeclareTextCommand{\textquotedbl}{PU}{\string"}% \80\042 U+0022
14550 % U+0023 NUMBER SIGN; numbersign
14551 \DeclareTextCommand{\textnumbersign}{PU}{\80\043}% U+0023
14552 % U+0024 DOLLAR SIGN; dollar
14553 \DeclareTextCommand{\textdollar}{PU}{\80\044}% U+0024
14554 % U+0025 PERCENT SIGN; percent
14555 \DeclareTextCommand{\textpercent}{PU}{\80\045}% U+0025
14556 % U+0026 AMPERSAND; ampersand
14557 \DeclareTextCommand{\textampersand}{PU}{\80\046}% U+0026
14558 % U+0027 APOSTROPHE; quotesingle
14559 \DeclareTextCommand{\textquotesingle}{PU}{\80\047}% U+0027
14560 % U+0028 LEFT PARENTHESIS; parenleft
14561 \DeclareTextCommand{\textparenleft}{PU}{\80\050}% U+0028
14562 % U+0029 RIGHT PARENTHESIS; parenright
14563 \DeclareTextCommand{\textparenright}{PU}{\80\051}% U+0029
14564 % U+002A ASTERISK; asterisk
14565 \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

14566 % U+003C LESS-THAN SIGN; less
14567 \DeclareTextCommand{\textless}{PU}{<}% \80\074 U+003C

```

\80\075: U+003D EQUALS SIGN; equal
 14568 % U+003E GREATER-THAN SIGN; greater
 14569 \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
 14570 % U+005C REVERSE SOLIDUS; backslash
 14571 \DeclareTextCommand{\textbackslash}{PU}{\80\134}% U+005C
 \80\135: U+005D RIGHT SQUARE BRACKET; bracketright
 14572 % U+005E CIRCUMFLEX ACCENT; asciicircum
 14573 \DeclareTextCommand{\textasciicircum}{PU}{\80\136}% U+005E
 14574 % U+005F LOW LINE; underscore
 14575 \DeclareTextCommand{\textunderscore}{PU}{\80\137}% U+005F
 14576 % U+0060 GRAVE ACCENT; grave
 14577 \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
 14578 % U+0069 LATIN SMALL LETTER I; i
 14579 \DeclareTextCompositeCommand{\.}{PU}{i}{i} % \80\151 U+0069
 14580 \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
 14581 % U+007B LEFT CURLY BRACKET; braceleft
 14582 \DeclareTextCommand{\textbraceleft}{PU}{\80\173}% U+007B
 14583 % U+007C VERTICAL LINE; *bar, verticalbar
 14584 \DeclareTextCommand{\textbar}{PU}{|}% \80\174 U+007C
 14585 % U+007D RIGHT CURLY BRACKET; braceright
 14586 \DeclareTextCommand{\textbraceright}{PU}{\80\175}% U+007D
 14587 % U+007E TILDE; asciitilde
 14588 \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
 14589 % U+00A1 INVERTED EXCLAMATION MARK; exclamdown
 14590 \DeclareTextCommand{\textexclamdown}{PU}{\80\241}% U+00A1
 14591 % U+00A2 CENT SIGN; cent
 14592 \DeclareTextCommand{\textcent}{PU}{\80\242}% U+00A2
 14593 % U+00A3 POUND SIGN; sterling
 14594 \DeclareTextCommand{\textsterling}{PU}{\80\243}% U+00A3
 14595 % U+00A4 CURRENCY SIGN; currency
 14596 \DeclareTextCommand{\textcurrency}{PU}{\80\244}% U+00A4
 14597 % U+00A5 YEN SIGN; yen
 14598 \DeclareTextCommand{\textyen}{PU}{\80\245}% U+00A5
 14599 % U+00A6 BROKEN BAR; brokenbar
 14600 \DeclareTextCommand{\textbrokenbar}{PU}{\80\246}% U+00A6
 14601 % U+00A7 SECTION SIGN; section
 14602 \DeclareTextCommand{\textsection}{PU}{\80\247}% U+00A7
 14603 % U+00A8 DIAERESIS; dieresis

14604 \DeclareTextCommand{\textasciidieresis}{PU}{\80\250}% U+00A8
14605 % U+00A9 COPYRIGHT SIGN; copyright
14606 \DeclareTextCommand{\textcopyright}{PU}{\80\251}% U+00A9
14607 % U+00AA FEMININE ORDINAL INDICATOR; ordfeminine
14608 \DeclareTextCommand{\textordfeminine}{PU}{\80\252}% U+00AA
14609 % U+00AB LEFT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motleft
14610 \DeclareTextCommand{\guillemotleft}{PU}{\80\253}% U+00AB
14611 % U+00AC NOT SIGN; logicalnot
14612 \DeclareTextCommand{\textlogicalnot}{PU}{\80\254}% U+00AC
14613 \DeclareTextCommand{\textlnot}{PU}{\80\254}% U+00AC
\80\255: U+00AD SOFT HYPHEN; sfthyphen, softthyphen
14614 % U+00AE REGISTERED SIGN; registered
14615 \DeclareTextCommand{\textregistered}{PU}{\80\256}% U+00AE
14616 % U+00AF MACRON; *macron, overscore
14617 \DeclareTextCommand{\textasciimacron}{PU}{\80\257}% U+00AF
14618 % U+00B0 DEGREE SIGN; degree
14619 \DeclareTextCommand{\textdegree}{PU}{\80\260}% U+00B0
14620 % U+00B1 PLUS-MINUS SIGN; plusminus
14621 \DeclareTextCommand{\textplusminus}{PU}{\80\261}% U+00B1
14622 % U+00B2 SUPERSCRIFT TWO; twosuperior
14623 \DeclareTextCommand{\texttwosuperior}{PU}{\80\262}% U+00B2
14624 % U+00B3 SUPERSCRIFT THREE; threesuperior
14625 \DeclareTextCommand{\textthreesuperior}{PU}{\80\263}% U+00B3
14626 % U+00B4 ACUTE ACCENT; acute
14627 \DeclareTextCommand{\textacute}{PU}{\80\264}% U+00B4
14628 \DeclareTextCommand{\textasciiacute}{PU}{\80\264}% U+00B4
14629 % U+00B5 MICRO SIGN; mu, mu1
14630 \DeclareTextCommand{\textmu}{PU}{\80\265}% U+00B5
14631 % U+00B6 PILCROW SIGN; paragraph
14632 \DeclareTextCommand{\textparagraph}{PU}{\80\266}% U+00B6
14633 % U+00B7 MIDDLE DOT; middot, *periodcentered
14634 \DeclareTextCommand{\textperiodcentered}{PU}{\80\267}% U+00B7
14635 % U+00B8 CEDILLA; cedilla
14636 \DeclareTextCommand{\textcedilla}{PU}{\80\270}% U+00B8
14637 % U+00B9 SUPERSCRIFT ONE; onesuperior
14638 \DeclareTextCommand{\textonesuperior}{PU}{\80\271}% U+00B9
14639 % U+00BA MASCULINE ORDINAL INDICATOR; ordmasculine
14640 \DeclareTextCommand{\textordmasculine}{PU}{\80\272}% U+00BA
14641 % U+00BB RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK; guille-
motright
14642 \DeclareTextCommand{\guillemotright}{PU}{\80\273}% U+00BB
14643 % U+00BC VULGAR FRACTION ONE QUARTER; onequarter
14644 \DeclareTextCommand{\textonequarter}{PU}{\80\274}% U+00BC
14645 % U+00BD VULGAR FRACTION ONE HALF; onehalf
14646 \DeclareTextCommand{\textonehalf}{PU}{\80\275}% U+00BD
14647 % U+00BE VULGAR FRACTION THREE QUARTERS; threequarters
14648 \DeclareTextCommand{\textthreequarters}{PU}{\80\276}% U+00BE
14649 % U+00BF INVERTED QUESTION MARK; questiondown
14650 \DeclareTextCommand{\textquestiondown}{PU}{\80\277}% U+00BF
14651 % U+00C0 LATIN CAPITAL LETTER A WITH GRAVE; Agrave
14652 \DeclareTextCompositeCommand{\`}{PU}{A}{\80\300}% U+00C0
14653 % U+00C1 LATIN CAPITAL LETTER A WITH ACUTE; Aacute
14654 \DeclareTextCompositeCommand{\'}{PU}{A}{\80\301}% U+00C1
14655 % U+00C2 LATIN CAPITAL LETTER A WITH CIRCUMFLEX; Acircumflex
14656 \DeclareTextCompositeCommand{\^}{PU}{A}{\80\302}% U+00C2
14657 % U+00C3 LATIN CAPITAL LETTER A WITH TILDE; Atilde

14658 \DeclareTextCompositeCommand{\~}{PU}{A}{\80\303}% U+00C3
14659 % U+00C4 LATIN CAPITAL LETTER A WITH DIAERESIS; Adieresis
14660 \DeclareTextCompositeCommand{\"}{PU}{A}{\80\304}% U+00C4
14661 % U+00C5 LATIN CAPITAL LETTER A WITH RING ABOVE; Aring
14662 \DeclareTextCompositeCommand{\r}{PU}{A}{\80\305}% U+00C5
14663 % U+00C6 LATIN CAPITAL LETTER AE; AE
14664 \DeclareTextCommand{\AE}{PU}{\80\306}% U+00C6
14665 % U+00C7 LATIN CAPITAL LETTER C WITH CEDILLA; Ccedilla
14666 \DeclareTextCompositeCommand{\c}{PU}{C}{\80\307}% U+00C7
14667 % U+00C8 LATIN CAPITAL LETTER E WITH GRAVE; Egrave
14668 \DeclareTextCompositeCommand{\`}{PU}{E}{\80\310}% U+00C8
14669 % U+00C9 LATIN CAPITAL LETTER E WITH ACUTE; Eacute
14670 \DeclareTextCompositeCommand{\'}{PU}{E}{\80\311}% U+00C9
14671 % U+00CA LATIN CAPITAL LETTER E WITH CIRCUMFLEX; Ecircumflex
14672 \DeclareTextCompositeCommand{\^}{PU}{E}{\80\312}% U+00CA
14673 % U+00CB LATIN CAPITAL LETTER E WITH DIAERESIS; Edieresis
14674 \DeclareTextCompositeCommand{\"}{PU}{E}{\80\313}% U+00CB
14675 % U+00CC LATIN CAPITAL LETTER I WITH GRAVE; Igrave
14676 \DeclareTextCompositeCommand{\`}{PU}{I}{\80\314}% U+00CC
14677 % U+00CD LATIN CAPITAL LETTER I WITH ACUTE; Iacute
14678 \DeclareTextCompositeCommand{\'}{PU}{I}{\80\315}% U+00CD
14679 % U+00CE LATIN CAPITAL LETTER I WITH CIRCUMFLEX; Icircumflex
14680 \DeclareTextCompositeCommand{\^}{PU}{I}{\80\316}% U+00CE
14681 % U+00CF LATIN CAPITAL LETTER I WITH DIAERESIS; Idieresis
14682 \DeclareTextCompositeCommand{\"}{PU}{I}{\80\317}% U+00CF
14683 % U+00D0 LATIN CAPITAL LETTER ETH; Eth
14684 \DeclareTextCommand{\DH}{PU}{\80\320}% U+00D0
14685 % U+00D1 LATIN CAPITAL LETTER N WITH TILDE; Ntilde
14686 \DeclareTextCompositeCommand{\~}{PU}{N}{\80\321}% U+00D1
14687 % U+00D2 LATIN CAPITAL LETTER O WITH GRAVE; Ograve
14688 \DeclareTextCompositeCommand{\`}{PU}{O}{\80\322}% U+00D2
14689 % U+00D3 LATIN CAPITAL LETTER O WITH ACUTE; Oacute
14690 \DeclareTextCompositeCommand{\'}{PU}{O}{\80\323}% U+00D3
14691 % U+00D4 LATIN CAPITAL LETTER O WITH CIRCUMFLEX; Ocircumflex
14692 \DeclareTextCompositeCommand{\^}{PU}{O}{\80\324}% U+00D4
14693 % U+00D5 LATIN CAPITAL LETTER O WITH TILDE; Otilde
14694 \DeclareTextCompositeCommand{\~}{PU}{O}{\80\325}% U+00D5
14695 % U+00D6 LATIN CAPITAL LETTER O WITH DIAERESIS; Odieresis
14696 \DeclareTextCompositeCommand{\"}{PU}{O}{\80\326}% U+00D6
14697 % U+00D7 MULTIPLICATION SIGN; multiply
14698 \DeclareTextCommand{\textmultiply}{PU}{\80\327}% U+00D7
14699 % U+00D8 LATIN CAPITAL LETTER O WITH STROKE; Oslash
14700 \DeclareTextCommand{\O}{PU}{\80\330}% U+00D8
14701 % U+00D9 LATIN CAPITAL LETTER U WITH GRAVE; Ugrave
14702 \DeclareTextCompositeCommand{\`}{PU}{U}{\80\331}% U+00D9
14703 % U+00DA LATIN CAPITAL LETTER U WITH ACUTE; Uacute
14704 \DeclareTextCompositeCommand{\'}{PU}{U}{\80\332}% U+00DA
14705 % U+00DB LATIN CAPITAL LETTER U WITH CIRCUMFLEX; Ucircumflex
14706 \DeclareTextCompositeCommand{\^}{PU}{U}{\80\333}% U+00DB
14707 % U+00DC LATIN CAPITAL LETTER U WITH DIAERESIS; Udieresis
14708 \DeclareTextCompositeCommand{\"}{PU}{U}{\80\334}% U+00DC
14709 % U+00DD LATIN CAPITAL LETTER Y WITH ACUTE; Yacute
14710 \DeclareTextCompositeCommand{\'}{PU}{Y}{\80\335}% U+00DD
14711 % U+00DE LATIN CAPITAL LETTER THORN; Thorn
14712 \DeclareTextCommand{\TH}{PU}{\80\336}% U+00DE
14713 % U+00DF LATIN SMALL LETTER SHARP S; germandbls
14714 \DeclareTextCommand{\ss}{PU}{\80\337}% U+00DF

14715 % U+00E0 LATIN SMALL LETTER A WITH GRAVE; agrave
14716 \DeclareTextCompositeCommand{\`}{PU}{a}{\80\340}% U+00E0
14717 % U+00E1 LATIN SMALL LETTER A WITH ACUTE; aacute
14718 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}% U+00E1
14719 % U+00E2 LATIN SMALL LETTER A WITH CIRCUMFLEX; acircumflex
14720 \DeclareTextCompositeCommand{\^}{PU}{a}{\80\342}% U+00E2
14721 % U+00E3 LATIN SMALL LETTER A WITH TILDE; atilde
14722 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}% U+00E3
14723 % U+00E4 LATIN SMALL LETTER A WITH DIAERESIS; adieresis
14724 \DeclareTextCompositeCommand{\"}{PU}{a}{\80\344}% U+00E4
14725 % U+00E5 LATIN SMALL LETTER A WITH RING ABOVE; aring
14726 \DeclareTextCompositeCommand{\r}{PU}{a}{\80\345}% U+00E5
14727 % U+00E6 LATIN SMALL LETTER AE; ae
14728 \DeclareTextCompositeCommand{\ae}{PU}{\80\346}% U+00E6
14729 % U+00E7 LATIN SMALL LETTER C WITH CEDILLA; ccedilla
14730 \DeclareTextCompositeCommand{\c}{PU}{c}{\80\347}% U+00E7
14731 % U+00E8 LATIN SMALL LETTER E WITH GRAVE; egrave
14732 \DeclareTextCompositeCommand{\`}{PU}{e}{\80\350}% U+00E8
14733 % U+00E9 LATIN SMALL LETTER E WITH ACUTE; eacute
14734 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}% U+00E9
14735 % U+00EA LATIN SMALL LETTER E WITH CIRCUMFLEX; ecircumflex
14736 \DeclareTextCompositeCommand{\^}{PU}{e}{\80\352}% U+00EA
14737 % U+00EB LATIN SMALL LETTER E WITH DIAERESIS; edieresis
14738 \DeclareTextCompositeCommand{\"}{PU}{e}{\80\353}% U+00EB
14739 % U+00EC LATIN SMALL LETTER I WITH GRAVE; igrave
14740 \DeclareTextCompositeCommand{\`}{PU}{i}{\80\354}% U+00EC
14741 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}% U+00EC
14742 % U+00ED LATIN SMALL LETTER I WITH ACUTE; iacute
14743 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14744 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}% U+00ED
14745 % U+00EE LATIN SMALL LETTER I WITH CIRCUMFLEX; icircumflex
14746 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
14747 \DeclareTextCompositeCommand{\^}{PU}{i}{\80\356}% U+00EE
14748 % U+00EF LATIN SMALL LETTER I WITH DIAERESIS; idieresis
14749 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
14750 \DeclareTextCompositeCommand{\"}{PU}{i}{\80\357}% U+00EF
14751 % U+00F0 LATIN SMALL LETTER ETH; eth
14752 \DeclareTextCommand{\dh}{PU}{\80\360}% U+00F0
14753 % U+00F1 LATIN SMALL LETTER N WITH TILDE; ntilde
14754 \DeclareTextCompositeCommand{\~}{PU}{n}{\80\361}% U+00F1
14755 % U+00F2 LATIN SMALL LETTER O WITH GRAVE; ograve
14756 \DeclareTextCompositeCommand{\`}{PU}{o}{\80\362}% U+00F2
14757 % U+00F3 LATIN SMALL LETTER O WITH ACUTE; oacute
14758 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}% U+00F3
14759 % U+00F4 LATIN SMALL LETTER O WITH CIRCUMFLEX; ocircumflex
14760 \DeclareTextCompositeCommand{\^}{PU}{o}{\80\364}% U+00F4
14761 % U+00F5 LATIN SMALL LETTER O WITH TILDE; otilde
14762 \DeclareTextCompositeCommand{\~}{PU}{o}{\80\365}% U+00F5
14763 % U+00F6 LATIN SMALL LETTER O WITH DIAERESIS; odieresis
14764 \DeclareTextCompositeCommand{\"}{PU}{o}{\80\366}% U+00F6
14765 % U+00F7 DIVISION SIGN; divide
14766 \DeclareTextCommand{\textdivide}{PU}{\80\367}% U+00F7
14767 % U+00F8 LATIN SMALL LETTER O WITH STROKE; oslash
14768 \DeclareTextCommand{\o}{PU}{\80\370}% U+00F8
14769 % U+00F9 LATIN SMALL LETTER U WITH GRAVE; ugrave
14770 \DeclareTextCompositeCommand{\`}{PU}{u}{\80\371}% U+00F9
14771 % U+00FA LATIN SMALL LETTER U WITH ACUTE; uacute

14772 \DeclareTextCompositeCommand{\'}{PU}{u}{\80\372}% U+00FA
 14773 % U+00FB LATIN SMALL LETTER U WITH CIRCUMFLEX; ucircumflex
 14774 \DeclareTextCompositeCommand{\^}{PU}{u}{\80\373}% U+00FB
 14775 % U+00FC LATIN SMALL LETTER U WITH DIAERESIS; udieresis
 14776 \DeclareTextCompositeCommand{\"}{PU}{u}{\80\374}% U+00FC
 14777 % U+00FD LATIN SMALL LETTER Y WITH ACUTE; yacute
 14778 \DeclareTextCompositeCommand{\'}{PU}{y}{\80\375}% U+00FD
 14779 % U+00FE LATIN SMALL LETTER THORN; thorn
 14780 \DeclareTextCommand{\th}{PU}{\80\376}% U+00FE
 14781 % U+00FF LATIN SMALL LETTER Y WITH DIAERESIS; ydieresis
 14782 \DeclareTextCompositeCommand{\"}{PU}{y}{\80\377}% U+00FF

50.2.4 Latin Extended-A: U+0080 to U+017F

14783 % U+0100 LATIN CAPITAL LETTER A WITH MACRON; Amacron
 14784 \DeclareTextCompositeCommand{\=}{PU}{A}{\81\000}% U+0100
 14785 % U+0101 LATIN SMALL LETTER A WITH MACRON; amacron
 14786 \DeclareTextCompositeCommand{\=}{PU}{a}{\81\001}% U+0101
 14787 % U+0102 LATIN CAPITAL LETTER A WITH BREVE; Abreve
 14788 \DeclareTextCompositeCommand{\u}{PU}{A}{\81\002}% U+0102
 14789 % U+0103 LATIN SMALL LETTER A WITH BREVE; abreve
 14790 \DeclareTextCompositeCommand{\u}{PU}{a}{\81\003}% U+0103
 14791 % U+0104 LATIN CAPITAL LETTER A WITH OGONEK; Aogonek
 14792 \DeclareTextCompositeCommand{\k}{PU}{A}{\81\004}% U+0104
 14793 % U+0105 LATIN SMALL LETTER A WITH OGONEK; aogonek
 14794 \DeclareTextCompositeCommand{\k}{PU}{a}{\81\005}% U+0105
 14795 % U+0106 LATIN CAPITAL LETTER C WITH ACUTE; Cacute
 14796 \DeclareTextCompositeCommand{\'}{PU}{C}{\81\006}% U+0106
 14797 % U+0107 LATIN SMALL LETTER C WITH ACUTE; cacute
 14798 \DeclareTextCompositeCommand{\'}{PU}{c}{\81\007}% U+0107
 14799 % U+0108 LATIN CAPITAL LETTER C WITH CIRCUMFLEX; Ccircumflex
 14800 \DeclareTextCompositeCommand{\^}{PU}{C}{\81\010}% U+0108
 14801 % U+0109 LATIN SMALL LETTER C WITH CIRCUMFLEX; ccircumflex
 14802 \DeclareTextCompositeCommand{\^}{PU}{c}{\81\011}% U+0109
 14803 % U+010A LATIN CAPITAL LETTER C WITH DOT ABOVE; Cdot, Cdotaccent
 14804 \DeclareTextCompositeCommand{\.}{PU}{C}{\81\012}% U+010A
 14805 % U+010B LATIN SMALL LETTER C WITH DOT ABOVE; cdot, cdotaccent
 14806 \DeclareTextCompositeCommand{\.}{PU}{c}{\81\013}% U+010B
 14807 % U+010C LATIN CAPITAL LETTER C WITH CARON; Ccaron
 14808 \DeclareTextCompositeCommand{\v}{PU}{C}{\81\014}% U+010C
 14809 % U+010D LATIN SMALL LETTER C WITH CARON; ccaron
 14810 \DeclareTextCompositeCommand{\v}{PU}{c}{\81\015}% U+010D
 14811 % U+010E LATIN CAPITAL LETTER D WITH CARON; Dcaron
 14812 \DeclareTextCompositeCommand{\v}{PU}{D}{\81\016}% U+010E
 14813 % U+010F LATIN SMALL LETTER D WITH CARON; dcaron
 14814 \DeclareTextCompositeCommand{\v}{PU}{d}{\81\017}% U+010F
 14815 % U+0110 LATIN CAPITAL LETTER D WITH STROKE; Dcroat, Dslash
 14816 \DeclareTextCommand{\DJ}{PU}{\81\020}% U+0110
 14817 % U+0111 LATIN SMALL LETTER D WITH STROKE; dcroat, dmacron
 14818 \DeclareTextCommand{\dj}{PU}{\81\021}% U+0111
 14819 % U+0112 LATIN CAPITAL LETTER E WITH MACRON; Emacron
 14820 \DeclareTextCompositeCommand{\=}{PU}{E}{\81\022}% U+0112
 14821 % U+0113 LATIN SMALL LETTER E WITH MACRON; emacron
 14822 \DeclareTextCompositeCommand{\=}{PU}{e}{\81\023}% U+0113
 14823 % U+0114 LATIN CAPITAL LETTER E WITH BREVE; Ebreve
 14824 \DeclareTextCompositeCommand{\u}{PU}{E}{\81\024}% U+0114
 14825 % U+0115 LATIN SMALL LETTER E WITH BREVE; ebreve

14826 \DeclareTextCompositeCommand{\u}{PU}{e}{\81\025}% U+0115
14827 % U+0116 LATIN CAPITAL LETTER E WITH DOT ABOVE; Edot, Edotaccent
14828 \DeclareTextCompositeCommand{\.}{PU}{E}{\81\026}% U+0116
14829 % U+0117 LATIN SMALL LETTER E WITH DOT ABOVE; edot, edotaccent
14830 \DeclareTextCompositeCommand{\.}{PU}{e}{\81\027}% U+0117
14831 % U+0118 LATIN CAPITAL LETTER E WITH OGONEK; Eogonek
14832 \DeclareTextCompositeCommand{\k}{PU}{E}{\81\030}% U+0118
14833 % U+0119 LATIN SMALL LETTER E WITH OGONEK; eogonek
14834 \DeclareTextCompositeCommand{\k}{PU}{e}{\81\031}% U+0119
14835 % U+011A LATIN CAPITAL LETTER E WITH CARON; Ecaron
14836 \DeclareTextCompositeCommand{\v}{PU}{E}{\81\032}% U+011A
14837 % U+011B LATIN SMALL LETTER E WITH CARON; ecaron
14838 \DeclareTextCompositeCommand{\v}{PU}{e}{\81\033}% U+011B
14839 % U+011C LATIN CAPITAL LETTER G WITH CIRCUMFLEX; Gcircumflex
14840 \DeclareTextCompositeCommand{\^}{PU}{G}{\81\034}% U+011C
14841 % U+011D LATIN SMALL LETTER G WITH CIRCUMFLEX; gcircumflex
14842 \DeclareTextCompositeCommand{\^}{PU}{g}{\81\035}% U+011D
14843 % U+011E LATIN CAPITAL LETTER G WITH BREVE; Gbreve
14844 \DeclareTextCompositeCommand{\u}{PU}{G}{\81\036}% U+011E
14845 % U+011F LATIN SMALL LETTER G WITH BREVE; gbreve
14846 \DeclareTextCompositeCommand{\u}{PU}{g}{\81\037}% U+011F
14847 % U+0120 LATIN CAPITAL LETTER G WITH DOT ABOVE; Gdot, Gdotaccent
14848 \DeclareTextCompositeCommand{\.}{PU}{G}{\81\040}% U+0120
14849 % U+0121 LATIN SMALL LETTER G WITH DOT ABOVE; gdot, gdotaccent
14850 \DeclareTextCompositeCommand{\.}{PU}{g}{\81\041}% U+0121
14851 % U+0122 LATIN CAPITAL LETTER G WITH CEDILLA; Gcedilla, Gcommaac-
cent
14852 \DeclareTextCompositeCommand{\c}{PU}{G}{\81\042}% U+0122
14853 % U+0123 LATIN SMALL LETTER G WITH CEDILLA; gcedilla, gcommaaccent
14854 \DeclareTextCompositeCommand{\c}{PU}{g}{\81\043}% U+0123
14855 % U+0124 LATIN CAPITAL LETTER H WITH CIRCUMFLEX; Hcircumflex
14856 \DeclareTextCompositeCommand{\^}{PU}{H}{\81\044}% U+0124
14857 % U+0125 LATIN SMALL LETTER H WITH CIRCUMFLEX; hcircumflex
14858 \DeclareTextCompositeCommand{\^}{PU}{h}{\81\045}% U+0125
14859 % U+0126 LATIN CAPITAL LETTER H WITH STROKE; Hbar
14860 \DeclareTextCommand{\textHslash}{PU}{\81\046}% U+0126
14861 % U+0127 LATIN SMALL LETTER H WITH STROKE; hbar
14862 \DeclareTextCommand{\texthslash}{PU}{\81\047}% U+0127
14863 % U+0128 LATIN CAPITAL LETTER I WITH TILDE; Itilde
14864 \DeclareTextCompositeCommand{\~}{PU}{I}{\81\050}% U+0128
14865 % U+0129 LATIN SMALL LETTER I WITH TILDE; itilde
14866 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14867 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}% U+0129
14868 % U+012A LATIN CAPITAL LETTER I WITH MACRON; Imacron
14869 \DeclareTextCompositeCommand{\=}{PU}{I}{\81\052}% U+012A
14870 % U+012B LATIN SMALL LETTER I WITH MACRON; imacron
14871 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14872 \DeclareTextCompositeCommand{\=}{PU}{i}{\81\053}% U+012B
14873 % U+012C LATIN CAPITAL LETTER I WITH BREVE; Ibreve
14874 \DeclareTextCompositeCommand{\u}{PU}{I}{\81\054}% U+012C
14875 % U+012D LATIN SMALL LETTER I WITH BREVE; ibreve
14876 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14877 \DeclareTextCompositeCommand{\u}{PU}{i}{\81\055}% U+012D
14878 % U+012E LATIN CAPITAL LETTER I WITH OGONEK; Iogonek
14879 \DeclareTextCompositeCommand{\k}{PU}{I}{\81\056}% U+012E
14880 % U+012F LATIN SMALL LETTER I WITH OGONEK; iogonek
14881 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F

14882 \DeclareTextCompositeCommand{\k}{PU}{i}{\81\057}% U+012F
 14883 % U+0130 LATIN CAPITAL LETTER I WITH DOT ABOVE; Idot, Idotaccent
 14884 \DeclareTextCompositeCommand{\.}{PU}{I}{\81\060}% U+0130
 14885 % U+0131 LATIN SMALL LETTER DOTLESS I; dotlessi
 14886 \DeclareTextCommand{\i}{PU}{\81\061}% U+0131
 14887 % U+0132 LATIN CAPITAL LIGATURE IJ; IJ
 14888 \DeclareTextCommand{\IJ}{PU}{\81\062}% U+0132
 14889 % U+0133 LATIN SMALL LIGATURE IJ; ij
 14890 \DeclareTextCommand{\ij}{PU}{\81\063}% U+0133
 14891 % U+0134 LATIN CAPITAL LETTER J WITH CIRCUMFLEX; Jcircumflex
 14892 \DeclareTextCompositeCommand{\^}{PU}{J}{\81\064}% U+0134
 14893 % U+0135 LATIN SMALL LETTER J WITH CIRCUMFLEX; jcircumflex
 14894 \DeclareTextCompositeCommand{\~}{PU}{j}{\81\065}% U+0135
 14895 \DeclareTextCompositeCommand{\^}{PU}{j}{\81\065}% U+0135
 14896 % U+0136 LATIN CAPITAL LETTER K WITH CEDILLA; Kcedilla, Kcommaac-
 cent
 14897 \DeclareTextCompositeCommand{\c}{PU}{K}{\81\066}% U+0136
 14898 % U+0137 LATIN SMALL LETTER K WITH CEDILLA; kcedilla, kcommaaccent
 14899 \DeclareTextCompositeCommand{\c}{PU}{k}{\81\067}% U+0137

The canonical name of U+0138, small letter kra, would be \textkgreenlandic, following the glyph naming convention. However latex/base/inputenc.dtx has choosen \textkra.

14900 % U+0138 LATIN SMALL LETTER KRA; kgreenlandic
 14901 \DeclareTextCommand{\textkra}{PU}{\81\070}% U+0138
 14902 % U+0139 LATIN CAPITAL LETTER L WITH ACUTE; Lacute
 14903 \DeclareTextCompositeCommand{\'}{PU}{L}{\81\071}% U+0139
 14904 % U+013A LATIN SMALL LETTER L WITH ACUTE; lacute
 14905 \DeclareTextCompositeCommand{\'}{PU}{l}{\81\072}% U+013A
 14906 % U+013B LATIN CAPITAL LETTER L WITH CEDILLA; Lcedilla, Lcommaac-
 cent
 14907 \DeclareTextCompositeCommand{\c}{PU}{L}{\81\073}% U+013B
 14908 % U+013C LATIN SMALL LETTER L WITH CEDILLA; lcedilla, lcommaaccent
 14909 \DeclareTextCompositeCommand{\c}{PU}{l}{\81\074}% U+013C
 14910 % U+013D LATIN CAPITAL LETTER L WITH CARON; Lcaron
 14911 \DeclareTextCompositeCommand{\v}{PU}{L}{\81\075}% U+013D
 14912 % U+013E LATIN SMALL LETTER L WITH CARON; lcaron
 14913 \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.

14914 % U+013F LATIN CAPITAL LETTER L WITH MIDDLE DOT; Ldot, Ldotaccent
 14915 \DeclareTextCompositeCommand{\.}{PU}{L}{\81\077}% U+013F
 14916 % U+0140 LATIN SMALL LETTER L WITH MIDDLE DOT; ldot, ldotaccent
 14917 \DeclareTextCompositeCommand{\.}{PU}{l}{\81\100}% U+0140
 14918 % U+0141 LATIN CAPITAL LETTER L WITH STROKE; Lslash
 14919 \DeclareTextCommand{\L}{PU}{\81\101}% U+0141
 14920 % U+0142 LATIN SMALL LETTER L WITH STROKE; lslash
 14921 \DeclareTextCommand{\l}{PU}{\81\102}% U+0142
 14922 % U+0143 LATIN CAPITAL LETTER N WITH ACUTE; Nacute
 14923 \DeclareTextCompositeCommand{\'}{PU}{N}{\81\103}% U+0143
 14924 % U+0144 LATIN SMALL LETTER N WITH ACUTE; nacute
 14925 \DeclareTextCompositeCommand{\'}{PU}{n}{\81\104}% U+0144
 14926 % U+0145 LATIN CAPITAL LETTER N WITH CEDILLA; Ncedilla, Ncommaac-
 cent
 14927 \DeclareTextCompositeCommand{\c}{PU}{N}{\81\105}% U+0145
 14928 % U+0146 LATIN SMALL LETTER N WITH CEDILLA; ncedilla, ncommaaccent
 14929 \DeclareTextCompositeCommand{\c}{PU}{n}{\81\106}% U+0146

14930 % U+0147 LATIN CAPITAL LETTER N WITH CARON; Ncaron
 14931 \DeclareTextCompositeCommand{\v}{PU}{N}{\81\107}% U+0147
 14932 % U+0148 LATIN SMALL LETTER N WITH CARON; ncaron
 14933 \DeclareTextCompositeCommand{\v}{PU}{n}{\81\110}% U+0148
 14934 % U+0149 LATIN SMALL LETTER N PRECEDED BY APOSTROPHE; napos-
 trophe, quoterightn
 14935 \DeclareTextCommand{\textnapostrophe}{PU}{\81\111}% U+0149
 14936 % U+014A LATIN CAPITAL LETTER ENG; Eng
 14937 \DeclareTextCommand{\NG}{PU}{\81\112}% U+014A
 14938 % U+014B LATIN SMALL LETTER ENG; eng
 14939 \DeclareTextCommand{\ng}{PU}{\81\113}% U+014B
 14940 % U+014C LATIN CAPITAL LETTER O WITH MACRON; Omacron
 14941 \DeclareTextCompositeCommand{\=}{PU}{O}{\81\114}% U+014C
 14942 % U+014D LATIN SMALL LETTER O WITH MACRON; omacron
 14943 \DeclareTextCompositeCommand{\=}{PU}{o}{\81\115}% U+014D
 14944 % U+014E LATIN CAPITAL LETTER O WITH BREVE; Obreve
 14945 \DeclareTextCompositeCommand{\u}{PU}{O}{\81\116}% U+014E
 14946 % U+014F LATIN SMALL LETTER O WITH BREVE; obreve
 14947 \DeclareTextCompositeCommand{\u}{PU}{o}{\81\117}% U+014F
 14948 % U+0150 LATIN CAPITAL LETTER O WITH DOUBLE ACUTE; Odbla-
 cute, Ohungarumlaut
 14949 \DeclareTextCompositeCommand{\H}{PU}{O}{\81\120}% U+0150
 14950 % U+0151 LATIN SMALL LETTER O WITH DOUBLE ACUTE; odblacute, ohun-
 garumlaut
 14951 \DeclareTextCompositeCommand{\H}{PU}{o}{\81\121}% U+0151
 14952 % U+0152 LATIN CAPITAL LIGATURE OE; OE
 14953 \DeclareTextCommand{\OE}{PU}{\81\122}% U+0152
 14954 % U+0153 LATIN SMALL LIGATURE OE; oe
 14955 \DeclareTextCommand{\oe}{PU}{\81\123}% U+0153
 14956 % U+0154 LATIN CAPITAL LETTER R WITH ACUTE; Racute
 14957 \DeclareTextCompositeCommand{\'}{PU}{R}{\81\124}% U+0154
 14958 % U+0155 LATIN SMALL LETTER R WITH ACUTE; racute
 14959 \DeclareTextCompositeCommand{\'}{PU}{r}{\81\125}% U+0155
 14960 % U+0156 LATIN CAPITAL LETTER R WITH CEDILLA; Rcedilla, Rcommaac-
 cent
 14961 \DeclareTextCompositeCommand{\c}{PU}{R}{\81\126}% U+0156
 14962 % U+0157 LATIN SMALL LETTER R WITH CEDILLA; rcedilla, rcommaaccent
 14963 \DeclareTextCompositeCommand{\c}{PU}{r}{\81\127}% U+0157
 14964 % U+0158 LATIN CAPITAL LETTER R WITH CARON; Rcaron
 14965 \DeclareTextCompositeCommand{\v}{PU}{R}{\81\130}% U+0158
 14966 % U+0159 LATIN SMALL LETTER R WITH CARON; rcaron
 14967 \DeclareTextCompositeCommand{\v}{PU}{r}{\81\131}% U+0159
 14968 % U+015A LATIN CAPITAL LETTER S WITH ACUTE; Sacute
 14969 \DeclareTextCompositeCommand{\'}{PU}{S}{\81\132}% U+015A
 14970 % U+015B LATIN SMALL LETTER S WITH ACUTE; sacute
 14971 \DeclareTextCompositeCommand{\'}{PU}{s}{\81\133}% U+015B
 14972 % U+015C LATIN CAPITAL LETTER S WITH CIRCUMFLEX; Scircumflex
 14973 \DeclareTextCompositeCommand{\^}{PU}{S}{\81\134}% U+015C
 14974 % U+015D LATIN SMALL LETTER S WITH CIRCUMFLEX; scircumflex
 14975 \DeclareTextCompositeCommand{\^}{PU}{s}{\81\135}% U+015D
 14976 % U+015E LATIN CAPITAL LETTER S WITH CEDILLA; Scedilla
 14977 \DeclareTextCompositeCommand{\c}{PU}{S}{\81\136}% U+015E
 14978 % U+015F LATIN SMALL LETTER S WITH CEDILLA; scedilla
 14979 \DeclareTextCompositeCommand{\c}{PU}{s}{\81\137}% U+015F
 14980 % U+0160 LATIN CAPITAL LETTER S WITH CARON; Scaron
 14981 \DeclareTextCompositeCommand{\v}{PU}{S}{\81\140}% U+0160
 14982 % U+0161 LATIN SMALL LETTER S WITH CARON; scaron

14983 \DeclareTextCompositeCommand{\v}{PU}{s}{\81\141}% U+0161
14984 % U+0162 LATIN CAPITAL LETTER T WITH CEDILLA; Tcedilla, Tcommaaccent
14985 \DeclareTextCompositeCommand{\c}{PU}{T}{\81\142}% U+0162
14986 % U+0163 LATIN SMALL LETTER T WITH CEDILLA; tcedilla, tcommaaccent
14987 \DeclareTextCompositeCommand{\c}{PU}{t}{\81\143}% U+0163
14988 % U+0164 LATIN CAPITAL LETTER T WITH CARON; Tcaron
14989 \DeclareTextCompositeCommand{\v}{PU}{T}{\81\144}% U+0164
14990 % U+0165 LATIN SMALL LETTER T WITH CARON; tcaron
14991 \DeclareTextCompositeCommand{\v}{PU}{t}{\81\145}% U+0165
14992 % U+0166 LATIN CAPITAL LETTER T WITH STROKE; Tbar
14993 \DeclareTextCommand{\textTslash}{PU}{\81\146}% U+0166
14994 % U+0167 LATIN SMALL LETTER T WITH STROKE; tbar
14995 \DeclareTextCommand{\texttslash}{PU}{\81\147}% U+0167
14996 % U+0168 LATIN CAPITAL LETTER U WITH TILDE; Utilde
14997 \DeclareTextCompositeCommand{\~}{PU}{U}{\81\150}% U+0168
14998 % U+0169 LATIN SMALL LETTER U WITH TILDE; utilde
14999 \DeclareTextCompositeCommand{\~}{PU}{u}{\81\151}% U+0169
15000 % U+016A LATIN CAPITAL LETTER U WITH MACRON; Umacron
15001 \DeclareTextCompositeCommand{\=}{PU}{U}{\81\152}% U+016A
15002 % U+016B LATIN SMALL LETTER U WITH MACRON; umacron
15003 \DeclareTextCompositeCommand{\=}{PU}{u}{\81\153}% U+016B
15004 % U+016C LATIN CAPITAL LETTER U WITH BREVE; Ubreve
15005 \DeclareTextCompositeCommand{\u}{PU}{U}{\81\154}% U+016C
15006 % U+016D LATIN SMALL LETTER U WITH BREVE; ubreve
15007 \DeclareTextCompositeCommand{\u}{PU}{u}{\81\155}% U+016D
15008 % U+016E LATIN CAPITAL LETTER U WITH RING ABOVE; Uring
15009 \DeclareTextCompositeCommand{\r}{PU}{U}{\81\156}% U+016E
15010 % U+016F LATIN SMALL LETTER U WITH RING ABOVE; uring
15011 \DeclareTextCompositeCommand{\r}{PU}{u}{\81\157}% U+016F
15012 % U+0170 LATIN CAPITAL LETTER U WITH DOUBLE ACUTE; Udblacute, Uhungarumlaut
15013 \DeclareTextCompositeCommand{\H}{PU}{U}{\81\160}% U+0170
15014 % U+0171 LATIN SMALL LETTER U WITH DOUBLE ACUTE; udblacute, uhungarumlaut
15015 \DeclareTextCompositeCommand{\H}{PU}{u}{\81\161}% U+0171
15016 % U+0172 LATIN CAPITAL LETTER U WITH OGONEK; Uogonek
15017 \DeclareTextCompositeCommand{\k}{PU}{U}{\81\162}% U+0172
15018 % U+0173 LATIN SMALL LETTER U WITH OGONEK; uogonek
15019 \DeclareTextCompositeCommand{\k}{PU}{u}{\81\163}% U+0173
15020 % U+0174 LATIN CAPITAL LETTER W WITH CIRCUMFLEX; Wcircumflex
15021 \DeclareTextCompositeCommand{\^}{PU}{W}{\81\164}% U+0174
15022 % U+0175 LATIN SMALL LETTER W WITH CIRCUMFLEX; wcircumflex
15023 \DeclareTextCompositeCommand{\^}{PU}{w}{\81\165}% U+0175
15024 % U+0176 LATIN CAPITAL LETTER Y WITH CIRCUMFLEX; Ycircumflex
15025 \DeclareTextCompositeCommand{\^}{PU}{Y}{\81\166}% U+0176
15026 % U+0177 LATIN SMALL LETTER Y WITH CIRCUMFLEX; ycircumflex
15027 \DeclareTextCompositeCommand{\^}{PU}{y}{\81\167}% U+0177
15028 % U+0178 LATIN CAPITAL LETTER Y WITH DIAERESIS; Ydieresis
15029 \DeclareTextCompositeCommand{\"}{PU}{Y}{\81\170}% U+0178
15030 % U+0179 LATIN CAPITAL LETTER Z WITH ACUTE; Zacute
15031 \DeclareTextCompositeCommand{\'}{PU}{Z}{\81\171}% U+0179
15032 % U+017A LATIN SMALL LETTER Z WITH ACUTE; zacute
15033 \DeclareTextCompositeCommand{\'}{PU}{z}{\81\172}% U+017A
15034 % U+017B LATIN CAPITAL LETTER Z WITH DOT ABOVE; Zdot, Zdotaccent
15035 \DeclareTextCompositeCommand{\.}{PU}{Z}{\81\173}% U+017B
15036 % U+017C LATIN SMALL LETTER Z WITH DOT ABOVE; zdot, zdotaccent

15037 \DeclareTextCompositeCommand{\.}{PU}{z}{\81\174}% U+017C
 15038 % U+017D LATIN CAPITAL LETTER Z WITH CARON; Zcaron
 15039 \DeclareTextCompositeCommand{\v}{PU}{Z}{\81\175}% U+017D
 15040 % U+017E LATIN SMALL LETTER Z WITH CARON; zcaron
 15041 \DeclareTextCompositeCommand{\v}{PU}{z}{\81\176}% U+017E
 15042 % U+017F LATIN SMALL LETTER LONG S; longs, slong
 15043 \DeclareTextCommand{\textlongS}{PU}{\81\177}% U+017F

50.2.5 Latin Extended-B: U+0180 to U+024F

15044 % U+0192 LATIN SMALL LETTER F WITH HOOK; florin
 15045 \DeclareTextCommand{\textflorin}{PU}{\81\222}% U+0192
 15046 % U+01CD LATIN CAPITAL LETTER A WITH CARON; Acaron
 15047 \DeclareTextCompositeCommand{\v}{PU}{A}{\81\315}% U+01CD
 15048 % U+01CE LATIN SMALL LETTER A WITH CARON; acaron
 15049 \DeclareTextCompositeCommand{\v}{PU}{a}{\81\316}% U+01CE
 15050 % U+01CF LATIN CAPITAL LETTER I WITH CARON; Icaron
 15051 \DeclareTextCompositeCommand{\v}{PU}{I}{\81\317}% U+01CF
 15052 % U+01D0 LATIN SMALL LETTER I WITH CARON; icaron
 15053 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 15054 \DeclareTextCompositeCommand{\v}{PU}{i}{\81\320}% U+01D0
 15055 % U+01D1 LATIN CAPITAL LETTER O WITH CARON; Ocaron
 15056 \DeclareTextCompositeCommand{\v}{PU}{O}{\81\321}% U+01D1
 15057 % U+01D2 LATIN SMALL LETTER O WITH CARON; ocaron
 15058 \DeclareTextCompositeCommand{\v}{PU}{o}{\81\322}% U+01D2
 15059 % U+01D3 LATIN CAPITAL LETTER U WITH CARON; Ucaron
 15060 \DeclareTextCompositeCommand{\v}{PU}{U}{\81\323}% U+01D3
 15061 % U+01D4 LATIN SMALL LETTER U WITH CARON; ucaron
 15062 \DeclareTextCompositeCommand{\v}{PU}{u}{\81\324}% U+01D4
 15063 % U+01E4 LATIN CAPITAL LETTER G WITH STROKE; Gstroke
 15064 \DeclareTextCommand{\textGslash}{PU}{\81\344}% U+01E4
 15065 % U+01E5 LATIN SMALL LETTER G WITH STROKE; gstroke
 15066 \DeclareTextCommand{\textgslash}{PU}{\81\345}% U+01E5
 15067 % U+01E6 LATIN CAPITAL LETTER G WITH CARON; Gcaron
 15068 \DeclareTextCompositeCommand{\v}{PU}{G}{\81\346}% U+01E6
 15069 % U+01E7 LATIN SMALL LETTER G WITH CARON; gcaron
 15070 \DeclareTextCompositeCommand{\v}{PU}{g}{\81\347}% U+01E7
 15071 % U+01E8 LATIN CAPITAL LETTER K WITH CARON; Kcaron
 15072 \DeclareTextCompositeCommand{\v}{PU}{K}{\81\350}% U+01E8
 15073 % U+01E9 LATIN SMALL LETTER K WITH CARON; kcaron
 15074 \DeclareTextCompositeCommand{\v}{PU}{k}{\81\351}% U+01E9
 15075 % U+01EA LATIN CAPITAL LETTER O WITH OGONEK; Oogonek
 15076 \DeclareTextCompositeCommand{\k}{PU}{O}{\81\352}% U+01EA
 15077 % U+01EB LATIN SMALL LETTER O WITH OGONEK; oogonek
 15078 \DeclareTextCompositeCommand{\k}{PU}{o}{\81\353}% U+01EB
 15079 % U+01F0 LATIN SMALL LETTER J WITH CARON; jcaron
 15080 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 15081 \DeclareTextCompositeCommand{\v}{PU}{j}{\81\360}% U+01F0
 15082 % U+01F4 LATIN CAPITAL LETTER G WITH ACUTE; Gacute
 15083 \DeclareTextCompositeCommand{\'}{PU}{G}{\81\364}% U+01F4
 15084 % U+01F5 LATIN SMALL LETTER G WITH ACUTE; gacute
 15085 \DeclareTextCompositeCommand{\'}{PU}{g}{\81\365}% U+01F5
 15086 % U+01F8 LATIN CAPITAL LETTER N WITH GRAVE
 15087 \DeclareTextCompositeCommand{\`}{PU}{N}{\81\370}% U+01F8
 15088 % U+01F9 LATIN SMALL LETTER N WITH GRAVE
 15089 \DeclareTextCompositeCommand{\`}{PU}{n}{\81\371}% U+01F9
 15090 % U+01FC LATIN CAPITAL LETTER AE WITH ACUTE; AEacute
 15091 \DeclareTextCompositeCommand{\'}{PU}{\AE}{\81\374}% U+01FC

15092 % U+01FD LATIN SMALL LETTER AE WITH ACUTE; aeacute
 15093 \DeclareTextCompositeCommand{\'}{PU}{\ae}{\81\375}% U+01FD
 15094 % U+01FE LATIN CAPITAL LETTER O WITH STROKE AND ACUTE; *Oslashacute, Ostrokeacute
 15095 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\376}% U+01FE
 15096 % U+01FF LATIN SMALL LETTER O WITH STROKE AND ACUTE; *oslashacute, ostrokeacute
 15097 \DeclareTextCompositeCommand{\'}{PU}{\o}{\81\377}% U+01FF
 15098 % U+0200 LATIN CAPITAL LETTER A WITH DOUBLE GRAVE; Adblgrave
 15099 \DeclareTextCompositeCommand{\G}{PU}{A}{\82\000}% U+0200
 15100 % U+0201 LATIN SMALL LETTER A WITH DOUBLE GRAVE; adblgrave
 15101 \DeclareTextCompositeCommand{\G}{PU}{a}{\82\001}% U+0201
 15102 % U+0204 LATIN CAPITAL LETTER E WITH DOUBLE GRAVE; Edblgrave
 15103 \DeclareTextCompositeCommand{\G}{PU}{E}{\82\004}% U+0204
 15104 % U+0205 LATIN SMALL LETTER E WITH DOUBLE GRAVE; edblgrave
 15105 \DeclareTextCompositeCommand{\G}{PU}{e}{\82\005}% U+0205
 15106 % U+0208 LATIN CAPITAL LETTER I WITH DOUBLE GRAVE; Idblgrave
 15107 \DeclareTextCompositeCommand{\G}{PU}{I}{\82\010}% U+0208
 15108 % U+0209 LATIN SMALL LETTER I WITH DOUBLE GRAVE; idblgrave
 15109 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 15110 \DeclareTextCompositeCommand{\G}{PU}{i}{\82\011}% U+0209
 15111 % U+020C LATIN CAPITAL LETTER O WITH DOUBLE GRAVE; Odblgrave
 15112 \DeclareTextCompositeCommand{\G}{PU}{O}{\82\014}% U+020C
 15113 % U+020D LATIN SMALL LETTER O WITH DOUBLE GRAVE; odblgrave
 15114 \DeclareTextCompositeCommand{\G}{PU}{o}{\82\015}% U+020D
 15115 % U+0210 LATIN CAPITAL LETTER R WITH DOUBLE GRAVE; Rdblgrave
 15116 \DeclareTextCompositeCommand{\G}{PU}{R}{\82\020}% U+0210
 15117 % U+0211 LATIN SMALL LETTER R WITH DOUBLE GRAVE; rdblgrave
 15118 \DeclareTextCompositeCommand{\G}{PU}{r}{\82\021}% U+0211
 15119 % U+0214 LATIN CAPITAL LETTER U WITH DOUBLE GRAVE; Udblgrave
 15120 \DeclareTextCompositeCommand{\G}{PU}{U}{\82\024}% U+0214
 15121 % U+0215 LATIN SMALL LETTER U WITH DOUBLE GRAVE; udblgrave
 15122 \DeclareTextCompositeCommand{\G}{PU}{u}{\82\025}% U+0215
 15123 % U+021E LATIN CAPITAL LETTER H WITH CARON
 15124 \DeclareTextCompositeCommand{\v}{PU}{H}{\82\036}% U+021E
 15125 % U+021F LATIN SMALL LETTER H WITH CARON
 15126 \DeclareTextCompositeCommand{\v}{PU}{h}{\82\037}% U+021F
 15127 % U+0226 LATIN CAPITAL LETTER A WITH DOT ABOVE
 15128 \DeclareTextCompositeCommand{\.}{PU}{A}{\82\046}% U+0226
 15129 % U+0227 LATIN SMALL LETTER A WITH DOT ABOVE
 15130 \DeclareTextCompositeCommand{\.}{PU}{a}{\82\047}% U+0227
 15131 % U+0228 LATIN CAPITAL LETTER E WITH CEDILLA
 15132 \DeclareTextCompositeCommand{\c}{PU}{E}{\82\050}% U+0228
 15133 % U+0229 LATIN SMALL LETTER E WITH CEDILLA
 15134 \DeclareTextCompositeCommand{\c}{PU}{e}{\82\051}% U+0229
 15135 % U+022E LATIN CAPITAL LETTER O WITH DOT ABOVE
 15136 \DeclareTextCompositeCommand{\.}{PU}{O}{\82\056}% U+022E
 15137 % U+022F LATIN SMALL LETTER O WITH DOT ABOVE
 15138 \DeclareTextCompositeCommand{\.}{PU}{o}{\82\057}% U+022F
 15139 % U+0232 LATIN CAPITAL LETTER Y WITH MACRON
 15140 \DeclareTextCompositeCommand{\=}{PU}{Y}{\82\062}% U+0232
 15141 % U+0233 LATIN SMALL LETTER Y WITH MACRON
 15142 \DeclareTextCompositeCommand{\=}{PU}{y}{\82\063}% U+0233
 15143 % U+0237 LATIN SMALL LETTER DOTLESS J
 15144 \DeclareTextCommand{\j}{PU}{\82\067}% U+0237

50.2.6 Spacing Modifier Letters: U+02B0 to U+02FF

15145 % U+02C7 CARON; caron
 15146 \DeclareTextCommand{\textasciicaron}{PU}{\82\307}% U+02C7
 15147 % U+02D8 BREVE; breve
 15148 \DeclareTextCommand{\textasciibreve}{PU}{\82\330}% U+02D8
 15149 % U+02D9 DOT ABOVE; dotaccent
 15150 \DeclareTextCommand{\textdotaccent}{PU}{\82\331}% U+02D9
 15151 % U+02DA RING ABOVE; ring
 15152 \DeclareTextCommand{\textring}{PU}{\82\332}% U+02DA
 15153 % U+02DB OGONEK; ogonek
 15154 \DeclareTextCommand{\textogonek}{PU}{\82\333}% U+02DB
 15155 % U+02DC SMALL TILDE; ilde, *tilde
 15156 \DeclareTextCommand{\texttilde}{PU}{\82\334}% U+02DC
 15157 % U+02DD DOUBLE ACUTE ACCENT; hungarumlaut
 15158 \DeclareTextCommand{\texthungarumlaut}{PU}{\82\335}% U+02DD
 15159 \DeclareTextCommand{\textacutedbl}{PU}{\texthungarumlaut}% U+02DD
 15160 % U+02F5 MODIFIER LETTER MIDDLE DOUBLE GRAVE ACCENT
 15161 \DeclareTextCommand{\textgravedbl}{PU}{\82\365}% U+02F5
 15162 % U+02F7 MODIFIER LETTER LOW TILDE
 15163 \DeclareTextCommand{\texttildelow}{PU}{\82\367}% U+02F7

50.2.7 Combining Diacritical Marks: U+0300 to U+036F

15164 % U+030F COMBINING DOUBLE GRAVE ACCENT; dblgravecmb
 15165 \DeclareTextCommand{\textdoublegrave}{PU}{\83\017}% U+030F
 15166 % U+0311 COMBINING INVERTED BREVE; breveinvertedcmb
 15167 \DeclareTextCommand{\textnewtie}{PU}{\83\021}% U+0311
 15168 % U+0323 COMBINING DOT BELOW; dotbelowcmb, *dotbelowcomb
 15169 \DeclareTextCommand{\textdotbelow}{PU}{\83\043}% U+0323
 15170 % U+0331 COMBINING MACRON BELOW; macronbelowcmb
 15171 \DeclareTextCommand{\textmacronbelow}{PU}{\83\061}% U+0331
 15172 % U+0361 COMBINING DOUBLE INVERTED BREVE; breveinverteddoublecmb
 15173 \DeclareTextCommand{\texttie}{PU}{\83\141}% U+0361

50.2.8 Greek and Coptic: U+0370 to U+03FF

15174 % U+0374 GREEK NUMERAL SIGN; numeralsigngreek
 15175 \DeclareTextCommand{\textnumeralsigngreek}{PU}{\83\164}% U+0374
 15176 % U+0375 GREEK LOWER NUMERAL SIGN; numeralsignlowergreek
 15177 \DeclareTextCommand{\textnumeralsignlowergreek}{PU}{\83\165}% U+0375
 15178 % U+0386 GREEK CAPITAL LETTER ALPHA WITH TONOS; Alphatonos
 15179 \DeclareTextCompositeCommand{\'}{PU}{\textAlpha}{\83\206}% U+0386
 15180 % U+0388 GREEK CAPITAL LETTER EPSILON WITH TONOS; Epsilontonos
 15181 \DeclareTextCompositeCommand{\'}{PU}{\textEpsilon}{\83\210}% U+0388
 15182 % U+0389 GREEK CAPITAL LETTER ETA WITH TONOS; Etatonos
 15183 \DeclareTextCompositeCommand{\'}{PU}{\textEta}{\83\211}% U+0389
 15184 % U+038A GREEK CAPITAL LETTER IOTA WITH TONOS; Iotatonos
 15185 \DeclareTextCompositeCommand{\'}{PU}{\textIota}{\83\212}% U+038A
 15186 % U+038C GREEK CAPITAL LETTER OMICRON WITH TONOS; Omi-
 cronos
 15187 \DeclareTextCompositeCommand{\'}{PU}{\textOmicron}{\83\214}% U+038C
 15188 % U+038E GREEK CAPITAL LETTER UPSILON WITH TONOS; Upsilontonos
 15189 \DeclareTextCompositeCommand{\'}{PU}{\textUpsilon}{\83\216}% U+038E
 15190 % U+038F GREEK CAPITAL LETTER OMEGA WITH TONOS; Omegatonos
 15191 \DeclareTextCompositeCommand{\'}{PU}{\textOmega}{\83\217}% U+038F
 15192 % U+0390 GREEK SMALL LETTER IOTA WITH DIALYTIKA AND TONOS; io-
 tadiesis
 15193 \DeclareTextCompositeCommand{\'}{PU}{\textIotadiesis}{\83\220}% U+0390
 15194 % U+0391 GREEK CAPITAL LETTER ALPHA; Alpha
 15195 \DeclareTextCommand{\textAlpha}{PU}{\83\221}% U+0391

15196 % U+0392 GREEK CAPITAL LETTER BETA; Beta
15197 \DeclareTextCommand{\textBeta}{PU}{\83\222}% U+0392
15198 % U+0393 GREEK CAPITAL LETTER GAMMA; Gamma
15199 \DeclareTextCommand{\textGamma}{PU}{\83\223}% U+0393
15200 % U+0394 GREEK CAPITAL LETTER DELTA; Deltagreek, *Delta
15201 \DeclareTextCommand{\textDelta}{PU}{\83\224}% U+0394
15202 % U+0395 GREEK CAPITAL LETTER EPSILON; Epsilon
15203 \DeclareTextCommand{\textEpsilon}{PU}{\83\225}% U+0395
15204 % U+0396 GREEK CAPITAL LETTER ZETA; Zeta
15205 \DeclareTextCommand{\textZeta}{PU}{\83\226}% U+0396
15206 % U+0397 GREEK CAPITAL LETTER ETA; Eta
15207 \DeclareTextCommand{\textEta}{PU}{\83\227}% U+0397
15208 % U+0398 GREEK CAPITAL LETTER THETA; Theta
15209 \DeclareTextCommand{\textTheta}{PU}{\83\230}% U+0398
15210 % U+0399 GREEK CAPITAL LETTER IOTA; Iota
15211 \DeclareTextCommand{\textIota}{PU}{\83\231}% U+0399
15212 % U+039A GREEK CAPITAL LETTER KAPPA; Kappa
15213 \DeclareTextCommand{\textKappa}{PU}{\83\232}% U+039A
15214 % U+039B GREEK CAPITAL LETTER LAMDA; Lambda
15215 \DeclareTextCommand{\textLambda}{PU}{\83\233}% U+039B
15216 % U+039C GREEK CAPITAL LETTER MU; Mu
15217 \DeclareTextCommand{\textMu}{PU}{\83\234}% U+039C
15218 % U+039D GREEK CAPITAL LETTER NU; Nu
15219 \DeclareTextCommand{\textNu}{PU}{\83\235}% U+039D
15220 % U+039E GREEK CAPITAL LETTER XI; Xi
15221 \DeclareTextCommand{\textXi}{PU}{\83\236}% U+039E
15222 % U+039F GREEK CAPITAL LETTER OMICRON; Omicron
15223 \DeclareTextCommand{\textOmicron}{PU}{\83\237}% U+039F
15224 % U+03A0 GREEK CAPITAL LETTER PI; Pi
15225 \DeclareTextCommand{\textPi}{PU}{\83\240}% U+03A0
15226 % U+03A1 GREEK CAPITAL LETTER RHO; Rho
15227 \DeclareTextCommand{\textRho}{PU}{\83\241}% U+03A1
15228 % U+03A3 GREEK CAPITAL LETTER SIGMA; Sigma
15229 \DeclareTextCommand{\textSigma}{PU}{\83\243}% U+03A3
15230 % U+03A4 GREEK CAPITAL LETTER TAU; Tau
15231 \DeclareTextCommand{\textTau}{PU}{\83\244}% U+03A4
15232 % U+03A5 GREEK CAPITAL LETTER UPSILON; Upsilon
15233 \DeclareTextCommand{\textUpsilon}{PU}{\83\245}% U+03A5
15234 % U+03A6 GREEK CAPITAL LETTER PHI; Phi
15235 \DeclareTextCommand{\textPhi}{PU}{\83\246}% U+03A6
15236 % U+03A7 GREEK CAPITAL LETTER CHI; Chi
15237 \DeclareTextCommand{\textChi}{PU}{\83\247}% U+03A7
15238 % U+03A8 GREEK CAPITAL LETTER PSI; Psi
15239 \DeclareTextCommand{\textPsi}{PU}{\83\250}% U+03A8
15240 % U+03A9 GREEK CAPITAL LETTER OMEGA; Omegagreek, *Omega
15241 \DeclareTextCommand{\textOmega}{PU}{\83\251}% U+03A9
15242 % U+03AA GREEK CAPITAL LETTER IOTA WITH DIALYTIKA; Iotadieresis
15243 \DeclareTextCommand{\textIotadieresis}{PU}{\83\252}% U+03AA
15244 \DeclareTextCompositeCommand{"}{PU}{\textIota}{\83\252}% U+03AA
15245 % U+03AB GREEK CAPITAL LETTER UPSILON WITH DIALYTIKA; Upsilonondieresis
15246 \DeclareTextCompositeCommand{"}{PU}{\textUpsilon}{\83\253}% U+03AB
15247 % U+03AC GREEK SMALL LETTER ALPHA WITH TONOS; alphanos
15248 \DeclareTextCompositeCommand{'}{PU}{\textalpha}{\83\254}% U+03AC
15249 % U+03AD GREEK SMALL LETTER EPSILON WITH TONOS; epsilononos
15250 \DeclareTextCompositeCommand{'}{PU}{\textepsilon}{\83\255}% U+03AD
15251 % U+03AE GREEK SMALL LETTER ETA WITH TONOS; etanos

15252 \DeclareTextCompositeCommand{\'}{PU}{\texteta}{\83\256}% U+03AE
15253 % U+03AF GREEK SMALL LETTER IOTA WITH TONOS; iotatonos
15254 \DeclareTextCompositeCommand{\'}{PU}{\textiota}{\83\257}% U+03AF
15255 % U+03B0 GREEK SMALL LETTER UPSILON WITH DIALYTIKA AND TONOS; up-
silonadiesisto
15256 \DeclareTextCompositeCommand{\'}{PU}{\textupsilonacute}{\83\260}% U+03B0
15257 % U+03B1 GREEK SMALL LETTER ALPHA; alpha
15258 \DeclareTextCommand{\textalpha}{PU}{\83\261}% U+03B1
15259 % U+03B2 GREEK SMALL LETTER BETA; beta
15260 \DeclareTextCommand{\textbeta}{PU}{\83\262}% U+03B2
15261 % U+03B3 GREEK SMALL LETTER GAMMA; gamma
15262 \DeclareTextCommand{\textgamma}{PU}{\83\263}% U+03B3
15263 % U+03B4 GREEK SMALL LETTER DELTA; delta
15264 \DeclareTextCommand{\textdelta}{PU}{\83\264}% U+03B4
15265 % U+03B5 GREEK SMALL LETTER EPSILON; epsilon
15266 \DeclareTextCommand{\textepsilon}{PU}{\83\265}% U+03B5
15267 % U+03B6 GREEK SMALL LETTER ZETA; zeta
15268 \DeclareTextCommand{\textzeta}{PU}{\83\266}% U+03B6
15269 % U+03B7 GREEK SMALL LETTER ETA; eta
15270 \DeclareTextCommand{\texteta}{PU}{\83\267}% U+03B7
15271 % U+03B8 GREEK SMALL LETTER THETA; theta
15272 \DeclareTextCommand{\texttheta}{PU}{\83\270}% U+03B8
15273 % U+03B9 GREEK SMALL LETTER IOTA; iota
15274 \DeclareTextCommand{\textiota}{PU}{\83\271}% U+03B9
15275 % U+03BA GREEK SMALL LETTER KAPPA; kappa
15276 \DeclareTextCommand{\textkappa}{PU}{\83\272}% U+03BA
15277 % U+03BB GREEK SMALL LETTER LAMDA; lambda
15278 \DeclareTextCommand{\textlambda}{PU}{\83\273}% U+03BB
15279 % U+03BC GREEK SMALL LETTER MU; mugreek, *mu
15280 \DeclareTextCommand{\textmugreek}{PU}{\83\274}% U+03BC
15281 % U+03BD GREEK SMALL LETTER NU; nu
15282 \DeclareTextCommand{\textnu}{PU}{\83\275}% U+03BD
15283 % U+03BE GREEK SMALL LETTER XI; xi
15284 \DeclareTextCommand{\textxi}{PU}{\83\276}% U+03BE
15285 % U+03BF GREEK SMALL LETTER OMICRON; omicron
15286 \DeclareTextCommand{\textomicron}{PU}{\83\277}% U+03BF
15287 % U+03C0 GREEK SMALL LETTER PI; pi
15288 \DeclareTextCommand{\textpi}{PU}{\83\300}% U+03C0
15289 % U+03C1 GREEK SMALL LETTER RHO; rho
15290 \DeclareTextCommand{\textrho}{PU}{\83\301}% U+03C1
15291 % U+03C2 GREEK SMALL LETTER FINAL SIGMA; *sigma1, sigmafinal
15292 \DeclareTextCommand{\textvarsigma}{PU}{\83\302}% U+03C2
15293 % U+03C3 GREEK SMALL LETTER SIGMA; sigma
15294 \DeclareTextCommand{\textsigma}{PU}{\83\303}% U+03C3
15295 % U+03C4 GREEK SMALL LETTER TAU; tau
15296 \DeclareTextCommand{\texttau}{PU}{\83\304}% U+03C4
15297 % U+03C5 GREEK SMALL LETTER UPSILON; upsilon
15298 \DeclareTextCommand{\textupsilon}{PU}{\83\305}% U+03C5
15299 % U+03C6 GREEK SMALL LETTER PHI; phi
15300 \DeclareTextCommand{\textphi}{PU}{\83\306}% U+03C6
15301 % U+03C7 GREEK SMALL LETTER CHI; chi
15302 \DeclareTextCommand{\textchi}{PU}{\83\307}% U+03C7
15303 % U+03C8 GREEK SMALL LETTER PSI; psi
15304 \DeclareTextCommand{\textpsi}{PU}{\83\310}% U+03C8
15305 % U+03C9 GREEK SMALL LETTER OMEGA; omega
15306 \DeclareTextCommand{\textomega}{PU}{\83\311}% U+03C9
15307 % U+03CA GREEK SMALL LETTER IOTA WITH DIALYTIKA; iotadiesis

15308 \DeclareTextCompositeCommand{"}{PU}{\textiota}{\83\312}% U+03CA
 15309 % U+03CB GREEK SMALL LETTER UPSILON WITH DIALYTIKA; up-
 silondieresis
 15310 \DeclareTextCompositeCommand{"}{PU}{\textupsilon}{\83\313}% U+03CB
 15311 % U+03CC GREEK SMALL LETTER OMICRON WITH TONOS; omicrontonos
 15312 \DeclareTextCompositeCommand{'}{PU}{\textomicron}{\83\314}% U+03CC
 15313 % U+03CD GREEK SMALL LETTER UPSILON WITH TONOS; upsilontonos
 15314 \DeclareTextCommand{\textupsilonacute}{PU}{\83\315}% U+03CD
 15315 \DeclareTextCompositeCommand{'}{PU}{\textupsilon}{\83\315}% U+03CD
 15316 % U+03CE GREEK SMALL LETTER OMEGA WITH TONOS; omegatonos
 15317 \DeclareTextCompositeCommand{'}{PU}{\textomega}{\83\316}% U+03CE
 15318 % U+03DA GREEK LETTER STIGMA; Stigmagreek
 15319 \DeclareTextCommand{\textStigmagreek}{PU}{\83\332}% U+03DA
 15320 % U+03DB GREEK SMALL LETTER STIGMA
 15321 \DeclareTextCommand{\textstigmagreek}{PU}{\83\333}% U+03DB
 15322 % U+03DC GREEK LETTER DIGAMMA; Digammagreek
 15323 \DeclareTextCommand{\textDigammagreek}{PU}{\83\334}% U+03DC
 15324 % U+03DD GREEK SMALL LETTER DIGAMMA
 15325 \DeclareTextCommand{\textdigammagreek}{PU}{\83\335}% U+03DD
 15326 % U+03DE GREEK LETTER KOPPA; Koppagreek
 15327 \DeclareTextCommand{\textKoppagreek}{PU}{\83\336}% U+03DE
 15328 % U+03DF GREEK SMALL LETTER KOPPA
 15329 \DeclareTextCommand{\textkoppagreek}{PU}{\83\337}% U+03DF
 15330 % U+03E0 GREEK LETTER SAMPI; Sampigreek
 15331 \DeclareTextCommand{\textSampigreek}{PU}{\83\340}% U+03E0
 15332 % U+03E1 GREEK SMALL LETTER SAMPI
 15333 \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.

15334 % U+0400 CYRILLIC CAPITAL LETTER IE WITH GRAVE
 15335 \DeclareTextCompositeCommand{'}{PU}{\CYRE}{\84\000}% U+0400
 15336 % U+0401 CYRILLIC CAPITAL LETTER IO; Iocyrillic, *afii10023
 15337 \DeclareTextCommand{\CYRYO}{PU}{\84\001}% U+0401
 15338 \DeclareTextCompositeCommand{"}{PU}{\CYRE}{\84\001}% ???
 15339 % U+0402 CYRILLIC CAPITAL LETTER DJE; Djecyrillic, *afii10051
 15340 \DeclareTextCommand{\CYRDJE}{PU}{\84\002}% U+0402
 15341 % U+0403 CYRILLIC CAPITAL LETTER GJE; Gjecyrillic, *afii10052
 15342 \DeclareTextCompositeCommand{'}{PU}{\CYRG}{\84\003}% U+0403
 15343 % U+0404 CYRILLIC CAPITAL LETTER UKRAINIAN IE; Ecyrillic, *afii10053
 15344 \DeclareTextCommand{\CYRIE}{PU}{\84\004}% U+0404
 15345 % U+0405 CYRILLIC CAPITAL LETTER DZE; Dzecyrillic, *afii10054
 15346 \DeclareTextCommand{\CYRDZE}{PU}{\84\005}% U+0405
 15347 % U+0406 CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I; Icyril-
 lic, *afii10055
 15348 \DeclareTextCommand{\CYRII}{PU}{\84\006}% U+0406
 15349 % U+0407 CYRILLIC CAPITAL LETTER YI; Yicyrillic, *afii10056
 15350 \DeclareTextCommand{\CYRYI}{PU}{\84\007}% U+0407
 15351 \DeclareTextCompositeCommand{"}{PU}{\CYRII}{\84\007}% U+0407
 15352 % U+0408 CYRILLIC CAPITAL LETTER JE; Jecyrillic, *afii10057
 15353 \DeclareTextCommand{\CYRJE}{PU}{\84\010}% U+0408
 15354 % U+0409 CYRILLIC CAPITAL LETTER LJE; Ljecyrillic, *afii10058
 15355 \DeclareTextCommand{\CYRLJE}{PU}{\84\011}% U+0409
 15356 % U+040A CYRILLIC CAPITAL LETTER NJE; Njecyrillic, *afii10059
 15357 \DeclareTextCommand{\CYRNJE}{PU}{\84\012}% U+040A
 15358 % U+040B CYRILLIC CAPITAL LETTER TSHE; Tshecyrillic, *afii10060

15359 \DeclareTextCommand{\CYRTSHE}{PU}{\84\013}% U+040B
15360 % U+040C CYRILLIC CAPITAL LETTER KJE; Kjecyrillic, *afii10061
15361 \DeclareTextCompositeCommand{\'}{PU}{\CYRK}{\84\014}% U+040C
15362 % U+040D CYRILLIC CAPITAL LETTER I WITH GRAVE
15363 \DeclareTextCompositeCommand{\'}{PU}{\CYRI}{\84\015}% U+040D
15364 % U+040E CYRILLIC CAPITAL LETTER SHORT U; Ushortcyrillic, *afii10062
15365 \DeclareTextCommand{\CYRUSHRT}{PU}{\84\016}% U+040E
15366 \DeclareTextCompositeCommand{\U}{PU}{\CYRU}{\84\016}% U+040E
15367 % U+040F CYRILLIC CAPITAL LETTER DZHE; Dzhecyrillic, *afii10145
15368 \DeclareTextCommand{\CYRDZHE}{PU}{\84\017}% U+040F
15369 % U+0410 CYRILLIC CAPITAL LETTER A; Acyrillic, *afii10017
15370 \DeclareTextCommand{\CYRA}{PU}{\84\020}% U+0410
15371 % U+0411 CYRILLIC CAPITAL LETTER BE; Becyrillic, *afii10018
15372 \DeclareTextCommand{\CYRB}{PU}{\84\021}% U+0411
15373 % U+0412 CYRILLIC CAPITAL LETTER VE; Vecyrillic, *afii10019
15374 \DeclareTextCommand{\CYRV}{PU}{\84\022}% U+0412
15375 % U+0413 CYRILLIC CAPITAL LETTER GHE; Gecyrillic, *afii10020
15376 \DeclareTextCommand{\CYRG}{PU}{\84\023}% U+0413
15377 % U+0414 CYRILLIC CAPITAL LETTER DE; Decyrillic, *afii10021
15378 \DeclareTextCommand{\CYRD}{PU}{\84\024}% U+0414
15379 % U+0415 CYRILLIC CAPITAL LETTER IE; Iecyrillic, *afii10022
15380 \DeclareTextCommand{\CYRE}{PU}{\84\025}% U+0415
15381 % U+0416 CYRILLIC CAPITAL LETTER ZHE; Zhecyrillic, *afii10024
15382 \DeclareTextCommand{\CYRZH}{PU}{\84\026}% U+0416
15383 % U+0417 CYRILLIC CAPITAL LETTER ZE; Zecyrillic, *afii10025
15384 \DeclareTextCommand{\CYRZ}{PU}{\84\027}% U+0417
15385 % U+0418 CYRILLIC CAPITAL LETTER I; Iicyrillic, *afii10026
15386 \DeclareTextCommand{\CYRI}{PU}{\84\030}% U+0418
15387 % U+0419 CYRILLIC CAPITAL LETTER SHORT I; Iishortcyrillic, *afii10027
15388 \DeclareTextCommand{\CYRISHRT}{PU}{\84\031}% U+0419
15389 \DeclareTextCompositeCommand{\U}{PU}{\CYRI}{\84\031}% U+0419
15390 % U+041A CYRILLIC CAPITAL LETTER KA; Kacyrillic, *afii10028
15391 \DeclareTextCommand{\CYRK}{PU}{\84\032}% U+041A
15392 % U+041B CYRILLIC CAPITAL LETTER EL; Elcyrillic, *afii10029
15393 \DeclareTextCommand{\CYRL}{PU}{\84\033}% U+041B
15394 % U+041C CYRILLIC CAPITAL LETTER EM; Emcyrillic, *afii10030
15395 \DeclareTextCommand{\CYRM}{PU}{\84\034}% U+041C
15396 % U+041D CYRILLIC CAPITAL LETTER EN; Encyrillic, *afii10031
15397 \DeclareTextCommand{\CYRN}{PU}{\84\035}% U+041D
15398 % U+041E CYRILLIC CAPITAL LETTER O; Ocyrillic, *afii10032
15399 \DeclareTextCommand{\CYRO}{PU}{\84\036}% U+041E
15400 % U+041F CYRILLIC CAPITAL LETTER PE; Pecyrillic, *afii10033
15401 \DeclareTextCommand{\CYRP}{PU}{\84\037}% U+041F
15402 % U+0420 CYRILLIC CAPITAL LETTER ER; Ercyrillic, *afii10034
15403 \DeclareTextCommand{\CYRR}{PU}{\84\040}% U+0420
15404 % U+0421 CYRILLIC CAPITAL LETTER ES; Escyrillic, *afii10035
15405 \DeclareTextCommand{\CYRS}{PU}{\84\041}% U+0421
15406 % U+0422 CYRILLIC CAPITAL LETTER TE; Tecyrillic, *afii10036
15407 \DeclareTextCommand{\CYRT}{PU}{\84\042}% U+0422
15408 % U+0423 CYRILLIC CAPITAL LETTER U; Ucyrillic, *afii10037
15409 \DeclareTextCommand{\CYRU}{PU}{\84\043}% U+0423
15410 % U+0424 CYRILLIC CAPITAL LETTER EF; Efcyrillic, *afii10038
15411 \DeclareTextCommand{\CYRF}{PU}{\84\044}% U+0424
15412 % U+0425 CYRILLIC CAPITAL LETTER HA; Khacyrillic, *afii10039
15413 \DeclareTextCommand{\CYRH}{PU}{\84\045}% U+0425
15414 % U+0426 CYRILLIC CAPITAL LETTER TSE; Tsecyrillic, *afii10040
15415 \DeclareTextCommand{\CYRC}{PU}{\84\046}% U+0426

15416 % U+0427 CYRILLIC CAPITAL LETTER CHE; Checyrillic, *afii10041
 15417 \DeclareTextCommand{\CYRCH}{PU}{\84\047}% U+0427
 15418 % U+0428 CYRILLIC CAPITAL LETTER SHA; Shacyrillic, *afii10042
 15419 \DeclareTextCommand{\CYRSH}{PU}{\84\050}% U+0428
 15420 % U+0429 CYRILLIC CAPITAL LETTER SHCHA; Shchacyrillic, *afii10043
 15421 \DeclareTextCommand{\CYRSHCH}{PU}{\84\051}% U+0429
 15422 % U+042A CYRILLIC CAPITAL LETTER HARD SIGN; Hardsigncyrillic, *afii10044
 15423 \DeclareTextCommand{\CYRHRDSN}{PU}{\84\052}% U+042A
 15424 % U+042B CYRILLIC CAPITAL LETTER YERU; Yericyrillic, *afii10045
 15425 \DeclareTextCommand{\CYRERY}{PU}{\84\053}% U+042B
 15426 % U+042C CYRILLIC CAPITAL LETTER SOFT SIGN; Softsigncyrillic, *afii10046
 15427 \DeclareTextCommand{\CYRSFTSN}{PU}{\84\054}% U+042C
 15428 % U+042D CYRILLIC CAPITAL LETTER E; Ereversedcyrillic, *afii10047
 15429 \DeclareTextCommand{\CYREREV}{PU}{\84\055}% U+042D
 15430 % U+042E CYRILLIC CAPITAL LETTER YU; IUcyrillic, *afii10048
 15431 \DeclareTextCommand{\CYRYU}{PU}{\84\056}% U+042E
 15432 % U+042F CYRILLIC CAPITAL LETTER YA; IAcyrillic, *afii10049
 15433 \DeclareTextCommand{\CYRYA}{PU}{\84\057}% U+042F
 15434 % U+0430 CYRILLIC SMALL LETTER A; acyrillic, *afii10065
 15435 \DeclareTextCommand{\cyra}{PU}{\84\060}% U+0430
 15436 % U+0431 CYRILLIC SMALL LETTER BE; *afii10066, becyrillic
 15437 \DeclareTextCommand{\cyrb}{PU}{\84\061}% U+0431
 15438 % U+0432 CYRILLIC SMALL LETTER VE; *afii10067, vecyrillic
 15439 \DeclareTextCommand{\cyrv}{PU}{\84\062}% U+0432
 15440 % U+0433 CYRILLIC SMALL LETTER GHE; *afii10068, gecyrillic
 15441 \DeclareTextCommand{\cyrg}{PU}{\84\063}% U+0433
 15442 % U+0434 CYRILLIC SMALL LETTER DE; *afii10069, decyrillic
 15443 \DeclareTextCommand{\cyrd}{PU}{\84\064}% U+0434
 15444 % U+0435 CYRILLIC SMALL LETTER IE; *afii10070, iecyrillic
 15445 \DeclareTextCommand{\cyre}{PU}{\84\065}% U+0435
 15446 % U+0436 CYRILLIC SMALL LETTER ZHE; *afii10072, zhecyrillic
 15447 \DeclareTextCommand{\cyrz}{PU}{\84\066}% U+0436
 15448 % U+0437 CYRILLIC SMALL LETTER ZE; *afii10073, zecyrillic
 15449 \DeclareTextCommand{\cyrz}{PU}{\84\067}% U+0437
 15450 % U+0438 CYRILLIC SMALL LETTER I; *afii10074, iicyrillic
 15451 \DeclareTextCommand{\cyri}{PU}{\84\070}% U+0438
 15452 % U+0439 CYRILLIC SMALL LETTER SHORT I; *afii10075, iishortcyrillic
 15453 \DeclareTextCommand{\cyrishrt}{PU}{\84\071}% U+0439
 15454 \DeclareTextCompositeCommand{\U}{PU}{\cyri}{\84\071}% U+0439
 15455 % U+043A CYRILLIC SMALL LETTER KA; *afii10076, kacyrillic
 15456 \DeclareTextCommand{\cyrk}{PU}{\84\072}% U+043A
 15457 % U+043B CYRILLIC SMALL LETTER EL; *afii10077, elcyrillic
 15458 \DeclareTextCommand{\cyr}{PU}{\84\073}% U+043B
 15459 % U+043C CYRILLIC SMALL LETTER EM; *afii10078, emcyrillic
 15460 \DeclareTextCommand{\cyr}{PU}{\84\074}% U+043C
 15461 % U+043D CYRILLIC SMALL LETTER EN; *afii10079, encyrillic
 15462 \DeclareTextCommand{\cyrn}{PU}{\84\075}% U+043D
 15463 % U+043E CYRILLIC SMALL LETTER O; *afii10080, ocyrillic
 15464 \DeclareTextCommand{\cyro}{PU}{\84\076}% U+043E
 15465 % U+043F CYRILLIC SMALL LETTER PE; *afii10081, pecyrillic
 15466 \DeclareTextCommand{\cyrp}{PU}{\84\077}% U+043F
 15467 % U+0440 CYRILLIC SMALL LETTER ER; *afii10082, ercyrillic
 15468 \DeclareTextCommand{\cyrr}{PU}{\84\100}% U+0440
 15469 % U+0441 CYRILLIC SMALL LETTER ES; *afii10083, escyrillic
 15470 \DeclareTextCommand{\cyrs}{PU}{\84\101}% U+0441
 15471 % U+0442 CYRILLIC SMALL LETTER TE; *afii10084, tecyrillic
 15472 \DeclareTextCommand{\cyrt}{PU}{\84\102}% U+0442

15473 % U+0443 CYRILLIC SMALL LETTER U; *afii10085, ucyrillic
15474 \DeclareTextCommand{\cyru}{PU}{\84\103}% U+0443
15475 % U+0444 CYRILLIC SMALL LETTER EF; *afii10086, efcyrillic
15476 \DeclareTextCommand{\cyrf}{PU}{\84\104}% U+0444
15477 % U+0445 CYRILLIC SMALL LETTER HA; *afii10087, khacyrillic
15478 \DeclareTextCommand{\cyrh}{PU}{\84\105}% U+0445
15479 % U+0446 CYRILLIC SMALL LETTER TSE; *afii10088, tsecyrillic
15480 \DeclareTextCommand{\cyrc}{PU}{\84\106}% U+0446
15481 % U+0447 CYRILLIC SMALL LETTER CHE; *afii10089, checyrillic
15482 \DeclareTextCommand{\cyrch}{PU}{\84\107}% U+0447
15483 % U+0448 CYRILLIC SMALL LETTER SHA; *afii10090, shacyrillic
15484 \DeclareTextCommand{\cyrsh}{PU}{\84\110}% U+0448
15485 % U+0449 CYRILLIC SMALL LETTER SHCHA; *afii10091, shchacyrillic
15486 \DeclareTextCommand{\cyrshch}{PU}{\84\111}% U+0449
15487 % U+044A CYRILLIC SMALL LETTER HARD SIGN; *afii10092, hardsigncyrillic
15488 \DeclareTextCommand{\cyrhdsn}{PU}{\84\112}% U+044A
15489 % U+044B CYRILLIC SMALL LETTER YERU; *afii10093, yericyrillic
15490 \DeclareTextCommand{\cyrery}{PU}{\84\113}% U+044B
15491 % U+044C CYRILLIC SMALL LETTER SOFT SIGN; *afii10094, softsigncyrillic
15492 \DeclareTextCommand{\cyrstsn}{PU}{\84\114}% U+044C
15493 % U+044D CYRILLIC SMALL LETTER E; *afii10095, ereversedcyrillic
15494 \DeclareTextCommand{\cyrerev}{PU}{\84\115}% U+044D
15495 % U+044E CYRILLIC SMALL LETTER YU; *afii10096, iucyrillic
15496 \DeclareTextCommand{\cyryu}{PU}{\84\116}% U+044E
15497 % U+044F CYRILLIC SMALL LETTER YA; *afii10097, iacyrillic
15498 \DeclareTextCommand{\cyrya}{PU}{\84\117}% U+044F
15499 % U+0450 CYRILLIC SMALL LETTER IE WITH GRAVE
15500 \DeclareTextCompositeCommand{\'}{PU}{\cyre}{\84\120}% U+0450
15501 % U+0451 CYRILLIC SMALL LETTER IO; *afii10071, iocyrillic
15502 \DeclareTextCommand{\cyryo}{PU}{\84\121}% U+0451
15503 \DeclareTextCompositeCommand{"}{PU}{\cyre}{\84\121}% U+0451
15504 % U+0452 CYRILLIC SMALL LETTER DJE; *afii10099, djecyrillic
15505 \DeclareTextCommand{\cyrdje}{PU}{\84\122}% U+0452
15506 % U+0453 CYRILLIC SMALL LETTER GJE; *afii10100, gjecyrillic
15507 \DeclareTextCompositeCommand{\'}{PU}{\cyrg}{\84\123}% U+0453
15508 % U+0454 CYRILLIC SMALL LETTER UKRAINIAN IE; *afii10101, ecyrillic
15509 \DeclareTextCommand{\cyrie}{PU}{\84\124}% U+0454
15510 % U+0455 CYRILLIC SMALL LETTER DZE; *afii10102, dzecyrillic
15511 \DeclareTextCommand{\cyrdze}{PU}{\84\125}% U+0455
15512 % U+0456 CYRILLIC SMALL LETTER BYELORUSSIAN-UKRAINIAN I; *afii10103, icyrillic
15513 \DeclareTextCommand{\cyrii}{PU}{\84\126}% U+0456
15514 % U+0457 CYRILLIC SMALL LETTER YI; *afii10104, yicyrillic
15515 \DeclareTextCommand{\cyryi}{PU}{\84\127}% U+0457
15516 \DeclareTextCompositeCommand{"}{PU}{\cyrii}{\84\127}% U+0457
15517 % U+0458 CYRILLIC SMALL LETTER JE; *afii10105, jecyrillic
15518 \DeclareTextCommand{\cyrje}{PU}{\84\130}% U+0458
15519 % U+0459 CYRILLIC SMALL LETTER LJE; *afii10106, ljecyrillic
15520 \DeclareTextCommand{\cyrkje}{PU}{\84\131}% U+0459
15521 % U+045A CYRILLIC SMALL LETTER NJE; *afii10107, njecyrillic
15522 \DeclareTextCommand{\cyrnje}{PU}{\84\132}% U+045A
15523 % U+045B CYRILLIC SMALL LETTER TSHE; *afii10108, tshecyrillic
15524 \DeclareTextCommand{\cyrtshe}{PU}{\84\133}% U+045B
15525 % U+045C CYRILLIC SMALL LETTER KJE; *afii10109, kjecyrillic
15526 \DeclareTextCompositeCommand{\'}{PU}{\cyrk}{\84\134}% U+045C
15527 % U+045D CYRILLIC SMALL LETTER I WITH GRAVE
15528 \DeclareTextCompositeCommand{\'}{PU}{\cyri}{\84\135}% U+045D

15529 % U+045E CYRILLIC SMALL LETTER SHORT U; *afii10110, ushortcyrillic
 15530 \DeclareTextCommand{\cyrushrt}{PU}{\84\136}% U+045E
 15531 \DeclareTextCompositeCommand{\U}{PU}{\curu}{\84\136}% U+045E
 15532 % U+045F CYRILLIC SMALL LETTER DZHE; *afii10193, dzhecyrillic
 15533 \DeclareTextCommand{\cyrdzhe}{PU}{\84\137}% U+045F
 15534 % U+0460 CYRILLIC CAPITAL LETTER OMEGA; Omegacyrillic
 15535 \DeclareTextCommand{\CYROMEGA}{PU}{\84\140}% U+0460
 15536 % U+0461 CYRILLIC SMALL LETTER OMEGA; omegacyrillic
 15537 \DeclareTextCommand{\cyromega}{PU}{\84\141}% U+0461
 15538 % U+0462 CYRILLIC CAPITAL LETTER YAT; Yatcyrillic, *afii10146
 15539 \DeclareTextCommand{\CYRYAT}{PU}{\84\142}% U+0462
 15540 % U+0463 CYRILLIC SMALL LETTER YAT; *afii10194, yatcyrillic
 15541 \DeclareTextCommand{\cyryat}{PU}{\84\143}% U+0463
 15542 % U+0464 CYRILLIC CAPITAL LETTER IOTIFIED E; Eiotifiedcyrillic
 15543 \DeclareTextCommand{\CYRIOTE}{PU}{\84\144}% U+0464
 15544 % U+0465 CYRILLIC SMALL LETTER IOTIFIED E; eiotifiedcyrillic
 15545 \DeclareTextCommand{\cyriote}{PU}{\84\145}% U+0465
 15546 % U+0466 CYRILLIC CAPITAL LETTER LITTLE YUS; Yuslittlecyrillic
 15547 \DeclareTextCommand{\CYRLYUS}{PU}{\84\146}% U+0466
 15548 % U+0467 CYRILLIC SMALL LETTER LITTLE YUS; yuslittlecyrillic
 15549 \DeclareTextCommand{\cyrlyus}{PU}{\84\147}% U+0467
 15550 % U+0468 CYRILLIC CAPITAL LETTER IOTIFIED LITTLE YUS; Yuslittleio-
 tifiedcyrillic
 15551 \DeclareTextCommand{\CYRIOTLYUS}{PU}{\84\150}% U+0468
 15552 % U+0469 CYRILLIC SMALL LETTER IOTIFIED LITTLE YUS; yuslittleioti-
 fiedcyrillic
 15553 \DeclareTextCommand{\cyriotlyus}{PU}{\84\151}% U+0469
 15554 % U+046A CYRILLIC CAPITAL LETTER BIG YUS; Yusbigcyrillic
 15555 \DeclareTextCommand{\CYRBYUS}{PU}{\84\152}% U+046A
 15556 % U+046B CYRILLIC SMALL LETTER BIG YUS; yusbigcyrillic
 15557 \DeclareTextCommand{\cyrbyus}{PU}{\84\153}% U+046B
 15558 % U+046C CYRILLIC CAPITAL LETTER IOTIFIED BIG YUS; Yusbigiotified-
 cyrillic
 15559 \DeclareTextCommand{\CYRIOTBYUS}{PU}{\84\154}% U+046C
 15560 % U+046D CYRILLIC SMALL LETTER IOTIFIED BIG YUS; yusbigiotifiedcyril-
 lic
 15561 \DeclareTextCommand{\cyriotbyus}{PU}{\84\155}% U+046D
 15562 % U+046E CYRILLIC CAPITAL LETTER KSI; Ksicyrillic
 15563 \DeclareTextCommand{\CYRKSI}{PU}{\84\156}% U+046E
 15564 % U+046F CYRILLIC SMALL LETTER KSI; ksicyrillic
 15565 \DeclareTextCommand{\cyrksi}{PU}{\84\157}% U+046F
 15566 % U+0470 CYRILLIC CAPITAL LETTER PSI; Psicyrillic
 15567 \DeclareTextCommand{\CYRPSI}{PU}{\84\160}% U+0470
 15568 % U+0471 CYRILLIC SMALL LETTER PSI; psicyrillic
 15569 \DeclareTextCommand{\cyrpsi}{PU}{\84\161}% U+0471
 15570 % U+0472 CYRILLIC CAPITAL LETTER FITA; Fitacyrillic, *afii10147
 15571 \DeclareTextCommand{\CYRFITA}{PU}{\84\162}% U+0472
 15572 % U+0473 CYRILLIC SMALL LETTER FITA; *afii10195, fitacyrillic
 15573 \DeclareTextCommand{\cyrfita}{PU}{\84\163}% U+0473
 15574 % U+0474 CYRILLIC CAPITAL LETTER IZHITSA; Izhitsacyrillic, *afii10148
 15575 \DeclareTextCommand{\CYRIZH}{PU}{\84\164}% U+0474
 15576 % U+0475 CYRILLIC SMALL LETTER IZHITSA; *afii10196, izhitsacyrillic
 15577 \DeclareTextCommand{\cyrizh}{PU}{\84\165}% U+0475
 15578 % U+0476 CYRILLIC CAPITAL LETTER IZHITSA WITH DOUBLE GRAVE AC-
 CENT; Izhitsadblgravecyrillic
 15579 \DeclareTextCompositeCommand{\C}{PU}{\CYRIZH}{\84\166}% U+0476

15580 % U+0477 CYRILLIC SMALL LETTER IZHITSA WITH DOUBLE GRAVE AC-
 CENT; izhitsadblgravecyrillic
 15581 \DeclareTextCompositeCommand{\C}{PU}{\cyrizh}{\84\167}% U+0477
 15582 % U+0478 CYRILLIC CAPITAL LETTER UK; Ukcyrillic
 15583 \DeclareTextCommand{\CYRUK}{PU}{\84\170}% U+0478
 15584 % U+0479 CYRILLIC SMALL LETTER UK; ukcyrillic
 15585 \DeclareTextCommand{\cyruk}{PU}{\84\171}% U+0479
 15586 % U+047A CYRILLIC CAPITAL LETTER ROUND OMEGA; Omegaroundcyril-
 lic
 15587 \DeclareTextCommand{\CYROMEGARND}{PU}{\84\172}% U+047A
 15588 % U+047B CYRILLIC SMALL LETTER ROUND OMEGA; omegaroundcyrillic
 15589 \DeclareTextCommand{\cyromegarnd}{PU}{\84\173}% U+047B
 15590 % U+047C CYRILLIC CAPITAL LETTER OMEGA WITH TITLO; Omegatitlo-
 cyrillic
 15591 \DeclareTextCommand{\CYROMEGATITLO}{PU}{\84\174}% U+047C
 15592 % U+047D CYRILLIC SMALL LETTER OMEGA WITH TITLO; omegatitlo-
 cyrillic
 15593 \DeclareTextCommand{\cyromegatitlo}{PU}{\84\175}% U+047D
 15594 % U+047E CYRILLIC CAPITAL LETTER OT; Otcyrillic
 15595 \DeclareTextCommand{\CYROT}{PU}{\84\176}% U+047E
 15596 % U+047F CYRILLIC SMALL LETTER OT; otcyrillic
 15597 \DeclareTextCommand{\cyrot}{PU}{\84\177}% U+047F
 15598 % U+0480 CYRILLIC CAPITAL LETTER KOPPA; Koppacyrillic
 15599 \DeclareTextCommand{\CYRKOPPA}{PU}{\84\200}% U+0480
 15600 % U+0481 CYRILLIC SMALL LETTER KOPPA; koppacyrillic
 15601 \DeclareTextCommand{\cyrkoppa}{PU}{\84\201}% U+0481
 15602 % U+0482 CYRILLIC THOUSANDS SIGN; thousandcyrillic
 15603 \DeclareTextCommand{\cyrthousands}{PU}{\84\202}% U+0482
 \84\203: U+0483 COMBINING CYRILLIC TITLO; titlocyrillicmb
 \84\204: U+0484 COMBINING CYRILLIC PALATALIZATION; palatalizationcyril-
 licmb
 \84\205: U+0485 COMBINING CYRILLIC DASIA PNEUMATA; dasiapneumata-
 cyrillicmb
 \84\206: U+0486 COMBINING CYRILLIC PSILI PNEUMATA; psilipneumatacyril-
 licmb
 \84\207: U+0487 COMBINING CYRILLIC POKRYTIE
 \84\210: U+0488 COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
 \84\211: U+0489 COMBINING CYRILLIC MILLIONS SIGN
 15604 % U+048A CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
 15605 \DeclareTextCommand{\CYRISHRTDSC}{PU}{\84\212}% U+048A
 15606 % U+048B CYRILLIC SMALL LETTER SHORT I WITH TAIL
 15607 \DeclareTextCommand{\cyrishrtdsc}{PU}{\84\213}% U+048B
 15608 % U+048C CYRILLIC CAPITAL LETTER SEMISOFT SIGN
 15609 \DeclareTextCommand{\CYRSEMISFTSN}{PU}{\84\214}% U+048C
 15610 % U+048D CYRILLIC SMALL LETTER SEMISOFT SIGN
 15611 \DeclareTextCommand{\cyrsemisftsn}{PU}{\84\215}% U+048D
 15612 % U+048E CYRILLIC CAPITAL LETTER ER WITH TICK
 15613 \DeclareTextCommand{\CYRRTICK}{PU}{\84\216}% U+048E
 15614 % U+048F CYRILLIC SMALL LETTER ER WITH TICK
 15615 \DeclareTextCommand{\cyrrtick}{PU}{\84\217}% U+048F
 15616 % U+0490 CYRILLIC CAPITAL LETTER GHE WITH UPTURN; Gheupturn-
 cyrillic, *afii10050
 15617 \DeclareTextCommand{\CYRGUP}{PU}{\84\220}% U+0490
 15618 % U+0491 CYRILLIC SMALL LETTER GHE WITH UPTURN; *afii10098, ghe-
 upturncyrillic
 15619 \DeclareTextCommand{\cyrgup}{PU}{\84\221}% U+0491

15620 % U+0492 CYRILLIC CAPITAL LETTER GHE WITH STROKE; Ghestroke-cyrillic
 15621 \DeclareTextCommand{\CYRGHCRS}{PU}{\84\222}% U+0492
 15622 % U+0493 CYRILLIC SMALL LETTER GHE WITH STROKE; ghestrokecyrillic
 15623 \DeclareTextCommand{\cyrghcrs}{PU}{\84\223}% U+0493
 15624 % U+0494 CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK; Ghemid-dlehookcyrillic
 15625 \DeclareTextCommand{\CYRGHK}{PU}{\84\224}% U+0494
 15626 % U+0495 CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK; ghemid-dlehookcyrillic
 15627 \DeclareTextCommand{\cyrghk}{PU}{\84\225}% U+0495
 15628 % U+0496 CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER; Zhedescendercyrillic
 15629 \DeclareTextCommand{\CYRZHDSC}{PU}{\84\226}% U+0496
 15630 % U+0497 CYRILLIC SMALL LETTER ZHE WITH DESCENDER; zhedescendercyrillic
 15631 \DeclareTextCommand{\cyrzhdsc}{PU}{\84\227}% U+0497
 15632 % U+0498 CYRILLIC CAPITAL LETTER ZE WITH DESCENDER; Zedescendercyrillic
 15633 \DeclareTextCommand{\CYRZDSC}{PU}{\84\230}% U+0498
 15634 \DeclareTextCompositeCommand{\c}{PU}{\CYRZ}{\84\230}% U+0498
 15635 % U+0499 CYRILLIC SMALL LETTER ZE WITH DESCENDER; zedescendercyrillic
 15636 \DeclareTextCommand{\cyrzdsc}{PU}{\84\231}% U+0499
 15637 \DeclareTextCompositeCommand{\c}{PU}{\cyrz}{\84\231}% U+0499
 15638 % U+049A CYRILLIC CAPITAL LETTER KA WITH DESCENDER; Kadescendercyrillic
 15639 \DeclareTextCommand{\CYRKDSC}{PU}{\84\232}% U+049A
 15640 % U+049B CYRILLIC SMALL LETTER KA WITH DESCENDER; kadescendercyrillic
 15641 \DeclareTextCommand{\cyrkdsc}{PU}{\84\233}% U+049B
 15642 % U+049C CYRILLIC CAPITAL LETTER KA WITH VERTICAL STROKE; Kaver-ticalstrokecyrillic
 15643 \DeclareTextCommand{\CYRKVCRS}{PU}{\84\234}% U+049C
 15644 % U+049D CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE; kaver-ticalstrokecyrillic
 15645 \DeclareTextCommand{\cyrkvcrs}{PU}{\84\235}% U+049D
 15646 % U+049E CYRILLIC CAPITAL LETTER KA WITH STROKE; Kastrokecyrillic
 15647 \DeclareTextCommand{\CYRKHCRS}{PU}{\84\236}% U+049E
 15648 % U+049F CYRILLIC SMALL LETTER KA WITH STROKE; kastrokecyrillic
 15649 \DeclareTextCommand{\cyrkhcrs}{PU}{\84\237}% U+049F
 15650 % U+04A0 CYRILLIC CAPITAL LETTER BASHKIR KA; Kabashkircyrillic
 15651 \DeclareTextCommand{\CYRKBEAK}{PU}{\84\240}% U+04A0
 15652 % U+04A1 CYRILLIC SMALL LETTER BASHKIR KA; kabashkircyrillic
 15653 \DeclareTextCommand{\cyrkbeak}{PU}{\84\241}% U+04A1
 15654 % U+04A2 CYRILLIC CAPITAL LETTER EN WITH DESCENDER; Endescendercyrillic
 15655 \DeclareTextCommand{\CYRNDSC}{PU}{\84\242}% U+04A2
 15656 % U+04A3 CYRILLIC SMALL LETTER EN WITH DESCENDER; endescendercyrillic
 15657 \DeclareTextCommand{\cyrndsc}{PU}{\84\243}% U+04A3
 15658 % U+04A4 CYRILLIC CAPITAL LIGATURE EN GHE; Enghecyrillic
 15659 \DeclareTextCommand{\CYRNG}{PU}{\84\244}% U+04A4
 15660 % U+04A5 CYRILLIC SMALL LIGATURE EN GHE; enghecyrillic
 15661 \DeclareTextCommand{\cyrng}{PU}{\84\245}% U+04A5
 15662 % U+04A6 CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK; Pemid-dlehookcyrillic

15663 \DeclareTextCommand{\CYRPHK}{PU}{\84\246}% U+04A6
 15664 % U+04A7 CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK; pemiddlehookcyrillic
 15665 \DeclareTextCommand{\cyrphk}{PU}{\84\247}% U+04A7
 15666 % U+04A8 CYRILLIC CAPITAL LETTER ABKHASIAN HA; Haabkhasiancyrillic
 15667 \DeclareTextCommand{\CYRABHHA}{PU}{\84\250}% U+04A8
 15668 % U+04A9 CYRILLIC SMALL LETTER ABKHASIAN HA; haabkhasiancyrillic
 15669 \DeclareTextCommand{\cyrabhha}{PU}{\84\251}% U+04A9
 15670 % U+04AA CYRILLIC CAPITAL LETTER ES WITH DESCENDER; Esdescendercyrillic
 15671 \DeclareTextCommand{\CYRSDSC}{PU}{\84\252}% U+04AA
 15672 \DeclareTextCompositeCommand{\CYRSDSC}{PU}{\CYRS}{\84\252}% U+04AA
 15673 % U+04AB CYRILLIC SMALL LETTER ES WITH DESCENDER; esdescendercyrillic
 15674 \DeclareTextCommand{\cyrsdsc}{PU}{\84\253}% U+04AB
 15675 \DeclareTextCompositeCommand{\k}{PU}{\cyr}{\84\253}% U+04AB
 15676 % U+04AC CYRILLIC CAPITAL LETTER TE WITH DESCENDER; Tedescendercyrillic
 15677 \DeclareTextCommand{\CYRTDSC}{PU}{\84\254}% U+04AC
 15678 % U+04AD CYRILLIC SMALL LETTER TE WITH DESCENDER; tedescendercyrillic
 15679 \DeclareTextCommand{\cyrt dsc}{PU}{\84\255}% U+04AD
 15680 % U+04AE CYRILLIC CAPITAL LETTER STRAIGHT U; Ustraightcyrillic
 15681 \DeclareTextCommand{\CYRY}{PU}{\84\256}% U+04AE
 15682 % U+04AF CYRILLIC SMALL LETTER STRAIGHT U; usstraightcyrillic
 15683 \DeclareTextCommand{\cyry}{PU}{\84\257}% U+04AF
 15684 % U+04B0 CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE; Ustraightstrokecyrillic
 15685 \DeclareTextCommand{\CYRYHCRS}{PU}{\84\260}% U+04B0
 15686 % U+04B1 CYRILLIC SMALL LETTER STRAIGHT U WITH STROKE; usstraightstrokecyrillic
 15687 \DeclareTextCommand{\cyr y hcrs}{PU}{\84\261}% U+04B1
 15688 % U+04B2 CYRILLIC CAPITAL LETTER HA WITH DESCENDER; Hadesdescendercyrillic
 15689 \DeclareTextCommand{\CYRHDSC}{PU}{\84\262}% U+04B2
 15690 % U+04B3 CYRILLIC SMALL LETTER HA WITH DESCENDER; hadescendercyrillic
 15691 \DeclareTextCommand{\cyr h dsc}{PU}{\84\263}% U+04B3
 15692 % U+04B4 CYRILLIC CAPITAL LIGATURE TE TSE; Tetsecyrillic
 15693 \DeclareTextCommand{\CYRTETSE}{PU}{\84\264}% U+04B4
 15694 % U+04B5 CYRILLIC SMALL LIGATURE TE TSE; tetsecyrillic
 15695 \DeclareTextCommand{\cyrtetse}{PU}{\84\265}% U+04B5
 15696 % U+04B6 CYRILLIC CAPITAL LETTER CHE WITH DESCENDER; Chedescendercyrillic
 15697 \DeclareTextCommand{\CYRCHRDSC}{PU}{\84\266}% U+04B6
 15698 % U+04B7 CYRILLIC SMALL LETTER CHE WITH DESCENDER; chedescendercyrillic
 15699 \DeclareTextCommand{\cyr chrdsc}{PU}{\84\267}% U+04B7
 15700 % U+04B8 CYRILLIC CAPITAL LETTER CHE WITH VERTICAL STROKE; Chev-
 15701 \DeclareTextCommand{\CYRCHVCRS}{PU}{\84\270}% U+04B8
 15702 % U+04B9 CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE; chev-
 15703 \DeclareTextCommand{\cyr chvcrs}{PU}{\84\271}% U+04B9
 15704 % U+04BA CYRILLIC CAPITAL LETTER SHHA; Shhacyrillic
 15705 \DeclareTextCommand{\CYRSHHA}{PU}{\84\272}% U+04BA

15706 % U+04BB CYRILLIC SMALL LETTER SHHA; shhacyrillic
 15707 \DeclareTextCommand{\cyrshha}{PU}{\84\273}% U+04BB
 15708 % U+04BC CYRILLIC CAPITAL LETTER ABKHASIAN CHE; Cheabkhasian-cyrillic
 15709 \DeclareTextCommand{\CYRABHCH}{PU}{\84\274}% U+04BC
 15710 % U+04BD CYRILLIC SMALL LETTER ABKHASIAN CHE; cheabkhasiancyrillic
 15711 \DeclareTextCommand{\cyrabhch}{PU}{\84\275}% U+04BD
 15712 % U+04BE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH DESCENDER; Chedescenderabkhasiancyrillic
 15713 \DeclareTextCommand{\CYRABHCHDSC}{PU}{\84\276}% U+04BE
 15714 \DeclareTextCompositeCommand{\k}{PU}{\CYRABHCH}{\84\276}% U+04BE
 15715 % U+04BF CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER; chedescenderabkhasiancyrillic
 15716 \DeclareTextCommand{\cyrabhchdsc}{PU}{\84\277}% U+04BF
 15717 \DeclareTextCompositeCommand{\k}{PU}{\cyrabhch}{\84\277}% U+04BF
 15718 % U+04C0 CYRILLIC LETTER PALOCHKA; palochkacyrillic
 15719 \DeclareTextCommand{\CYRpalochka}{PU}{\84\300}% U+04C0
 15720 % U+04C1 CYRILLIC CAPITAL LETTER ZHE WITH BREVE; Zhebrevecyrillic
 15721 \DeclareTextCompositeCommand{\U}{PU}{\CYRZH}{\84\301}% U+04C1
 15722 % U+04C2 CYRILLIC SMALL LETTER ZHE WITH BREVE; zhebrevecyrillic
 15723 \DeclareTextCompositeCommand{\U}{PU}{\cyrzh}{\84\302}% U+04C2
 15724 % U+04C3 CYRILLIC CAPITAL LETTER KA WITH HOOK; Kahookcyrillic
 15725 \DeclareTextCommand{\CYRKHK}{PU}{\84\303}% U+04C3
 15726 % U+04C4 CYRILLIC SMALL LETTER KA WITH HOOK; kahookcyrillic
 15727 \DeclareTextCommand{\cyrkhk}{PU}{\84\304}% U+04C4
 15728 % U+04C5 CYRILLIC CAPITAL LETTER EL WITH TAIL
 15729 \DeclareTextCommand{\CYRLDSC}{PU}{\84\305}% U+04C5
 15730 % U+04C6 CYRILLIC SMALL LETTER EL WITH TAIL
 15731 \DeclareTextCommand{\cyrldsc}{PU}{\84\306}% U+04C6
 15732 % U+04C7 CYRILLIC CAPITAL LETTER EN WITH HOOK; Enhookcyrillic
 15733 \DeclareTextCommand{\CYRNHK}{PU}{\84\307}% U+04C7
 15734 % U+04C8 CYRILLIC SMALL LETTER EN WITH HOOK; enhookcyrillic
 15735 \DeclareTextCommand{\cyrnhk}{PU}{\84\310}% U+04C8
 15736 % U+04CB CYRILLIC CAPITAL LETTER KHAKASSIAN CHE; Chekhakassian-cyrillic
 15737 \DeclareTextCommand{\CYRCHLDSC}{PU}{\84\313}% U+04CB
 15738 % U+04CC CYRILLIC SMALL LETTER KHAKASSIAN CHE; chekhakassian-cyrillic
 15739 \DeclareTextCommand{\cyrchldsc}{PU}{\84\314}% U+04CC
 15740 % U+04CD CYRILLIC CAPITAL LETTER EM WITH TAIL
 15741 \DeclareTextCommand{\CYRMDSC}{PU}{\84\315}% U+04CD
 15742 % U+04CE CYRILLIC SMALL LETTER EM WITH TAIL
 15743 \DeclareTextCommand{\cyrmdsc}{PU}{\84\316}% U+04CE
 \84\317: U+04CF CYRILLIC SMALL LETTER PALOCHKA
 15744 % U+04D0 CYRILLIC CAPITAL LETTER A WITH BREVE; Abrevecyrillic
 15745 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\320}% U+04D0
 15746 % U+04D1 CYRILLIC SMALL LETTER A WITH BREVE; abrevecyrillic
 15747 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\321}% U+04D1
 15748 % U+04D2 CYRILLIC CAPITAL LETTER A WITH DIAERESIS; Adieresiscyrillic
 15749 \DeclareTextCompositeCommand{\U}{PU}{\CYRA}{\84\322}% U+04D2
 15750 % U+04D3 CYRILLIC SMALL LETTER A WITH DIAERESIS; adieresiscyrillic
 15751 \DeclareTextCompositeCommand{\U}{PU}{\cyra}{\84\323}% U+04D3
 15752 % U+04D4 CYRILLIC CAPITAL LIGATURE A IE; Aiecyrillic
 15753 \DeclareTextCommand{\CYRAE}{PU}{\84\324}% U+04D4
 15754 % U+04D5 CYRILLIC SMALL LIGATURE A IE; aiecyrillic

15755 \DeclareTextCommand{\cyrae}{PU}{\84\325}% U+04D5
15756 % U+04D6 CYRILLIC CAPITAL LETTER IE WITH BREVE; Iebrevacyrillic
15757 \DeclareTextCompositeCommand{\U}{PU}{\CYRE}{\84\326}% U+04D6
15758 % U+04D7 CYRILLIC SMALL LETTER IE WITH BREVE; iebrevacyrillic
15759 \DeclareTextCompositeCommand{\U}{PU}{\cyre}{\84\327}% U+04D7
15760 % U+04D8 CYRILLIC CAPITAL LETTER SCHWA; Schwacyrillic
15761 \DeclareTextCommand{\CYRSCHWA}{PU}{\84\330}% U+04D8
15762 % U+04D9 CYRILLIC SMALL LETTER SCHWA; *afii10846, schwacyrillic
15763 \DeclareTextCommand{\cyrschwa}{PU}{\84\331}% U+04D9
15764 % U+04DA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS; Schwadiere-
siscyrillic
15765 \DeclareTextCompositeCommand{"}{PU}{\CYRSCHWA}{\84\332}% U+04DA
15766 % U+04DB CYRILLIC SMALL LETTER SCHWA WITH DIAERESIS; schwadiere-
siscyrillic
15767 \DeclareTextCompositeCommand{"}{PU}{\cyrschwa}{\84\333}% U+04DB
15768 % U+04DC CYRILLIC CAPITAL LETTER ZHE WITH DIAERESIS; Zhediere-
siscyrillic
15769 \DeclareTextCompositeCommand{"}{PU}{\CYRZH}{\84\334}% U+04DC
15770 % U+04DD CYRILLIC SMALL LETTER ZHE WITH DIAERESIS; zhedieres-
cyrillic
15771 \DeclareTextCompositeCommand{"}{PU}{\cyrzh}{\84\335}% U+04DD
15772 % U+04DE CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS; Zedieres-
cyrillic
15773 \DeclareTextCompositeCommand{"}{PU}{\CYRZ}{\84\336}% U+04DE
15774 % U+04DF CYRILLIC SMALL LETTER ZE WITH DIAERESIS; zedieresicyrillic
15775 \DeclareTextCompositeCommand{"}{PU}{\cyrz}{\84\337}% U+04DF
15776 % U+04E0 CYRILLIC CAPITAL LETTER ABKHASIAN DZE; Dzeabkhasian-
cyrillic
15777 \DeclareTextCommand{\CYRABHDZE}{PU}{\84\340}% U+04E0
15778 % U+04E1 CYRILLIC SMALL LETTER ABKHASIAN DZE; dzeabkhasiancyrillic
15779 \DeclareTextCommand{\cyrabhdze}{PU}{\84\341}% U+04E1
15780 % U+04E2 CYRILLIC CAPITAL LETTER I WITH MACRON; Imacroncyrillic
15781 \DeclareTextCompositeCommand{\=}{PU}{\CYRI}{\84\342}% U+04E2
15782 % U+04E3 CYRILLIC SMALL LETTER I WITH MACRON; imacroncyrillic
15783 \DeclareTextCompositeCommand{\=}{PU}{\cyri}{\84\343}% U+04E3
15784 % U+04E4 CYRILLIC CAPITAL LETTER I WITH DIAERESIS; Idieresicyrillic
15785 \DeclareTextCompositeCommand{"}{PU}{\CYRI}{\84\344}% U+04E4
15786 % U+04E5 CYRILLIC SMALL LETTER I WITH DIAERESIS; idieresicyrillic
15787 \DeclareTextCompositeCommand{"}{PU}{\cyri}{\84\345}% U+04E5
15788 % U+04E6 CYRILLIC CAPITAL LETTER O WITH DIAERESIS; Odieresicyril-
lic
15789 \DeclareTextCompositeCommand{"}{PU}{\CYRO}{\84\346}% U+04E6
15790 % U+04E7 CYRILLIC SMALL LETTER O WITH DIAERESIS; odieresicyrillic
15791 \DeclareTextCompositeCommand{"}{PU}{\cyro}{\84\347}% U+04E7
15792 % U+04E8 CYRILLIC CAPITAL LETTER BARRED O; Obarredcyrillic
15793 \DeclareTextCommand{\CYROTLD}{PU}{\84\350}% U+04E8
15794 % U+04E9 CYRILLIC SMALL LETTER BARRED O; obarredcyrillic
15795 \DeclareTextCommand{\cyrotld}{PU}{\84\351}% U+04E9
15796 % U+04EA CYRILLIC CAPITAL LETTER BARRED O WITH DIAERE-
SIS; Obarreddieresicyrillic
15797 \DeclareTextCompositeCommand{"}{PU}{\CYROTLD}{\84\352}% U+04EA
15798 % U+04EB CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS; obarred-
dieresicyrillic
15799 \DeclareTextCompositeCommand{"}{PU}{\cyrotld}{\84\353}% U+04EB
15800 % U+04EC CYRILLIC CAPITAL LETTER E WITH DIAERESIS
15801 \DeclareTextCompositeCommand{"}{PU}{\CYREREV}{\84\354}% U+04EC
15802 % U+04ED CYRILLIC SMALL LETTER E WITH DIAERESIS

15803 \DeclareTextCompositeCommand{"}{PU}{\cyreref}{\84\355}% U+04ED
 15804 % U+04EE CYRILLIC CAPITAL LETTER U WITH MACRON; Umacroncyrillic
 15805 \DeclareTextCompositeCommand{\=}{PU}{\CYRU}{\84\356}% U+04EE
 15806 % U+04EF CYRILLIC SMALL LETTER U WITH MACRON; umacroncyrillic
 15807 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\357}% U+04EF
 15808 % U+04F0 CYRILLIC CAPITAL LETTER U WITH DIAERESIS; Udieresiscyrillic
 15809 \DeclareTextCompositeCommand{"}{PU}{\CYRU}{\84\360}% U+04F0
 15810 % U+04F1 CYRILLIC SMALL LETTER U WITH DIAERESIS; udieresiscyrillic
 15811 \DeclareTextCompositeCommand{"}{PU}{\cyru}{\84\361}% U+04F1
 15812 % U+04F2 CYRILLIC CAPITAL LETTER U WITH DOUBLE ACUTE; Uhun-
 garumlautcyrillic
 15813 \DeclareTextCompositeCommand{\H}{PU}{\CYRU}{\84\362}% U+04F2
 15814 % U+04F3 CYRILLIC SMALL LETTER U WITH DOUBLE ACUTE; uhun-
 garumlautcyrillic
 15815 \DeclareTextCompositeCommand{\H}{PU}{\cyru}{\84\363}% U+04F3
 15816 % U+04F4 CYRILLIC CAPITAL LETTER CHE WITH DIAERESIS; Chediere-
 siscyrillic
 15817 \DeclareTextCompositeCommand{"}{PU}{\CYRCH}{\84\364}% U+04F4
 15818 % U+04F5 CYRILLIC SMALL LETTER CHE WITH DIAERESIS; chedieres-
 iscyrillic
 15819 \DeclareTextCompositeCommand{"}{PU}{\cyrch}{\84\365}% U+04F5
 15820 % U+04F6 CYRILLIC CAPITAL LETTER GHE WITH DESCENDER
 15821 \DeclareTextCommand{\CYRGDSC}{PU}{\84\366}% U+04F6
 15822 % U+04F7 CYRILLIC SMALL LETTER GHE WITH DESCENDER
 15823 \DeclareTextCommand{\cyrgdsc}{PU}{\84\367}% U+04F7
 15824 % U+04F8 CYRILLIC CAPITAL LETTER YERU WITH DIAERESIS; Yerudiere-
 siscyrillic
 15825 \DeclareTextCompositeCommand{"}{PU}{\CYRERY}{\84\370}% U+04F8
 15826 % U+04F9 CYRILLIC SMALL LETTER YERU WITH DIAERESIS; yerudiere-
 siscyrillic
 15827 \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
 15828 % U+04FC CYRILLIC CAPITAL LETTER HA WITH HOOK
 15829 \DeclareTextCommand{\CYRHHK}{PU}{\84\374}% U+04FC
 15830 % U+04FD CYRILLIC SMALL LETTER HA WITH HOOK
 15831 \DeclareTextCommand{\cyrhkh}{PU}{\84\375}% U+04FD
 \84\376: U+04FE CYRILLIC CAPITAL LETTER HA WITH STROKE
 \84\377: U+04FF CYRILLIC SMALL LETTER HA WITH STROKE

50.2.10 Thai: U+0E00 to U+0E7F

15832 % U+0E3F THAI CURRENCY SYMBOL BAHT; bahtthai
 15833 \DeclareTextCommand{\textbaht}{PU}{\9016\077}% U+0E3F

50.2.11 Latin Extended Additional: U+1E00 to U+1EFF

15834 % U+1E02 LATIN CAPITAL LETTER B WITH DOT ABOVE; Bdotaccent
 15835 \DeclareTextCompositeCommand{.}{PU}{B}{\9036\002}% U+1E02
 15836 % U+1E03 LATIN SMALL LETTER B WITH DOT ABOVE; bdotaccent
 15837 \DeclareTextCompositeCommand{.}{PU}{b}{\9036\003}% U+1E03
 15838 % U+1E06 LATIN CAPITAL LETTER B WITH LINE BELOW; Blinebelow
 15839 \DeclareTextCompositeCommand{\b}{PU}{B}{\9036\006}% U+1E06
 15840 % U+1E07 LATIN SMALL LETTER B WITH LINE BELOW; blinebelow
 15841 \DeclareTextCompositeCommand{\b}{PU}{b}{\9036\007}% U+1E07
 15842 % U+1E0A LATIN CAPITAL LETTER D WITH DOT ABOVE; Ddotaccent
 15843 \DeclareTextCompositeCommand{.}{PU}{D}{\9036\012}% U+1E0A

15844 % U+1E0B LATIN SMALL LETTER D WITH DOT ABOVE; ddotaccent
15845 \DeclareTextCompositeCommand{.}{PU}{d}{\9036\013}% U+1E0B
15846 % U+1E0E LATIN CAPITAL LETTER D WITH LINE BELOW; Dlinebelow
15847 \DeclareTextCompositeCommand{\b}{PU}{D}{\9036\016}% U+1E0E
15848 % U+1E0F LATIN SMALL LETTER D WITH LINE BELOW; dlinebelow
15849 \DeclareTextCompositeCommand{\b}{PU}{d}{\9036\017}% U+1E0F
15850 % U+1E10 LATIN CAPITAL LETTER D WITH CEDILLA; Dcedilla
15851 \DeclareTextCompositeCommand{\c}{PU}{D}{\9036\020}% U+1E10
15852 % U+1E11 LATIN SMALL LETTER D WITH CEDILLA; dcedilla
15853 \DeclareTextCompositeCommand{\c}{PU}{d}{\9036\021}% U+1E11
15854 % U+1E1E LATIN CAPITAL LETTER F WITH DOT ABOVE; Fdotaccent
15855 \DeclareTextCompositeCommand{.}{PU}{F}{\9036\036}% U+1E1E
15856 % U+1E1F LATIN SMALL LETTER F WITH DOT ABOVE; fdotaccent
15857 \DeclareTextCompositeCommand{.}{PU}{f}{\9036\037}% U+1E1F
15858 % U+1E20 LATIN CAPITAL LETTER G WITH MACRON; Gmacron
15859 \DeclareTextCompositeCommand{\=}{PU}{G}{\9036\040}% U+1E20
15860 % U+1E21 LATIN SMALL LETTER G WITH MACRON; gmacron
15861 \DeclareTextCompositeCommand{\=}{PU}{g}{\9036\041}% U+1E21
15862 % U+1E22 LATIN CAPITAL LETTER H WITH DOT ABOVE; Hdotaccent
15863 \DeclareTextCompositeCommand{.}{PU}{H}{\9036\042}% U+1E22
15864 % U+1E23 LATIN SMALL LETTER H WITH DOT ABOVE; hdotaccent
15865 \DeclareTextCompositeCommand{.}{PU}{h}{\9036\043}% U+1E23
15866 % U+1E26 LATIN CAPITAL LETTER H WITH DIAERESIS; Hdieresis
15867 \DeclareTextCompositeCommand{"}{PU}{H}{\9036\046}% U+1E26
15868 % U+1E27 LATIN SMALL LETTER H WITH DIAERESIS; hdieresis
15869 \DeclareTextCompositeCommand{"}{PU}{h}{\9036\047}% U+1E27
15870 % U+1E28 LATIN CAPITAL LETTER H WITH CEDILLA; Hcedilla
15871 \DeclareTextCompositeCommand{\c}{PU}{H}{\9036\050}% U+1E28
15872 % U+1E29 LATIN SMALL LETTER H WITH CEDILLA; hcedilla
15873 \DeclareTextCompositeCommand{\c}{PU}{h}{\9036\051}% U+1E29
15874 % U+1E30 LATIN CAPITAL LETTER K WITH ACUTE; Kacute
15875 \DeclareTextCompositeCommand{\'}{PU}{K}{\9036\060}% U+1E30
15876 % U+1E31 LATIN SMALL LETTER K WITH ACUTE; kacute
15877 \DeclareTextCompositeCommand{\'}{PU}{k}{\9036\061}% U+1E31
15878 % U+1E34 LATIN CAPITAL LETTER K WITH LINE BELOW; Klinebelow
15879 \DeclareTextCompositeCommand{\b}{PU}{K}{\9036\064}% U+1E34
15880 % U+1E35 LATIN SMALL LETTER K WITH LINE BELOW; klinebelow
15881 \DeclareTextCompositeCommand{\b}{PU}{k}{\9036\065}% U+1E35
15882 % U+1E3A LATIN CAPITAL LETTER L WITH LINE BELOW; Llinebelow
15883 \DeclareTextCompositeCommand{\b}{PU}{L}{\9036\072}% U+1E3A
15884 % U+1E3B LATIN SMALL LETTER L WITH LINE BELOW; llinebelow
15885 \DeclareTextCompositeCommand{\b}{PU}{l}{\9036\073}% U+1E3B
15886 % U+1E3E LATIN CAPITAL LETTER M WITH ACUTE; Macute
15887 \DeclareTextCompositeCommand{\'}{PU}{M}{\9036\076}% U+1E3E
15888 % U+1E3F LATIN SMALL LETTER M WITH ACUTE; macute
15889 \DeclareTextCompositeCommand{\'}{PU}{m}{\9036\077}% U+1E3F
15890 % U+1E40 LATIN CAPITAL LETTER M WITH DOT ABOVE; Mdotaccent
15891 \DeclareTextCompositeCommand{.}{PU}{M}{\9036\100}% U+1E40
15892 % U+1E41 LATIN SMALL LETTER M WITH DOT ABOVE; mdotaccent
15893 \DeclareTextCompositeCommand{.}{PU}{m}{\9036\101}% U+1E41
15894 % U+1E44 LATIN CAPITAL LETTER N WITH DOT ABOVE; Ndotaccent
15895 \DeclareTextCompositeCommand{.}{PU}{N}{\9036\104}% U+1E44
15896 % U+1E45 LATIN SMALL LETTER N WITH DOT ABOVE; ndotaccent
15897 \DeclareTextCompositeCommand{.}{PU}{n}{\9036\105}% U+1E45
15898 % U+1E48 LATIN CAPITAL LETTER N WITH LINE BELOW; Nlinebelow
15899 \DeclareTextCompositeCommand{\b}{PU}{N}{\9036\110}% U+1E48
15900 % U+1E49 LATIN SMALL LETTER N WITH LINE BELOW; nlinebelow

15901 \DeclareTextCompositeCommand{\b}{PU}{n}{\9036\111}% U+1E49
15902 % U+1E54 LATIN CAPITAL LETTER P WITH ACUTE; Pacute
15903 \DeclareTextCompositeCommand{\'}{PU}{P}{\9036\124}% U+1E54
15904 % U+1E55 LATIN SMALL LETTER P WITH ACUTE; pacute
15905 \DeclareTextCompositeCommand{\'}{PU}{p}{\9036\125}% U+1E55
15906 % U+1E56 LATIN CAPITAL LETTER P WITH DOT ABOVE; Pdotaccent
15907 \DeclareTextCompositeCommand{\.}{PU}{P}{\9036\126}% U+1E56
15908 % U+1E57 LATIN SMALL LETTER P WITH DOT ABOVE; pdotaccent
15909 \DeclareTextCompositeCommand{\.}{PU}{p}{\9036\127}% U+1E57
15910 % U+1E58 LATIN CAPITAL LETTER R WITH DOT ABOVE; Rdotaccent
15911 \DeclareTextCompositeCommand{\.}{PU}{R}{\9036\130}% U+1E58
15912 % U+1E59 LATIN SMALL LETTER R WITH DOT ABOVE; rdotaccent
15913 \DeclareTextCompositeCommand{\.}{PU}{r}{\9036\131}% U+1E59
15914 % U+1E5E LATIN CAPITAL LETTER R WITH LINE BELOW; Rlinebelow
15915 \DeclareTextCompositeCommand{\b}{PU}{R}{\9036\136}% U+1E5E
15916 % U+1E5F LATIN SMALL LETTER R WITH LINE BELOW; rlinebelow
15917 \DeclareTextCompositeCommand{\b}{PU}{r}{\9036\137}% U+1E5F
15918 % U+1E60 LATIN CAPITAL LETTER S WITH DOT ABOVE; Sdotaccent
15919 \DeclareTextCompositeCommand{\.}{PU}{S}{\9036\140}% U+1E60
15920 % U+1E61 LATIN SMALL LETTER S WITH DOT ABOVE; sdotaccent
15921 \DeclareTextCompositeCommand{\.}{PU}{s}{\9036\141}% U+1E61
15922 % U+1E6E LATIN CAPITAL LETTER T WITH LINE BELOW; Tlinebelow
15923 \DeclareTextCompositeCommand{\b}{PU}{T}{\9036\156}% U+1E6E
15924 % U+1E6F LATIN SMALL LETTER T WITH LINE BELOW; tlinebelow
15925 \DeclareTextCompositeCommand{\b}{PU}{t}{\9036\157}% U+1E6F
15926 % U+1E7C LATIN CAPITAL LETTER V WITH TILDE; Vtilde
15927 \DeclareTextCompositeCommand{\~}{PU}{V}{\9036\174}% U+1E7C
15928 % U+1E7D LATIN SMALL LETTER V WITH TILDE; vtilde
15929 \DeclareTextCompositeCommand{\~}{PU}{v}{\9036\175}% U+1E7D
15930 % U+1E80 LATIN CAPITAL LETTER W WITH GRAVE; Wgrave
15931 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\200}% U+1E80
15932 % U+1E81 LATIN SMALL LETTER W WITH GRAVE; wgrave
15933 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\201}% U+1E81
15934 % U+1E82 LATIN CAPITAL LETTER W WITH ACUTE; Wacute
15935 \DeclareTextCompositeCommand{\'}{PU}{W}{\9036\202}% U+1E82
15936 % U+1E83 LATIN SMALL LETTER W WITH ACUTE; wacute
15937 \DeclareTextCompositeCommand{\'}{PU}{w}{\9036\203}% U+1E83
15938 % U+1E84 LATIN CAPITAL LETTER W WITH DIAERESIS; Wdieresis
15939 \DeclareTextCompositeCommand{\"}{PU}{W}{\9036\204}% U+1E84
15940 % U+1E85 LATIN SMALL LETTER W WITH DIAERESIS; wdieresis
15941 \DeclareTextCompositeCommand{\"}{PU}{w}{\9036\205}% U+1E85
15942 % U+1E86 LATIN CAPITAL LETTER W WITH DOT ABOVE; Wdotaccent
15943 \DeclareTextCompositeCommand{\.}{PU}{W}{\9036\206}% U+1E86
15944 % U+1E87 LATIN SMALL LETTER W WITH DOT ABOVE; wdotaccent
15945 \DeclareTextCompositeCommand{\.}{PU}{w}{\9036\207}% U+1E87
15946 % U+1E8A LATIN CAPITAL LETTER X WITH DOT ABOVE; Xdotaccent
15947 \DeclareTextCompositeCommand{\.}{PU}{X}{\9036\212}% U+1E8A
15948 % U+1E8B LATIN SMALL LETTER X WITH DOT ABOVE; xdotaccent
15949 \DeclareTextCompositeCommand{\.}{PU}{x}{\9036\213}% U+1E8B
15950 % U+1E8C LATIN CAPITAL LETTER X WITH DIAERESIS; Xdieresis
15951 \DeclareTextCompositeCommand{\"}{PU}{X}{\9036\214}% U+1E8C
15952 % U+1E8D LATIN SMALL LETTER X WITH DIAERESIS; xdieresis
15953 \DeclareTextCompositeCommand{\"}{PU}{x}{\9036\215}% U+1E8D
15954 % U+1E8E LATIN CAPITAL LETTER Y WITH DOT ABOVE; Ydotaccent
15955 \DeclareTextCompositeCommand{\.}{PU}{Y}{\9036\216}% U+1E8E
15956 % U+1E8F LATIN SMALL LETTER Y WITH DOT ABOVE; ydotaccent
15957 \DeclareTextCompositeCommand{\.}{PU}{y}{\9036\217}% U+1E8F

15958 % U+1E90 LATIN CAPITAL LETTER Z WITH CIRCUMFLEX; Zcircumflex
 15959 \DeclareTextCompositeCommand{\~}{PU}{z}{\9036\220}% U+1E90
 15960 % U+1E91 LATIN SMALL LETTER Z WITH CIRCUMFLEX; zcircumflex
 15961 \DeclareTextCompositeCommand{\~}{PU}{z}{\9036\221}% U+1E91
 15962 % U+1E94 LATIN CAPITAL LETTER Z WITH LINE BELOW; Zlinebelow
 15963 \DeclareTextCompositeCommand{\b}{PU}{Z}{\9036\224}% U+1E94
 15964 % U+1E95 LATIN SMALL LETTER Z WITH LINE BELOW; zlinebelow
 15965 \DeclareTextCompositeCommand{\b}{PU}{z}{\9036\225}% U+1E95
 15966 % U+1E96 LATIN SMALL LETTER H WITH LINE BELOW; hlinebelow
 15967 \DeclareTextCompositeCommand{\b}{PU}{h}{\9036\226}% U+1E96
 15968 % U+1E97 LATIN SMALL LETTER T WITH DIAERESIS; tdieresis
 15969 \DeclareTextCompositeCommand{\"}{PU}{t}{\9036\227}% U+1E97
 15970 % U+1E98 LATIN SMALL LETTER W WITH RING ABOVE; wring
 15971 \DeclareTextCompositeCommand{\r}{PU}{w}{\9036\230}% U+1E98
 15972 % U+1E99 LATIN SMALL LETTER Y WITH RING ABOVE; yring
 15973 \DeclareTextCompositeCommand{\r}{PU}{y}{\9036\231}% U+1E99
 15974 % U+1E9B LATIN SMALL LETTER LONG S WITH DOT ABOVE; slongdotac-
 cent
 15975 \DeclareTextCompositeCommand{\.}{PU}{\textlongs}{\9036\233}% U+1E9B
 15976 % U+1EBC LATIN CAPITAL LETTER E WITH TILDE; Etilde
 15977 \DeclareTextCompositeCommand{\-}{PU}{E}{\9036\274}% U+1EBC
 15978 % U+1EBD LATIN SMALL LETTER E WITH TILDE; etilde
 15979 \DeclareTextCompositeCommand{\-}{PU}{e}{\9036\275}% U+1EBD
 15980 % U+1EF2 LATIN CAPITAL LETTER Y WITH GRAVE; Ygrave
 15981 \DeclareTextCompositeCommand{\'}{PU}{Y}{\9036\362}% U+1EF2
 15982 % U+1EF3 LATIN SMALL LETTER Y WITH GRAVE; ygrave
 15983 \DeclareTextCompositeCommand{\'}{PU}{y}{\9036\363}% U+1EF3
 15984 % U+1EF8 LATIN CAPITAL LETTER Y WITH TILDE; Ytilde
 15985 \DeclareTextCompositeCommand{\-}{PU}{Y}{\9036\370}% U+1EF8
 15986 % U+1EF9 LATIN SMALL LETTER Y WITH TILDE; ytilde
 15987 \DeclareTextCompositeCommand{\-}{PU}{y}{\9036\371}% U+1EF9

50.2.12 General Punctuation: U+2000 to U+206F

15988 % U+200C ZERO WIDTH NON-JOINER; *afi61664, zerowidthnonjoiner
 15989 \DeclareTextCommand{\textcompwordmark}{PU}{\9040\014}% U+200C
 15990 % U+2013 EN DASH; endash
 15991 \DeclareTextCommand{\textendash}{PU}{\9040\023}% U+2013
 15992 % U+2014 EM DASH; emdash
 15993 \DeclareTextCommand{\textemdash}{PU}{\9040\024}% U+2014
 15994 % U+2016 DOUBLE VERTICAL LINE; dblverticalbar
 15995 \DeclareTextCommand{\textbardbl}{PU}{\9040\026}% U+2016
 15996 % U+2018 LEFT SINGLE QUOTATION MARK; quoteleft
 15997 \DeclareTextCommand{\textquoteleft}{PU}{\9040\030}% U+2018
 15998 % U+2019 RIGHT SINGLE QUOTATION MARK; quoteright
 15999 \DeclareTextCommand{\textquoteright}{PU}{\9040\031}% U+2019
 16000 % U+201A SINGLE LOW-9 QUOTATION MARK; quotesinglbase
 16001 \DeclareTextCommand{\quotesinglbase}{PU}{\9040\032}% U+201A
 16002 % U+201C LEFT DOUBLE QUOTATION MARK; quotedbleft
 16003 \DeclareTextCommand{\textquotedbleft}{PU}{\9040\034}% U+201C
 16004 % U+201D RIGHT DOUBLE QUOTATION MARK; quotedbtright
 16005 \DeclareTextCommand{\textquotedbtright}{PU}{\9040\035}% U+201D
 16006 % U+201E DOUBLE LOW-9 QUOTATION MARK; quotedblbase
 16007 \DeclareTextCommand{\quotedblbase}{PU}{\9040\036}% U+201E
 16008 % U+2020 DAGGER; dagger
 16009 \DeclareTextCommand{\textdagger}{PU}{\9040\040}% U+2020
 16010 % U+2021 DOUBLE DAGGER; daggerdbl
 16011 \DeclareTextCommand{\textdaggerdbl}{PU}{\9040\041}% U+2021

16012 % U+2022 BULLET; bullet
 16013 \DeclareTextCommand{\textbullet}{PU}{\9040\042}% U+2022
 16014 % U+2026 HORIZONTAL ELLIPSIS; ellipsis
 16015 \DeclareTextCommand{\textellipsis}{PU}{\9040\046}% U+2026
 16016 % U+2030 PER MILLE SIGN; perthousand
 16017 \DeclareTextCommand{\textperthousand}{PU}{\9040\060}% U+2030
 16018 % U+2031 PER TEN THOUSAND SIGN
 16019 \DeclareTextCommand{\textpertenthousand}{PU}{\9040\061}% U+2031
 16020 % U+2039 SINGLE LEFT-POINTING ANGLE QUOTATION MARK; guil-
 lingleft
 16021 \DeclareTextCommand{\guillemotleft}{PU}{\9040\071}% U+2039
 16022 % U+203A SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; guil-
 lingright
 16023 \DeclareTextCommand{\guillemotright}{PU}{\9040\072}% U+203A
 16024 % U+203B REFERENCE MARK; referencemark
 16025 \DeclareTextCommand{\textreferencemark}{PU}{\9040\073}% U+203B
 16026 % U+203D INTERROBANG
 16027 \DeclareTextCommand{\textinterrobang}{PU}{\9040\075}% U+203D
 16028 % U+2044 FRACTION SLASH; fraction
 16029 \DeclareTextCommand{\textfractionsolidus}{PU}{\9040\104}% U+2044
 16030 % U+2045 LEFT SQUARE BRACKET WITH QUILL
 16031 \DeclareTextCommand{\textlquill}{PU}{\9040\105}% U+2045
 16032 % U+2046 RIGHT SQUARE BRACKET WITH QUILL
 16033 \DeclareTextCommand{\textrquill}{PU}{\9040\106}% U+2046
 16034 % U+2052 COMMERCIAL MINUS SIGN
 16035 \DeclareTextCommand{\textdiscount}{PU}{\9040\122}% U+2052

50.2.13 Superscripts and Subscripts: U+2070 to U+209F

16036 % U+2070 SUPERSCRIPT ZERO; zerosuperior
 16037 \DeclareTextCommand{\textzerosuperior}{PU}{\9040\160}% U+2070
 16038 % U+2074 SUPERSCRIPT FOUR; foursuperior
 16039 \DeclareTextCommand{\textfoursuperior}{PU}{\9040\164}% U+2074
 16040 % U+2075 SUPERSCRIPT FIVE; fivesuperior
 16041 \DeclareTextCommand{\textfivesuperior}{PU}{\9040\165}% U+2075
 16042 % U+2076 SUPERSCRIPT SIX; sixsuperior
 16043 \DeclareTextCommand{\textsixsuperior}{PU}{\9040\166}% U+2076
 16044 % U+2077 SUPERSCRIPT SEVEN; sevensuperior
 16045 \DeclareTextCommand{\textsevensuperior}{PU}{\9040\167}% U+2077
 16046 % U+2078 SUPERSCRIPT EIGHT; eightsuperior
 16047 \DeclareTextCommand{\texteightsuperior}{PU}{\9040\170}% U+2078
 16048 % U+2079 SUPERSCRIPT NINE; ninesuperior
 16049 \DeclareTextCommand{\textninesuperior}{PU}{\9040\171}% U+2079
 16050 % U+207A SUPERSCRIPT PLUS SIGN; plussuperior
 16051 \DeclareTextCommand{\textplussuperior}{PU}{\9040\172}% U+207A
 16052 % U+207B SUPERSCRIPT MINUS
 16053 \DeclareTextCommand{\textminussuperior}{PU}{\9040\173}
 16054 % U+207C SUPERSCRIPT EQUALS SIGN; equalsuperior
 16055 \DeclareTextCommand{\textequalsuperior}{PU}{\9040\174}
 16056 % U+207D SUPERSCRIPT LEFT PARENTHESIS; parenleftsuperior
 16057 \DeclareTextCommand{\textparenleftsuperior}{PU}{\9040\175}
 16058 % U+207E SUPERSCRIPT RIGHT PARENTHESIS; parenrightsuperior
 16059 \DeclareTextCommand{\textparenrightsuperior}{PU}{\9040\176}
 16060 % U+207F SUPERSCRIPT LATIN SMALL LETTER N; nsuperior
 16061 \DeclareTextCommand{\textnsuperior}{PU}{\9040\177}
 16062 % U+2080 SUBSCRIPT ZERO; zeroinferior
 16063 \DeclareTextCommand{\textzeroinferior}{PU}{\9040\200}% U+2080
 16064 % U+2081 SUBSCRIPT ONE; oneinferior

16065 \DeclareTextCommand{\textoneinferior}{PU}{\9040\201}% U+2081
 16066 % U+2082 SUBSCRIPT TWO; twoinferior
 16067 \DeclareTextCommand{\texttwoinferior}{PU}{\9040\202}% U+2082
 16068 % U+2083 SUBSCRIPT THREE; threeinferior
 16069 \DeclareTextCommand{\textthreeinferior}{PU}{\9040\203}% U+2083
 16070 % U+2084 SUBSCRIPT FOUR; fourinferior
 16071 \DeclareTextCommand{\textfourinferior}{PU}{\9040\204}% U+2084
 16072 % U+2085 SUBSCRIPT FIVE; fiveinferior
 16073 \DeclareTextCommand{\textfiveinferior}{PU}{\9040\205}% U+2085
 16074 % U+2086 SUBSCRIPT SIX; sixinferior
 16075 \DeclareTextCommand{\textsixinferior}{PU}{\9040\206}% U+2086
 16076 % U+2087 SUBSCRIPT SEVEN; seveninferior
 16077 \DeclareTextCommand{\textseveninferior}{PU}{\9040\207}% U+2087
 16078 % U+2088 SUBSCRIPT EIGHT; eightinferior
 16079 \DeclareTextCommand{\texteightinferior}{PU}{\9040\210}% U+2088
 16080 % U+2089 SUBSCRIPT NINE; nineinferior
 16081 \DeclareTextCommand{\textnineinferior}{PU}{\9040\211}% U+2089
 16082 % U+208D SUBSCRIPT LEFT PARENTHESIS; parenleftinferior
 16083 \DeclareTextCommand{\textparenleftinferior}{PU}{\9040\215}% U+208D
 16084 % U+208E SUBSCRIPT RIGHT PARENTHESIS; parenrightinferior
 16085 \DeclareTextCommand{\textparenrightinferior}{PU}{\9040\216}% U+208E

50.2.14 Currency Symbols: U+20A0 to U+20CF

16086 % U+20A1 COLON SIGN; *colonmonetary, colonsign
 16087 \DeclareTextCommand{\textcolonmonetary}{PU}{\9040\241}% U+20A1
 16088 % U+20A4 LIRA SIGN; afii08941, *lira
 16089 \DeclareTextCommand{\textlira}{PU}{\9040\244}% U+20A4
 16090 % U+20A6 NAIRA SIGN
 16091 \DeclareTextCommand{\textnaira}{PU}{\9040\246}% U+20A6
 16092 % U+20A7 PESETA SIGN; peseta
 16093 \DeclareTextCommand{\textpeseta}{PU}{\9040\247}% U+20A7
 16094 % U+20A9 WON SIGN; won
 16095 \DeclareTextCommand{\textwon}{PU}{\9040\251}% U+20A9
 16096 % U+20AB DONG SIGN; dong
 16097 \DeclareTextCommand{\textdong}{PU}{\9040\253}% U+20AB
 16098 % U+20AC EURO SIGN; *Euro, euro
 16099 \DeclareTextCommand{\texteuro}{PU}{\9040\254}% U+20AC
 16100 % U+20B1 PESO SIGN
 16101 \DeclareTextCommand{\textpeso}{PU}{\9040\261}% U+20B1
 16102 % U+20B2 GUARANI SIGN
 16103 \DeclareTextCommand{\textguarani}{PU}{\9040\262}% U+20B2

50.2.15 Letterlike Symbols: U+2100 to U+214F

16104 % U+2103 DEGREE CELSIUS; centigrade
 16105 \DeclareTextCommand{\textcelsius}{PU}{\9041\003}% U+2103
 16106 % U+2116 NUMERO SIGN; *afii61352, numero
 16107 \DeclareTextCommand{\textnumero}{PU}{\9041\026}% U+2116
 16108 % U+2117 SOUND RECORDING COPYRIGHT
 16109 \DeclareTextCommand{\textcircledP}{PU}{\9041\027}% U+2117
 16110 % U+211E PRESCRIPTION TAKE; prescription
 16111 \DeclareTextCommand{\textrecipe}{PU}{\9041\036}% U+211E
 16112 % U+2120 SERVICE MARK
 16113 \DeclareTextCommand{\textservicemark}{PU}{\9041\040}% U+2120
 16114 % U+2122 TRADE MARK SIGN; trademark
 16115 \DeclareTextCommand{\texttrademark}{PU}{\9041\042}% U+2122
 16116 % U+2126 OHM SIGN; Ohm, Omega
 16117 \DeclareTextCommand{\textohm}{PU}{\9041\046}% U+2126

16118 % U+2127 INVERTED OHM SIGN
 16119 \DeclareTextCommand{\textmho}{PU}{\9041\047}% U+2127
 16120 % U+212B ANGSTROM SIGN; angstrom
 16121 \DeclareTextCommand{\textangstrom}{PU}{\9041\053}% U+212B
 16122 % U+212E ESTIMATED SYMBOL; estimated
 16123 \DeclareTextCommand{\textestimated}{PU}{\9041\056}% U+212E
 16124 % U+2135 ALEF SYMBOL; aleph
 16125 \DeclareTextCommand{\textaleph}{PU}{\9041\065}% U+2135

50.2.16 Arrows: U+2190 to U+21FF

16126 % U+2190 LEFTWARDS ARROW; arrowleft
 16127 \DeclareTextCommand{\textleftarrow}{PU}{\9041\220}% U+2190
 16128 % U+2191 UPWARDS ARROW; arrowup
 16129 \DeclareTextCommand{\textuparrow}{PU}{\9041\221}% U+2191
 16130 % U+2192 RIGHTWARDS ARROW; arrowright
 16131 \DeclareTextCommand{\textrightarrow}{PU}{\9041\222}% U+2192
 16132 % U+2193 DOWNWARDS ARROW; arrowdown
 16133 \DeclareTextCommand{\textdownarrow}{PU}{\9041\223}% U+2193

50.2.17 Mathematical Operators: U+2200 to U+22FF

16134 % U+2212 MINUS SIGN; minus
 16135 \DeclareTextCommand{\textminus}{PU}{\9042\022}% U+2212
 16136 % U+221A SQUARE ROOT; radical
 16137 \DeclareTextCommand{\textsurd}{PU}{\9042\032}% U+221A

50.2.18 Miscellaneous Technical: U+2300 to U+23FF

16138 % U+2329 LEFT-POINTING ANGLE BRACKET; angleleft
 16139 \DeclareTextCommand{\textlangle}{PU}{\9043\051}% U+2329
 16140 % U+232A RIGHT-POINTING ANGLE BRACKET; angleright
 16141 \DeclareTextCommand{\textrangle}{PU}{\9043\052}% U+232A

50.2.19 Control Pictures: U+2400 to U+243F

16142 % U+2422 BLANK SYMBOL
 16143 \DeclareTextCommand{\textblank}{PU}{\9044\042}% U+2422
 16144 % U+2423 OPEN BOX; blank
 16145 \DeclareTextCommand{\textvisiblespace}{PU}{\9044\043}% U+2423

50.2.20 Enclosed Alphanumerics: U+2460 to U+24FF

16146 % U+2460 CIRCLED DIGIT ONE; onecircle
 16147 \DeclareTextCompositeCommand{\textcircled}{PU}{1}{\9044\140}% U+2460
 16148 % U+2461 CIRCLED DIGIT TWO; twocircle
 16149 \DeclareTextCompositeCommand{\textcircled}{PU}{2}{\9044\141}% U+2461
 16150 % U+2462 CIRCLED DIGIT THREE; threecircle
 16151 \DeclareTextCompositeCommand{\textcircled}{PU}{3}{\9044\142}% U+2462
 16152 % U+2463 CIRCLED DIGIT FOUR; fourcircle
 16153 \DeclareTextCompositeCommand{\textcircled}{PU}{4}{\9044\143}% U+2463
 16154 % U+2464 CIRCLED DIGIT FIVE; fivecircle
 16155 \DeclareTextCompositeCommand{\textcircled}{PU}{5}{\9044\144}% U+2464
 16156 % U+2465 CIRCLED DIGIT SIX; sixcircle
 16157 \DeclareTextCompositeCommand{\textcircled}{PU}{6}{\9044\145}% U+2465
 16158 % U+2466 CIRCLED DIGIT SEVEN; sevencircle
 16159 \DeclareTextCompositeCommand{\textcircled}{PU}{7}{\9044\146}% U+2466
 16160 % U+2467 CIRCLED DIGIT EIGHT; eightcircle
 16161 \DeclareTextCompositeCommand{\textcircled}{PU}{8}{\9044\147}% U+2467
 16162 % U+2468 CIRCLED DIGIT NINE; ninecircle
 16163 \DeclareTextCompositeCommand{\textcircled}{PU}{9}{\9044\150}% U+2468
 16164 % U+2469 CIRCLED NUMBER TEN; tencircle

16165 \DeclareTextCompositeCommand{\textcircled}{PU}{10}{\9044\151}% U+2469
16166 % U+246A CIRCLED NUMBER ELEVEN; elevencircle
16167 \DeclareTextCompositeCommand{\textcircled}{PU}{11}{\9044\152}% U+246A
16168 % U+246B CIRCLED NUMBER TWELVE; twelvencircle
16169 \DeclareTextCompositeCommand{\textcircled}{PU}{12}{\9044\153}% U+246B
16170 % U+246C CIRCLED NUMBER THIRTEEN; thirteencircle
16171 \DeclareTextCompositeCommand{\textcircled}{PU}{13}{\9044\154}% U+246C
16172 % U+246D CIRCLED NUMBER FOURTEEN; fourteencircle
16173 \DeclareTextCompositeCommand{\textcircled}{PU}{14}{\9044\155}% U+246D
16174 % U+246E CIRCLED NUMBER FIFTEEN; fifteencircle
16175 \DeclareTextCompositeCommand{\textcircled}{PU}{15}{\9044\156}% U+246E
16176 % U+246F CIRCLED NUMBER SIXTEEN; sixteencircle
16177 \DeclareTextCompositeCommand{\textcircled}{PU}{16}{\9044\157}% U+246F
16178 % U+2470 CIRCLED NUMBER SEVENTEEN; seventeencircle
16179 \DeclareTextCompositeCommand{\textcircled}{PU}{17}{\9044\160}% U+2470
16180 % U+2471 CIRCLED NUMBER EIGHTEEN; eighteencircle
16181 \DeclareTextCompositeCommand{\textcircled}{PU}{18}{\9044\161}% U+2471
16182 % U+2472 CIRCLED NUMBER NINETEEN; nineteencircle
16183 \DeclareTextCompositeCommand{\textcircled}{PU}{19}{\9044\162}% U+2472
16184 % U+2473 CIRCLED NUMBER TWENTY; twentycircle
16185 \DeclareTextCompositeCommand{\textcircled}{PU}{20}{\9044\163}% U+2473
16186 % U+24B6 CIRCLED LATIN CAPITAL LETTER A; Acircle
16187 \DeclareTextCompositeCommand{\textcircled}{PU}{A}{\9044\266}% U+24B6
16188 % U+24B7 CIRCLED LATIN CAPITAL LETTER B; Bcircle
16189 \DeclareTextCompositeCommand{\textcircled}{PU}{B}{\9044\267}% U+24B7
16190 % U+24B8 CIRCLED LATIN CAPITAL LETTER C; Ccircle
16191 \DeclareTextCompositeCommand{\textcircled}{PU}{C}{\9044\270}% U+24B8
16192 % U+24B9 CIRCLED LATIN CAPITAL LETTER D; Dcircle
16193 \DeclareTextCompositeCommand{\textcircled}{PU}{D}{\9044\271}% U+24B9
16194 % U+24BA CIRCLED LATIN CAPITAL LETTER E; Ecircle
16195 \DeclareTextCompositeCommand{\textcircled}{PU}{E}{\9044\272}% U+24BA
16196 % U+24BB CIRCLED LATIN CAPITAL LETTER F; Fcircle
16197 \DeclareTextCompositeCommand{\textcircled}{PU}{F}{\9044\273}% U+24BB
16198 % U+24BC CIRCLED LATIN CAPITAL LETTER G; Gcircle
16199 \DeclareTextCompositeCommand{\textcircled}{PU}{G}{\9044\274}% U+24BC
16200 % U+24BD CIRCLED LATIN CAPITAL LETTER H; Hcircle
16201 \DeclareTextCompositeCommand{\textcircled}{PU}{H}{\9044\275}% U+24BD
16202 % U+24BE CIRCLED LATIN CAPITAL LETTER I; Icircle
16203 \DeclareTextCompositeCommand{\textcircled}{PU}{I}{\9044\276}% U+24BE
16204 % U+24BF CIRCLED LATIN CAPITAL LETTER J; Jcircle
16205 \DeclareTextCompositeCommand{\textcircled}{PU}{J}{\9044\277}% U+24BF
16206 % U+24C0 CIRCLED LATIN CAPITAL LETTER K; Kcircle
16207 \DeclareTextCompositeCommand{\textcircled}{PU}{K}{\9044\300}% U+24C0
16208 % U+24C1 CIRCLED LATIN CAPITAL LETTER L; Lcircle
16209 \DeclareTextCompositeCommand{\textcircled}{PU}{L}{\9044\301}% U+24C1
16210 % U+24C2 CIRCLED LATIN CAPITAL LETTER M; Mcircle
16211 \DeclareTextCompositeCommand{\textcircled}{PU}{M}{\9044\302}% U+24C2
16212 % U+24C3 CIRCLED LATIN CAPITAL LETTER N; Ncircle
16213 \DeclareTextCompositeCommand{\textcircled}{PU}{N}{\9044\303}% U+24C3
16214 % U+24C4 CIRCLED LATIN CAPITAL LETTER O; Ocircle
16215 \DeclareTextCompositeCommand{\textcircled}{PU}{O}{\9044\304}% U+24C4
16216 % U+24C5 CIRCLED LATIN CAPITAL LETTER P; Pcircle
16217 \DeclareTextCompositeCommand{\textcircled}{PU}{P}{\9044\305}% U+24C5
16218 % U+24C6 CIRCLED LATIN CAPITAL LETTER Q; Qcircle
16219 \DeclareTextCompositeCommand{\textcircled}{PU}{Q}{\9044\306}% U+24C6
16220 % U+24C7 CIRCLED LATIN CAPITAL LETTER R; Rcircle
16221 \DeclareTextCompositeCommand{\textcircled}{PU}{R}{\9044\307}% U+24C7

16222 % U+24C8 CIRCLED LATIN CAPITAL LETTER S; Scircle
 16223 \DeclareTextCompositeCommand{\textcircled}{PU}{S}{\9044\310}% U+24C8
 16224 % U+24C9 CIRCLED LATIN CAPITAL LETTER T; Tcircle
 16225 \DeclareTextCompositeCommand{\textcircled}{PU}{T}{\9044\311}% U+24C9
 16226 % U+24CA CIRCLED LATIN CAPITAL LETTER U; Ucircle
 16227 \DeclareTextCompositeCommand{\textcircled}{PU}{U}{\9044\312}% U+24CA
 16228 % U+24CB CIRCLED LATIN CAPITAL LETTER V; Vcircle
 16229 \DeclareTextCompositeCommand{\textcircled}{PU}{V}{\9044\313}% U+24CB
 16230 % U+24CC CIRCLED LATIN CAPITAL LETTER W; Wcircle
 16231 \DeclareTextCompositeCommand{\textcircled}{PU}{W}{\9044\314}% U+24CC
 16232 % U+24CD CIRCLED LATIN CAPITAL LETTER X; Xcircle
 16233 \DeclareTextCompositeCommand{\textcircled}{PU}{X}{\9044\315}% U+24CD
 16234 % U+24CE CIRCLED LATIN CAPITAL LETTER Y; Ycircle
 16235 \DeclareTextCompositeCommand{\textcircled}{PU}{Y}{\9044\316}% U+24CE
 16236 % U+24CF CIRCLED LATIN CAPITAL LETTER Z; Zcircle
 16237 \DeclareTextCompositeCommand{\textcircled}{PU}{Z}{\9044\317}% U+24CF
 16238 % U+24D0 CIRCLED LATIN SMALL LETTER A; acircle
 16239 \DeclareTextCompositeCommand{\textcircled}{PU}{a}{\9044\320}% U+24D0
 16240 % U+24D1 CIRCLED LATIN SMALL LETTER B; bcircle
 16241 \DeclareTextCompositeCommand{\textcircled}{PU}{b}{\9044\321}% U+24D1
 16242 % U+24D2 CIRCLED LATIN SMALL LETTER C; ccircle
 16243 \DeclareTextCompositeCommand{\textcircled}{PU}{c}{\9044\322}% U+24D2
 16244 % U+24D3 CIRCLED LATIN SMALL LETTER D; dcircle
 16245 \DeclareTextCompositeCommand{\textcircled}{PU}{d}{\9044\323}% U+24D3
 16246 % U+24D4 CIRCLED LATIN SMALL LETTER E; ecircle
 16247 \DeclareTextCompositeCommand{\textcircled}{PU}{e}{\9044\324}% U+24D4
 16248 % U+24D5 CIRCLED LATIN SMALL LETTER F; fcircle
 16249 \DeclareTextCompositeCommand{\textcircled}{PU}{f}{\9044\325}% U+24D5
 16250 % U+24D6 CIRCLED LATIN SMALL LETTER G; gcircle
 16251 \DeclareTextCompositeCommand{\textcircled}{PU}{g}{\9044\326}% U+24D6
 16252 % U+24D7 CIRCLED LATIN SMALL LETTER H; hcircle
 16253 \DeclareTextCompositeCommand{\textcircled}{PU}{h}{\9044\327}% U+24D7
 16254 % U+24D8 CIRCLED LATIN SMALL LETTER I; icircle
 16255 \DeclareTextCompositeCommand{\textcircled}{PU}{i}{\9044\330}% U+24D8
 16256 % U+24D9 CIRCLED LATIN SMALL LETTER J; jcircle
 16257 \DeclareTextCompositeCommand{\textcircled}{PU}{j}{\9044\331}% U+24D9
 16258 % U+24DA CIRCLED LATIN SMALL LETTER K; kcircle
 16259 \DeclareTextCompositeCommand{\textcircled}{PU}{k}{\9044\332}% U+24DA
 16260 % U+24DB CIRCLED LATIN SMALL LETTER L; lcircle
 16261 \DeclareTextCompositeCommand{\textcircled}{PU}{l}{\9044\333}% U+24DB
 16262 % U+24DC CIRCLED LATIN SMALL LETTER M; mcircle
 16263 \DeclareTextCompositeCommand{\textcircled}{PU}{m}{\9044\334}% U+24DC
 16264 % U+24DD CIRCLED LATIN SMALL LETTER N; ncircle
 16265 \DeclareTextCompositeCommand{\textcircled}{PU}{n}{\9044\335}% U+24DD
 16266 % U+24DE CIRCLED LATIN SMALL LETTER O; ocircle
 16267 \DeclareTextCompositeCommand{\textcircled}{PU}{o}{\9044\336}% U+24DE
 16268 % U+24DF CIRCLED LATIN SMALL LETTER P; pcircle
 16269 \DeclareTextCompositeCommand{\textcircled}{PU}{p}{\9044\337}% U+24DF
 16270 % U+24E0 CIRCLED LATIN SMALL LETTER Q; qcircle
 16271 \DeclareTextCompositeCommand{\textcircled}{PU}{q}{\9044\340}% U+24E0
 16272 % U+24E1 CIRCLED LATIN SMALL LETTER R; rcircle
 16273 \DeclareTextCompositeCommand{\textcircled}{PU}{r}{\9044\341}% U+24E1
 16274 % U+24E2 CIRCLED LATIN SMALL LETTER S; scircle
 16275 \DeclareTextCompositeCommand{\textcircled}{PU}{s}{\9044\342}% U+24E2
 16276 % U+24E3 CIRCLED LATIN SMALL LETTER T; tcircle
 16277 \DeclareTextCompositeCommand{\textcircled}{PU}{t}{\9044\343}% U+24E3
 16278 % U+24E4 CIRCLED LATIN SMALL LETTER U; ucircle

16279 \DeclareTextCompositeCommand{\textcircled}{PU}{u}{\9044\344}% U+24E4
 16280 % U+24E5 CIRCLED LATIN SMALL LETTER V; vcircle
 16281 \DeclareTextCompositeCommand{\textcircled}{PU}{v}{\9044\345}% U+24E5
 16282 % U+24E6 CIRCLED LATIN SMALL LETTER W; wcircle
 16283 \DeclareTextCompositeCommand{\textcircled}{PU}{w}{\9044\346}% U+24E6
 16284 % U+24E7 CIRCLED LATIN SMALL LETTER X; xcircle
 16285 \DeclareTextCompositeCommand{\textcircled}{PU}{x}{\9044\347}% U+24E7
 16286 % U+24E8 CIRCLED LATIN SMALL LETTER Y; ycircle
 16287 \DeclareTextCompositeCommand{\textcircled}{PU}{y}{\9044\350}% U+24E8
 16288 % U+24E9 CIRCLED LATIN SMALL LETTER Z; zcircle
 16289 \DeclareTextCompositeCommand{\textcircled}{PU}{z}{\9044\351}% U+24E9
 16290 % U+24EA CIRCLED DIGIT ZERO
 16291 \DeclareTextCompositeCommand{\textcircled}{PU}{0}{\9044\352}% U+24EA

50.2.21 Box Drawing: U+2500 to U+257F

16292 % U+25E6 WHITE BULLET; *openbullet, whitebullet
 16293 \DeclareTextCommand{\textopenbullet}{PU}{\9045\346}% U+25E6
 16294 % U+25EF LARGE CIRCLE; largecircle
 16295 \DeclareTextCommand{\textbigcircle}{PU}{\9045\357}% U+25EF

50.2.22 Miscellaneous Symbols: U+2600 to U+26FF

16296 % U+266A EIGHTH NOTE; musicalnote
 16297 \DeclareTextCommand{\textmusicalnote}{PU}{\9046\152}% U+266A
 16298 % U+26AD MARRIAGE SYMBOL
 16299 \DeclareTextCommand{\textmarried}{PU}{\9046\255}% U+26AD
 16300 % U+26AE DIVORCE SYMBOL
 16301 \DeclareTextCommand{\textdivorced}{PU}{\9046\256}% U+26AE

50.2.23 Miscellaneous Mathematical Symbols-A: U+27C0 to U+27EF

16302 % U+27E6 MATHEMATICAL LEFT WHITE SQUARE BRACKET
 16303 \DeclareTextCommand{\textlbrackdbl}{PU}{\9047\346}% U+27E6
 16304 % U+27E7 MATHEMATICAL RIGHT WHITE SQUARE BRACKET
 16305 \DeclareTextCommand{\textrbrackdbl}{PU}{\9047\347}% U+27E7

50.2.24 Alphabetic Presentation Forms: U+FB00 to U+FB4F

16306 % U+FB01 LATIN SMALL LIGATURE FI; fi
 16307 \DeclareTextCommand{\textfi}{PU}{\9373\001}% U+FB01
 16308 % U+FB02 LATIN SMALL LIGATURE FL; fl
 16309 \DeclareTextCommand{\textfl}{PU}{\9373\002}% U+FB02

50.2.25 Miscellaneous

16310 \DeclareTextCommand{\SS}{PU}{SS}

50.2.26 Aliases

Aliases (german.sty)

16311 \DeclareTextCommand{\textglqq}{PU}{\quotedblbase}
 16312 \DeclareTextCommand{\textgrqq}{PU}{\textquotedblleft}
 16313 \DeclareTextCommand{\textglq}{PU}{\quotesinglbase}
 16314 \DeclareTextCommand{\textgrq}{PU}{\textquoteleft}
 16315 \DeclareTextCommand{\textflqq}{PU}{\guillemotleft}
 16316 \DeclareTextCommand{\textfrqq}{PU}{\guillemotright}
 16317 \DeclareTextCommand{\textflq}{PU}{\guilsinglleft}
 16318 \DeclareTextCommand{\textfrq}{PU}{\guilsinglright}

Aliases (math names)

16319 \DeclareTextCommand{\textneg}{PU}{\textlogicalnot}
 16320 \DeclareTextCommand{\texttimes}{PU}{\textmultiply}

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16321 \DeclareTextCommand{\textdiv}{PU}{\textdivide}
16322 \DeclareTextCommand{\textpm}{PU}{\textplusminus}
16323 \DeclareTextCommand{\textcdot}{PU}{\textperiodcentered}
16324 \puenc)

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50.3 PU encoding, additions for VnTeX

This file is provided by Han The Thanh.

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16325 (*puvnenc)

16326 \DeclareTextCommand{\abreve}{PU}{\81\003}
16327 \DeclareTextCommand{\acircumflex}{PU}{\80\342}
16328 \DeclareTextCommand{\dj}{PU}{\81\021}
16329 \DeclareTextCommand{\ecircumflex}{PU}{\80\352}
16330 \DeclareTextCommand{\ocircumflex}{PU}{\80\364}
16331 \DeclareTextCommand{\ohorn}{PU}{\81\241}
16332 \DeclareTextCommand{\uhorn}{PU}{\81\260}
16333 \DeclareTextCommand{\ABREVE}{PU}{\81\002}
16334 \DeclareTextCommand{\ACIRCUMFLEX}{PU}{\80\302}
16335 \DeclareTextCommand{\DJ}{PU}{\81\020}
16336 \DeclareTextCommand{\ECIRCUMFLEX}{PU}{\80\312}
16337 \DeclareTextCommand{\OCIRCUMFLEX}{PU}{\80\324}
16338 \DeclareTextCommand{\OHORN}{PU}{\81\240}
16339 \DeclareTextCommand{\UHORN}{PU}{\81\257}

16340 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\341}
16341 \DeclareTextCompositeCommand{\d}{PU}{a}{\9036\241}
16342 \DeclareTextCompositeCommand{\'}{PU}{a}{\80\340}
16343 \DeclareTextCompositeCommand{\h}{PU}{a}{\9036\243}
16344 \DeclareTextCompositeCommand{\~}{PU}{a}{\80\343}
16345 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\257}
16346 \DeclareTextCompositeCommand{\d}{PU}{\abreve}{\9036\267}
16347 \DeclareTextCompositeCommand{\'}{PU}{\abreve}{\9036\261}
16348 \DeclareTextCompositeCommand{\h}{PU}{\abreve}{\9036\263}
16349 \DeclareTextCompositeCommand{\~}{PU}{\abreve}{\9036\265}
16350 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\245}
16351 \DeclareTextCompositeCommand{\d}{PU}{\acircumflex}{\9036\255}
16352 \DeclareTextCompositeCommand{\'}{PU}{\acircumflex}{\9036\247}
16353 \DeclareTextCompositeCommand{\h}{PU}{\acircumflex}{\9036\251}
16354 \DeclareTextCompositeCommand{\~}{PU}{\acircumflex}{\9036\253}
16355 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\351}
16356 \DeclareTextCompositeCommand{\d}{PU}{e}{\9036\271}
16357 \DeclareTextCompositeCommand{\'}{PU}{e}{\80\350}
16358 \DeclareTextCompositeCommand{\h}{PU}{e}{\9036\273}
16359 \DeclareTextCompositeCommand{\~}{PU}{e}{\9036\275}
16360 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\277}
16361 \DeclareTextCompositeCommand{\d}{PU}{\ecircumflex}{\9036\307}
16362 \DeclareTextCompositeCommand{\'}{PU}{\ecircumflex}{\9036\301}
16363 \DeclareTextCompositeCommand{\h}{PU}{\ecircumflex}{\9036\303}
16364 \DeclareTextCompositeCommand{\~}{PU}{\ecircumflex}{\9036\305}
16365 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\355}
16366 \DeclareTextCompositeCommand{\d}{PU}{i}{\9036\313}
16367 \DeclareTextCompositeCommand{\'}{PU}{i}{\80\354}
16368 \DeclareTextCompositeCommand{\h}{PU}{i}{\9036\311}
16369 \DeclareTextCompositeCommand{\~}{PU}{i}{\81\051}
16370 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\363}
16371 \DeclareTextCompositeCommand{\d}{PU}{o}{\9036\315}
16372 \DeclareTextCompositeCommand{\'}{PU}{o}{\80\362}

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16458 \DeclareTextCompositeCommand{\h}{PU}{Y}{\9036\366}
16459 \DeclareTextCompositeCommand{\~}{PU}{Y}{\9036\370}
16460 </puvnenc>

```

50.4 PU encoding, additions for Arabi

This file is provided and maintained by Youssef Jabri.

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16461 <*puarenc>
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TER HAMZA
16463 \DeclareTextCommand{\alefmadda}{PU}{\86\042}% 0622;afii57410;ARABIC LET-
TER ALEF WITH MADDA ABOVE
16464 \DeclareTextCommand{\alefhamza}{PU}{\86\043}% 0623;afii57411;ARABIC LET-
TER ALEF WITH HAMZA ABOVE
16465 \DeclareTextCommand{\wawhamza}{PU}{\86\044}% 0624;afii57412;ARABIC LET-
TER WAW WITH HAMZA ABOVE
16466 \DeclareTextCommand{\aleflowerhamza}{PU}{\86\045}% 0625;afii57413;ARABIC LET-
TER ALEF WITH HAMZA BELOW
16467 \DeclareTextCommand{\yahamza}{PU}{\86\046}% 0626;afii57414;ARABIC LET-
TER YEH WITH HAMZA ABOVE
16468 \DeclareTextCommand{\alef}{PU}{\86\047}% 0627;afii57415;ARABIC LETTER ALEF
16469 \DeclareTextCommand{\baa}{PU}{\86\050}% 0628;afii57416;ARABIC LETTER BEH
16470 \DeclareTextCommand{\T}{PU}{\86\051}% 0629;afii57417;ARABIC LETTER TEH MARBUTA
16471 \DeclareTextCommand{\taa}{PU}{\86\052}% 062A;afii57418;ARABIC LETTER TEH
16472 \DeclareTextCommand{\thaa}{PU}{\86\053}% 062B;afii57419;ARABIC LET-
TER THEH
16473 \DeclareTextCommand{\jeem}{PU}{\86\054}% 062C;afii57420;ARABIC LET-
TER JEEM

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16474 \DeclareTextCommand{\Haa}{PU}{\86\055}% 062D;afii57421;ARABIC LETTER HAH
16475 \DeclareTextCommand{\kha}{PU}{\86\056}% 062E;afii57422;ARABIC LETTER KHAH
16476 \DeclareTextCommand{\dal}{PU}{\86\057}% 062F;afii57423;ARABIC LETTER DAL
16477 \DeclareTextCommand{\dhal}{PU}{\86\060}% 0630;afii57424;ARABIC LETTER THAL
16478 \DeclareTextCommand{\ra}{PU}{\86\061}% 0631;afii57425;ARABIC LETTER REH
16479 \DeclareTextCommand{\zay}{PU}{\86\062}% 0632;afii57426;ARABIC LETTER ZAIN
16480 \DeclareTextCommand{\seen}{PU}{\86\063}% 0633;afii57427;ARABIC LETTER SEEN
16481 \DeclareTextCommand{\sheen}{PU}{\86\064}% 0634;afii57428;ARABIC LET-
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16482 \DeclareTextCommand{\sad}{PU}{\86\065}% 0635;afii57429;ARABIC LETTER SAD
16483 \DeclareTextCommand{\dad}{PU}{\86\066}% 0636;afii57430;ARABIC LETTER DAD
16484 \DeclareTextCommand{\Ta}{PU}{\86\067}% 0637;afii57431;ARABIC LETTER TAH
16485 \DeclareTextCommand{\za}{PU}{\86\070}% 0638;afii57432;ARABIC LETTER ZAH
16486 \DeclareTextCommand{\ayn}{PU}{\86\071}% 0639;afii57433;ARABIC LETTER AIN
16487 \DeclareTextCommand{\ghayn}{PU}{\86\072}% 063A;afii57434;ARABIC LET-
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16488 \DeclareTextCommand{\tatweel}{PU}{\86\100}% 0640;afii57440;ARABIC TATWEEL
16489 \DeclareTextCommand{\fa}{PU}{\86\101}% 0641;afii57441;ARABIC LETTER FEH
16490 \DeclareTextCommand{\qaf}{PU}{\86\102}% 0642;afii57442;ARABIC LETTER QAF
16491 \DeclareTextCommand{\kaf}{PU}{\86\103}% 0643;afii57443;ARABIC LETTER KAF
16492 \DeclareTextCommand{\lam}{PU}{\86\104}% 0644;afii57444;ARABIC LETTER LAM
16493 \DeclareTextCommand{\meem}{PU}{\86\105}% 0645;afii57445;ARABIC LET-
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16494 \DeclareTextCommand{\nun}{PU}{\86\106}% 0646;afii57446;ARABIC LETTER NOON
16495 \DeclareTextCommand{\ha}{PU}{\86\107}% 0647;afii57470;ARABIC LETTER HEH
16496 \DeclareTextCommand{\waw}{PU}{\86\110}% 0648;afii57448;ARABIC LETTER WAW
16497 \DeclareTextCommand{\alefmaqsura}{PU}{\86\111}% 0649;afii57449;ARABIC LET-
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16499 \DeclareTextCommand{\nasb}{PU}{\86\113}% 064B;afii57451;ARABIC FATHATAN
16500 \DeclareTextCommand{\raff}{PU}{\86\114}% 064C;afii57452;ARABIC DAMMATAN
16501 \DeclareTextCommand{\jarr}{PU}{\86\115}% 064D;afii57453;ARABIC KASRATAN
16502 \DeclareTextCommand{\fatha}{PU}{\86\116}% 064E;afii57454;ARABIC FATHA
16503 \DeclareTextCommand{\damma}{PU}{\86\117}% 064F;afii57455;ARABIC DAMMA
16504 \DeclareTextCommand{\kasra}{PU}{\86\120}% 0650;afii57456;ARABIC KASRA
16505 \DeclareTextCommand{\shadda}{PU}{\86\121}% 0651;afii57457;ARABIC SHADDA
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16509 \DeclareTextCommand{\jeh}{PU}{\86\230}% 0698;afii57508;ARABIC LETTER JEH
16510 \DeclareTextCommand{\farsikaf}{PU}{\86\251}% 06A9???;afii????;FARSI LET-
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16511 \DeclareTextCommand{\gaf}{PU}{\86\257}% 06AF;afii57509;ARABIC LETTER GAF
16512 \DeclareTextCommand{\farsiya}{PU}{\86\314}% 06CC;afii????;FARSI LET-
TER YEH

16513 \DeclareTextCommand{\ZWNJ}{PU}{\9040\014}% 200C;ZWNJ%
16514 \DeclareTextCommand{\noboundary}{PU}{\86\325}% 200D;ZWJ
16515 \langle/puarenc\rangle

51 End of file hycheck.tex

16516 \langle*check\rangle

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16517 \typeout{}  
16518 \begin{document}  
16519 \end{document}  
16520 \</check>
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