

# The pdfrender package

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## Abstract

The PDF format has some graphics parameter like line width or text rendering mode. This package provides an interface for setting these parameters.

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\*Please report any issues at <https://github.com/ho-tex/oberdiek/issues>

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## 1 Documentation

This package `pdfrender` defines an interface for PDF specific parameters that affects the rendering of graphics or text. The interface and its implementation uses the same technique as package `color` for color settings. Therefore this package is loaded to enable L<sup>A</sup>T<sub>E</sub>X's color interface.

At different places L<sup>A</sup>T<sub>E</sub>X uses `\normalcolor` to avoid that header, footer or floats are print in the current color of the main text. `\setgroup@color` is used to start a save box with the color that is set at box saving time. Package `pdfrender` extends these macros to add its own hooks of its parameters. Therefore L<sup>A</sup>T<sub>E</sub>X<sub>3</sub> should generalize L<sup>A</sup>T<sub>E</sub>X<sub>2<sub>ε</sub></sub>'s color interface.

### 1.1 Usage

In L<sup>A</sup>T<sub>E</sub>X the package is loaded as normal package. Options are not defined for this package.

```
\usepackage{pdfrender}
```

This package can also be used in plain T<sub>E</sub>X and even iniT<sub>E</sub>X:

```
input pdfrender.sty
```

### 1.2 Macros

`\pdfrender {⟨key value list⟩}`

The first parameter *⟨key value list⟩* contains a list of parameter settings. The key entry is the parameter name. The macro works like `\color` (without optional argument) for color setting.

`\textpdfrender {⟨key value list⟩} {⟨text⟩}`

In the same way as `\pdfrender` the first argument specifies the parameters that should be set. This parameter setting affects *⟨text⟩* only. Basically it works the same way as `\textcolor` (without optional argument).

### 1.3 Parameters

The following table shows an overview for the supported parameters and values:

Parameter	Value	Alias
TextRenderingMode	0	Fill
	1	Stroke
	2	FillStroke
	3	Invisible
	4	FillClip
	5	StrokeClip
	6	FillStrokeClip
	7	Clip
LineWidth	<i>positive number, unit is bp</i>	<i>TEX dimen</i>
LineCapStyle	0	Butt
	1	Round
	2	ProjectingSquare
LineJoinStyle	0	Miter
	1	Round
	2	Bevel
MiterLimit	<i>positive number</i>	
Flatness	<i>number between 0 and 100</i>	
LineDashPattern	<i>numbers in square brackets, followed by number, units are bp</i>	
RenderingIntent	AbsoluteColorimetric RelativeColorimetric Saturation Perceptual	
FillColor		<i>color specification</i>
StrokeColor		<i>color specification</i>

### 1.3.1 Details

The description and specification of these parameters are available in the PDF specification [1]. Therefore they are not repeated here.

**Value:** The values in the second column lists or describe the values that are specified by the PDF specification.

**Alias:** Instead of magic numbers the package also defines some aliases that can be given as value. Example: `LineCapStyle=Round` has the same effect as `LineCapStyle=1`.

**Number:** The term *number* means an integer or real number. The real number is given as plain decimal number without exponent. The decimal separator is a period. At least one digit must be present.

**LineWidth:** As alias a `TEX dimen` specification can be given. This includes explicit specifications with number and unit, e.g. `LineWidth=0.5pt`. Also `LATEX` length registers may be used. If `ε-TEX`'s `\dimexpr` is available, then it is automatically added. However package `calc` is not supported.

**FillColor, StrokeColor:** Package `color` or `xcolor` must be loaded before these options can be used (since version 1.2). `LATEX`'s color support sets both colors at the same time to the same value. However parameter `TextRenderingMode` offers the value `FillStroke` that makes only sense, if the two color types can

be set separately. If one of the options `FillColor` or `StrokeColor` is specified, then also the color is set. For compatibility with the  $\LaTeX$  color packages (`color` or `xcolor`), always both colors must be set. Thus if one of them is not specified, it is taken from the current color.

Both options `FillColor` and `StrokeColor` expect a  $\LaTeX$  color specification as value. Also the optional color model argument is supported. Example:

```
FillColor=yellow,
StrokeColor=[cmymk]{1,.5,0,0}
```

## 1.4 Color stack

If the `pdf $\TeX$`  version provides color stacks, then each parameter is assigned a page based color stack. The assignment of a stack takes place, when its parameter is set the first time. This avoids the use of color stacks that are not needed.

## 2 Implementation

```
1 \langle *package \rangle
```

Reload check, especially if the package is not used with  $\LaTeX$ .

```
2 \begingroup\catcode61\catcode48\catcode32=10\relax%
3 \catcode13=5 % ^^M
4 \endlinechar=13 %
5 \catcode35=6 % #
6 \catcode39=12 % '
7 \catcode44=12 % ,
8 \catcode45=12 % -
9 \catcode46=12 % .
10 \catcode58=12 % :
11 \catcode64=11 % @
12 \catcode123=1 % {
13 \catcode125=2 % }
14 \expandafter\let\expandafter\x\csname ver@pdfrender.sty\endcsname
15 \ifx\x\relax % plain-TeX, first loading
16 \else
17 \def\empty{}%
18 \ifx\x\empty % LaTeX, first loading,
19 % variable is initialized, but \ProvidesPackage not yet seen
20 \else
21 \expandafter\ifx\csname PackageInfo\endcsname\relax
22 \def\x#1#2{%
23 \immediate\write-1{Package #1 Info: #2.}%
24 }%
25 \else
26 \def\x#1#2{\PackageInfo{#1}{#2, stopped}}%
27 \fi
28 \x{pdfrender}{The package is already loaded}%
29 \aftergroup\endinput
30 \fi
31 \fi
32 \endgroup%
```

Package identification:

```
33 \begingroup\catcode61\catcode48\catcode32=10\relax%
34 \catcode13=5 % ^^M
35 \endlinechar=13 %
36 \catcode35=6 % #
37 \catcode39=12 % '
38 \catcode40=12 % (
39 \catcode41=12 % )
```

```

40 \catcode44=12 % ,
41 \catcode45=12 % -
42 \catcode46=12 % .
43 \catcode47=12 % /
44 \catcode58=12 % :
45 \catcode64=11 % @
46 \catcode91=12 % [
47 \catcode93=12 % ]
48 \catcode123=1 % {
49 \catcode125=2 % }
50 \expandafter\ifx\csname ProvidesPackage\endcsname\relax
51   \def\x#1#2#3[#4]{\endgroup
52     \immediate\write-1{Package: #3 #4}%
53     \xdef#1{#4}%
54   }%
55 \else
56   \def\x#1#2[#3]{\endgroup
57     #2[#{#3}]%
58     \ifx#1\@undefined
59       \xdef#1{#3}%
60     \fi
61     \ifx#1\relax
62       \xdef#1{#3}%
63     \fi
64   }%
65 \fi
66 \expandafter\x\csname ver@pdfrender.sty\endcsname
67 \ProvidesPackage{pdfrender}%
68 [2016/05/17 v1.4 Access to some PDF graphics parameters (HO)]%
69 \begingroup\catcode61\catcode48\catcode32=10\relax%
70 \catcode13=5 % ^^M
71 \endlinechar=13 %
72 \catcode123=1 % {
73 \catcode125=2 % }
74 \catcode64=11 % @
75 \def\x{\endgroup
76   \expandafter\edef\csname PdfRender@AtEnd\endcsname{%
77     \endlinechar=\the\endlinechar\relax
78     \catcode13=\the\catcode13\relax
79     \catcode32=\the\catcode32\relax
80     \catcode35=\the\catcode35\relax
81     \catcode61=\the\catcode61\relax
82     \catcode64=\the\catcode64\relax
83     \catcode123=\the\catcode123\relax
84     \catcode125=\the\catcode125\relax
85   }%
86 }%
87 \x\catcode61\catcode48\catcode32=10\relax%
88 \catcode13=5 % ^^M
89 \endlinechar=13 %
90 \catcode35=6 % #
91 \catcode64=11 % @
92 \catcode123=1 % {
93 \catcode125=2 % }
94 \def\TMP@EnsureCode#1#2{%
95   \edef\PdfRender@AtEnd{%
96     \PdfRender@AtEnd
97     \catcode#1=\the\catcode#1\relax
98   }%
99   \catcode#1=#2\relax
100 }
101 \TMP@EnsureCode{10}{12}% ^^J

```

```

102 \TMP@EnsureCode{36}{3}% $
103 \TMP@EnsureCode{39}{12}% '
104 \TMP@EnsureCode{40}{12}% (
105 \TMP@EnsureCode{41}{12}% )
106 \TMP@EnsureCode{42}{12}% *
107 \TMP@EnsureCode{43}{12}% +
108 \TMP@EnsureCode{44}{12}% ,
109 \TMP@EnsureCode{45}{12}% -
110 \TMP@EnsureCode{46}{12}% .
111 \TMP@EnsureCode{47}{12}% /
112 \TMP@EnsureCode{58}{12}% :
113 \TMP@EnsureCode{59}{12}% ;
114 \TMP@EnsureCode{60}{12}% <
115 \TMP@EnsureCode{62}{12}% >
116 \TMP@EnsureCode{63}{12}% ?
117 \TMP@EnsureCode{91}{12}% [
118 \TMP@EnsureCode{93}{12}% ]
119 \TMP@EnsureCode{94}{7}% ^ (superscript)
120 \TMP@EnsureCode{96}{12}% `
121 \TMP@EnsureCode{124}{12}% |

122 \def\PdfRender@AtEndHook{}
123 \expandafter\def\expandafter\PdfRender@AtEnd\expandafter{%
124 \expandafter\PdfRender@AtEndHook
125 \PdfRender@AtEnd
126 \endinput
127 }

```

## 2.1 Look for pdfTeX, its mode and features

\PdfRender@newif

```

128 \def\PdfRender@newif#1{%
129 \expandafter\edef\csname PdfRender@#1true\endcsname{%
130 \let
131 \expandafter\noexpand\csname ifPdfRender@#1\endcsname
132 \noexpand\iftrue
133 }%
134 \expandafter\edef\csname PdfRender@#1false\endcsname{%
135 \let
136 \expandafter\noexpand\csname ifPdfRender@#1\endcsname
137 \noexpand\iffalse
138 }%
139 \csname PdfRender@#1false\endcsname
140 }

```

\ifPdfRender@Stack

```
141 \PdfRender@newif{Stack}
```

\ifPdfRender@Match

```
142 \PdfRender@newif{Match}
```

\PdfRender@RequirePackage

```

143 \begingroup\expandafter\expandafter\expandafter\endgroup
144 \expandafter\ifx\csname RequirePackage\endcsname\relax
145 \def\PdfRender@RequirePackage#1[#2]{%
146 \expandafter\def\expandafter\PdfRender@AtEndHook\expandafter{%
147 \PdfRender@AtEndHook
148 \ltx@ifpackagelater{#1}{#2}{-}{%
149 \@PackageWarningNoLine{pdfrender}{%
150 You have requested version\MessageBreak
151 `#2' of package `#1',\MessageBreak
152 but only version\MessageBreak
153 ` \csname ver@#1.\ltx@pkgextension\endcsname'\MessageBreak

```

```

154     is available%
155   }%
156 }%
157 }%
158 \input #1.sty\relax
159 }%
160 \else
161 \let\PdfRender@RequirePackage\RequirePackage
162 \fi

```

#### Luatex compatibility

```

163 \ifx\pdfextension\@undefined\else
164 \PdfRender@RequirePackage{luatex85}[2016/01/01]
165 \fi

166 \PdfRender@RequirePackage{ifpdf}[2010/01/28]
167 \PdfRender@RequirePackage{infwarerr}[2007/09/09]
168 \PdfRender@RequirePackage{txcmds}[2010/01/28]

169 \ifpdf
170 \ltx@ifundefined{pdfcolorstackinit}{%
171   \@PackageWarning{pdfrender}{%
172     Missing \string\pdfcolorstackinit
173   }%
174 }{%
175   \PdfRender@Stacktrue
176 }%
177 \ltx@ifundefined{pdfmatch}{%
178   \@PackageInfoNoLine{pdfrender}{%
179     \string\pdfmatch\ltx@space not found. %
180     Therefore the values\MessageBreak
181     of some parameters are not validated%
182   }%
183 }{%
184   \PdfRender@Matchtrue
185 }%
186 \else
187 \@PackageWarning{pdfrender}{%
188   Missing pdfTeX in PDF mode%
189 }%
190 \ltx@ifundefined{newcommand}{%

\pdfrender
191 \def\pdfrender#1{%

\textpdfrender
192 \long\def\textpdfrender#1#2{#2}%

193 }{%

\pdfrender
194 \newcommand*\pdfrender[1]{%

\textpdfrender
195 \newcommand{\textpdfrender}[2]{#2}%

196 }%
197 \expandafter\PdfRender@AtEnd
198 \fi%

```

## 2.2 Enable color support of L<sup>A</sup>T<sub>E</sub>X

```
199 \ltx@ifpackageloaded{color}{-}{-%
200 \def\color@setgroup{\begingroup\set@color}%
201 \let\color@begingroup\begingroup
202 \def\color@endgroup{\endgraf\endgroup}%
203 \def\color@hbox{\hbox\bgroup\color@begingroup}%
204 \def\color@vbox{\vbox\bgroup\color@begingroup}%
205 \def\color@endbox{\color@endgroup\egroup}%
206 \ltx@ifundefined{bgroup}{-%
207 \let\bgroup={\let\egroup=}-%
208 }{}-%
209 \ltx@ifundefined{endgraf}{-%
210 \let\endgraf=\par
211 }{}-%
212 }
```

## 2.3 Hook into \normalcolor

The problem is that packages `color` and `xcolor` each overwrite `\normalcolor`. For example, after the package loading order `color`, `pdfrender` and `xcolor` the patched version of `\normalcolor` is overwritten by package `xcolor`. Also using `\AtBeginDocument` for patching is not enough. If package `hyperref` is loaded later, it might load package `color` using `\AtBeginDocument`.

```
\PdfRender@NormalColorHook
213 \def\PdfRender@NormalColorHook{}

\PdfRender@ColorSetGroupHook
214 \def\PdfRender@ColorSetGroupHook{}

\PdfRender@TestBox
215 \def\PdfRender@TestBox#1{-%
216 \setbox0=\color@hbox#1\color@endbox
217 }

\PdfRender@PatchNormalColor
218 \def\PdfRender@PatchNormalColor{%
219 \ltx@ifundefined{normalcolor}{-%
220 \gdef\normalcolor{\PdfRender@NormalColorHook}%
221 }-%
222 \begingroup
223 \def\PdfRender@NormalColorHook{\let\PdfRender@temp=Y}%
224 \PdfRender@TestBox{%
225 \let\set@color\relax
226 \normalcolor
227 \ifx\PdfRender@temp Y%
228 \else
229 \ltx@GlobalAppendToMacro\normalcolor{%
230 \PdfRender@NormalColorHook
231 }%
232 \fi
233 }%
234 \endgroup
235 }%
236 \ifx\@nodocument\relax
237 \global\let\PdfRender@PatchNormalColor\relax
238 \fi
239 }%

\PdfRender@PatchColorSetGroup
240 \def\PdfRender@PatchColorSetGroup{%
241 \begingroup
```

```

242 \def\PdfRender@ColorSetGroupHook{\let\PdfRender@temp=Y}%
243 \PdfRender@TestBox{%
244 \let\set@color\relax
245 \color@setgroup\color@endgroup
246 \ifx\PdfRender@temp Y%
247 \else
248 \ltx@GlobalAppendToMacro\color@setgroup{%
249 \PdfRender@ColorSetGroupHook
250 }%
251 \fi
252 }%
253 \endgroup
254 \ifx\@nodocument\relax
255 \global\let\PdfRender@PatchColorSetGroup\relax
256 \fi
257 }%

```

\PdfRender@PatchColor

```

258 \def\PdfRender@PatchColor{%
259 \PdfRender@PatchNormalColor
260 \PdfRender@PatchColorSetGroup
261 }

262 \PdfRender@PatchColor
263 \ltx@ifundefined{AtBeginDocument}{-}{%
264 \AtBeginDocument{\PdfRender@PatchColor}%
265 }

```

\AfterPackage is provided by package scrfile.

```

266 \ltx@ifundefined{AfterPackage}{-%
267 }{%
268 \AfterPackage{color}{\PdfRender@PatchColor}%
269 \AfterPackage{xcolor}{\PdfRender@PatchColor}%
270 \AfterPackage{etoolbox}{-%
271 \AfterEndPreamble{\PdfRender@PatchColor}%
272 }%
273 }%

```

\AfterEndPreamble is provided by package etoolbox.

```

274 \ltx@ifundefined{AfterEndPreamble}{-%
275 }{%
276 \AfterEndPreamble{\PdfRender@PatchColor}%
277 }%

278 \PdfRender@RequirePackage{kvsetkeys}[2010/01/28]

```

\PdfRender@texorpdfstring

```

279 \def\PdfRender@texorpdfstring{%
280 \ltx@ifundefined{texorpdfstring}\ltx@firstoftwo\texorpdfstring
281 }

```

\pdfrender

```

282 \ltx@ifundefined{DeclareRobustCommand}%
283 \ltx@firstoftwo\ltx@secondoftwo
284 {%
285 \def\pdfrender#1%
286 }{%
287 \newcommand{\pdfrender}{-}%
288 \DeclareRobustCommand*{\pdfrender}[1]%
289 }%
290 {%
291 \PdfRender@texorpdfstring{%
292 \PdfRender@PatchNormalColor
293 \global\let\PdfRender@FillColor\ltx@empty

```

```

294 \global\let\PdfRender@StrokeColor\ltx@empty
295 \kvsetkeys{PDFRENDER}{#1}%
296 \PdfRender@SetColor
297 }{}%
298 }

```

\textpdfrender

```

299 \ltx@ifundefined{DeclareRobustCommand}%
300 \ltx@firstoftwo\ltx@secondoftwo
301 {%
302 \long\def\textpdfrender#1#2%
303 }{%
304 \newcommand{\textpdfrender}{}%
305 \DeclareRobustCommand{\textpdfrender}[2]%
306 }%
307 {%
308 \PdfRender@texorpdfstring{%
309 \begingroup
310 \pdfrender{#1}%
311 #2%
312 \endgroup
313 }{#2}%
314 }

```

\ifPdfRender@Values

```

315 \PdfRender@newif{Values}

```

\PdfRender@NewClassValues

```

316 \def\PdfRender@NewClassValues#1#2#3#4{%
317 \PdfRender@Valuestrue
318 \PdfRender@NewClass{#1}{#2}{#3}{#4}{}%
319 }

```

\PdfRender@NewClass

```

320 \def\PdfRender@NewClass#1#2#3#4#5{%
321 \PdfRender@newif{Active#1}%
322 \expandafter\def\csname PdfRender@Default#1\endcsname{#2}%
323 \expandafter\let\csname PdfRender@Current#1\endcsname
324 \csname PdfRender@Default#1\endcsname
325 \ifPdfRender@Stack
326 \expandafter\edef\csname PdfRender@Init#1\endcsname{%
327 \global\chardef
328 \expandafter\noexpand\csname PdfRender@Stack#1\endcsname=%
329 \noexpand\pdfcolorstackinit page direct{%
330 \noexpand#3%
331 \expandafter\noexpand\csname PdfRender@Default#1\endcsname
332 }\relax
333 \noexpand\@PackageInfo{pdfrender}{%
334 New color stack `#1' = \noexpand\number
335 \expandafter\noexpand\csname PdfRender@Stack#1\endcsname
336 }%
337 \gdef\expandafter\noexpand\csname PdfRender@Init#1\endcsname{}%
338 }%
339 \expandafter\edef\csname PdfRender@Set#1\endcsname{%
340 \expandafter\noexpand\csname PdfRender@Init#1\endcsname
341 \noexpand\pdfcolorstack
342 \expandafter\noexpand\csname PdfRender@Stack#1\endcsname
343 push{%
344 #3{\expandafter\noexpand\csname PdfRender@Current#1\endcsname}%
345 }%
346 \noexpand\aftergroup
347 \expandafter\noexpand\csname PdfRender@Reset#1\endcsname

```

```

348 }%
349 \expandafter\edef\csname PdfRender@Reset#1\endcsname{%
350   \expandafter\noexpand\csname PdfRender@Init#1\endcsname
351   \noexpand\pdfcolorstack
352   \expandafter\noexpand\csname PdfRender@Stack#1\endcsname
353   pop\relax
354 }%
355 \else
356 \expandafter\edef\csname PdfRender@Set#1\endcsname{%
357   \noexpand\pdfliteral direct{%
358     #3{\expandafter\noexpand\csname PdfRender@Current#1\endcsname}%
359   }%
360   \noexpand\aftergroup
361   \expandafter\noexpand\csname PdfRender@Reset#1\endcsname
362 }%
363 \expandafter\edef\csname PdfRender@Reset#1\endcsname{%
364   \noexpand\pdfliteral direct{%
365     #3{\expandafter\noexpand\csname PdfRender@Current#1\endcsname}%
366   }%
367 }%
368 \fi
369 \expandafter\edef\csname PdfRender@Normal#1\endcsname{%
370   \let
371   \expandafter\noexpand\csname PdfRender@Current#1\endcsname
372   \expandafter\noexpand\csname PdfRender@Default#1\endcsname
373   \noexpand\PdfRender@Set{#1}%
374 }%
375 \expandafter\ltx@GlobalAppendToMacro\expandafter\PdfRender@NormalCol-
orHook
376 \expandafter{%
377   \csname PdfRender@Normal#1\endcsname
378 }%
379 \ltx@GlobalAppendToMacro\PdfRender@ColorSetGroupHook{%
380   \PdfRender@Set{#1}%
381 }%
382 \ifPdfRender@Values
383   \kv@parse@normalized{#4}{%
384     \expandafter\let\csname PdfRender@#1@\kv@key\endcsname\kv@key
385     \ifx\kv@value\relax
386     \else
387       \expandafter\let\csname PdfRender@#1@\kv@value\endcsname\kv@key
388     \fi
389     \ltx@gobbletwo
390   }%
391   \PdfRender@define@key{PDFRENDER}{#1}{%
392     \global\csname PdfRender@Active#1true\endcsname
393     \def\PdfRender@Current{##1}%
394     \PdfRender@SetValidateValues{#1}%
395   }%
396   \PdfRender@Valuesfalse
397 \else
398   \PdfRender@define@key{PDFRENDER}{#1}{%
399     \global\csname PdfRender@Active#1true\endcsname
400     \expandafter\def\csname PdfRender@Current#1\endcsname{##1}%
401     \ltx@ifundefined{PdfRender@PostProcess#1}{%
402       }{%
403         \csname PdfRender@PostProcess#1\endcsname
404       }%
405     \PdfRender@SetValidate{#1}{#4}{#5}%
406   }%
407 \fi
408 }%

```

\PdfRender@define@key

```
409 \ltx@ifundefined{define@key}{%
410 \def\PdfRender@define@key#1#2{%
411 \expandafter\def\csname KV@#1@#2\endcsname##1%
412 }%
413 }{%
414 \let\PdfRender@define@key\define@key
415 }
```

\PdfRender@Set

```
416 \def\PdfRender@Set#1{%
417 \csname ifPdfRender@Active#1\endcsname
418 \csname PdfRender@Set#1\expandafter\endcsname
419 \fi
420 }
```

\PdfRender@Reset

```
421 \def\PdfRender@Reset#1{%
422 \csname ifPdfRender@Active#1\endcsname
423 \csname PdfRender@Reset#1\expandafter\endcsname
424 \fi
425 }
```

\PdfRender@ErrorInvalidValue

```
426 \def\PdfRender@ErrorInvalidValue#1{%
427 \PackageError{pdfrender}{%
428 Ignoring parameter setting for `#1'\MessageBreak
429 because of invalid value %
430 \csname PdfRender@Current#1\endcsname'%
431 } \@ehc
432 \expandafter\let\csname PdfRender@Current#1\endcsname\ltx@empty
433 }%
```

\PdfRender@SetValidate

```
434 \ifPdfRender@Match
435 \def\PdfRender@SetValidate#1#2#3{%
436 \ifnum\pdfmatch{^(#2)$}\csname PdfRender@Current#1\endcsname}=1 %
437 \csname PdfRender@Set#1\expandafter\endcsname
438 \else
439 \PdfRender@ErrorInvalidValue{#1}%
440 \fi
441 }%
442 \else
443 \def\PdfRender@SetValidate#1#2#3{%
444 \expandafter\let\expandafter\PdfRender@Current
445 \csname PdfRender@Current#1\endcsname
446 #3%
447 \ifx\PdfRender@Current\@empty
448 \PdfRender@ErrorInvalidValue{#1}%
449 \else
450 \csname PdfRender@Set#1\expandafter\endcsname
451 \fi
452 }%
453 \fi
```

\PdfRender@SetValidateValues

```
454 \def\PdfRender@SetValidateValues#1{%
455 \ltx@ifundefined{PdfRender@#1@\PdfRender@Current}{%
456 \expandafter\let\csname PdfRender@Current#1\endcsname
457 \PdfRender@Current
458 \PdfRender@ErrorInvalidValue{#1}%
459 }{%
```

```

460 \expandafter\edef\csname PdfRender@Current#1\endcsname{%
461 \csname PdfRender@#1@\PdfRender@Current\endcsname
462 }%
463 \csname PdfRender@Set#1\endcsname
464 }%
465 }

```

\PdfRender@OpValue

```
466 \def\PdfRender@OpValue#1#2{#2\ltx@space#1}%
```

\PdfRender@OpName

```
467 \def\PdfRender@OpName#1#2{/#2\ltx@space#1}%
```

## 2.4 Declare and setup parameters

```

468 \PdfRender@NewClassValues{TextRenderingMode}%
469         {0}%
470         {\PdfRender@OpValue{Tr}}{%
471 0=Fill,%
472 1=Stroke,%
473 2=FillStroke,%
474 3=Invisible,%
475 4=FillClip,%
476 5=StrokeClip,%
477 6=FillStrokeClip,%
478 7=Clip,%
479 }%
480 \PdfRender@NewClass{LineWidth}{1}{\PdfRender@OpValue{w}}{%
481 [0-9]+\string\.[0-9]*|\string\.[0-9]+%
482 }{%
483 \ltx@ifundefined{dimexpr}{%
484 \def\PdfRender@dimexpr{}%
485 }{%
486 \let\PdfRender@dimexpr\dimexpr
487 }
488 \def\PdfRender@PostProcessLineWidth{%
489 \begingroup
490 \afterassignment\PdfRender@@PostProcessLineWidth
491 \dimen0=\PdfRender@dimexpr\PdfRender@CurrentLineWidth bp %
492 \PdfRender@let\PdfRender@relax\PdfRender@relax
493 }
494 \let\PdfRender@let\let
495 \let\PdfRender@relax\relax
496 \def\PdfRender@@PostProcessLineWidth#1\PdfRender@let{%
497 \ifx\#1\%
498 \endgroup
499 \else
500 \dimen0=.996264\dimen0 % 72/72.27
501 \edef\x{\endgroup
502 \def\noexpand\PdfRender@CurrentLineWidth{%
503 \strip@pt\dimen0%
504 }%
505 }%
506 \expandafter\x
507 \fi
508 }
509 \PdfRender@NewClassValues{LineCapStyle}{0}{\PdfRender@OpValue{J}}{%
510 0=Butt,%
511 1=Round,%
512 2=ProjectingSquare,%
513 }%
514 \PdfRender@NewClassValues{LineJoinStyle}{0}{\PdfRender@OpValue{j}}{%

```

```

515 0=Miter,%
516 1=Round,%
517 2=Bevel,%
518 }%
519 \PdfRender@NewClass{MiterLimit}{10}{\PdfRender@OpValue{M}}{%
520 [0-9]*[1-9][0-9]*\string\.[0-9]*|}%
521 [0-9]*\string\.[0-9]*[1-9][0-9]*%
522 }{}%
523 \PdfRender@NewClass{Flatness}{0}{\PdfRender@OpValue{i}}{%
524 100(\string\.[0-9]*| [0-9][0-9](\string\.[0-9]*)?|\string\.[0-9]+)%
525 }{}%
526 \PdfRender@NewClass{LineDashPattern}{[]}{\PdfRender@OpValue{d}}{%
527 \string\[%
528 ( ?([0-9]+\string\.[0-9]*|\string\.[0-9]+) ?)*%
529 \string\] ?%
530 ([0-9]+\string\.[0-9]*|\string\.[0-9]+)%
531 }{}%
532 \PdfRender@NewClassValues{RenderingIntent}%
533     {RelativeColorimetric}%
534     {\PdfRender@OpName{ri}}{%
535 AbsoluteColorimetric,%
536 RelativeColorimetric,%
537 Saturation,%
538 Perceptual,%
539 }%

```

## 2.5 Fill and stroke color support

```

540 \PdfRender@define@key{PDFRENDER}{FillColor}{%
541 \begingroup
542 \def\PdfRender@Color{#1}%
543 \ifx\PdfRender@Color\ltx@empty
544 \global\let\PdfRender@FillColor\ltx@empty
545 \else
546 \PdfRender@ColorAvailable{%
547 \PdfRender@TestBox{%
548 \expandafter\PdfRender@TryColor\PdfRender@Color\ltx@empty
549 \PdfRender@GetFillColor
550 \ifx\PdfRender@FillColor\ltx@empty
551 \@PackageWarning{pdfrender}{%
552 Cannot extract fill color\MessageBreak
553 from value `#1'%
554 }%
555 \fi
556 }%
557 }%
558 \fi
559 \endgroup
560 }
561 \PdfRender@define@key{PDFRENDER}{StrokeColor}{%
562 \begingroup
563 \def\PdfRender@Color{#1}%
564 \ifx\PdfRender@Color\ltx@empty
565 \global\let\PdfRender@StrokeColor\ltx@empty
566 \else
567 \PdfRender@ColorAvailable{%
568 \PdfRender@TestBox{%
569 \expandafter\PdfRender@TryColor\PdfRender@Color\ltx@empty
570 \PdfRender@GetStrokeColor
571 \ifx\PdfRender@StrokeColor\ltx@empty
572 \@PackageWarning{pdfrender}{%
573 Cannot extract stroke color\MessageBreak
574 from value `#1'%

```

```

575     }%
576     \fi
577     }%
578     }%
579     \fi
580 \endgroup
581 }

```

\PdfRender@ColorAvailable

```

582 \def\PdfRender@ColorAvailable{%
583 \@ifundefined{set@color}{%
584 \@PackageError{pdfrender}{%
585 Ignoring color options, because neither\MessageBreak
586 package `color' nor package `xcolor' is loaded%
587 }\@ehc
588 \global\let\PdfRender@ColorAvailable\tx@gobble
589 }{%
590 \global\let\PdfRender@ColorAvailable\tx@firstofone
591 }%
592 \PdfRender@ColorAvailable
593 }

```

\PdfRender@TryColor

```

594 \def\PdfRender@TryColor{%
595 \@ifnextchar[\color\PdfRender@@TryColor
596 }

```

\PdfRender@@TryColor

```

597 \def\PdfRender@@TryColor#1\tx@empty{%
598 \expandafter\color\expandafter{\PdfRender@Color}%
599 }

```

\PdfRender@SetColor

```

600 \def\PdfRender@SetColor{%
601 \chardef\PdfRender@NeedsCurrentColor=0 %
602 \ifx\PdfRender@FillColor\tx@empty
603 \ifx\PdfRender@StrokeColor\tx@empty
604 \else
605 \edef\PdfRender@CurrentColor{%
606 \noexpand\PdfRender@FillColor\tx@space\PdfRender@StrokeColor
607 }%
608 \chardef\PdfRender@NeedsCurrentColor=1 %
609 \fi
610 \else
611 \ifx\PdfRender@StrokeColor\tx@empty
612 \edef\PdfRender@CurrentColor{%
613 \PdfRender@FillColor\tx@space\noexpand\PdfRender@StrokeColor
614 }%
615 \chardef\PdfRender@NeedsCurrentColor=2 %
616 \else
617 \edef\current@color{%
618 \PdfRender@FillColor\tx@space\PdfRender@StrokeColor
619 }%
620 \set@color
621 \fi
622 \fi
623 \ifnum\PdfRender@NeedsCurrentColor=1 %
624 \PdfRender@GetFillColor
625 \ifx\PdfRender@FillColor\tx@empty
626 \@PackageWarning{pdfrender}{%
627 Cannot extract current fill color%
628 }%
629 \else

```

```

630   \edef\current@color{\PdfRender@CurrentColor}%
631   \set@color
632   \fi
633 \else
634   \ifnum\PdfRender@NeedsCurrentColor=2 %
635     \PdfRender@GetStrokeColor
636     \ifx\PdfRender@StrokeColor\ltx@empty
637       \@PackageWarning{pdfrender}{%
638         Cannot extract current stroke color%
639       }%
640     \else
641       \edef\current@color{\PdfRender@CurrentColor}%
642       \set@color
643     \fi
644   \fi
645 \fi
646 }

```

\PdfRender@PatternFillColor

```

647 \edef\PdfRender@PatternFillColor{ % space
648 (%
649 [0-9\string\.] + g |%
650 [0-9\string\.] + [0-9\string\.] + [0-9\string\.] + rg |%
651 [0-9\string\.] + [0-9\string\.] + %
652 [0-9\string\.] + [0-9\string\.] + k%
653 ) % space
654 (.*)$%
655 }

```

\PdfRender@PatternStrokeColor

```

656 \edef\PdfRender@PatternStrokeColor{ % space
657 (%
658 [0-9\string\.] + G |%
659 [0-9\string\.] + [0-9\string\.] + [0-9\string\.] + RG |%
660 [0-9\string\.] + [0-9\string\.] + %
661 [0-9\string\.] + [0-9\string\.] + K%
662 ) % space
663 (.*)$%
664 }

```

\PdfRender@MatchPattern

```

665 \def\PdfRender@MatchPattern#1{%
666   \ifnum\pdfmatch{\PdfRender@Pattern}{\PdfRender@String}=1 %
667     \xdef#1{%
668       \expandafter\strip@prefix\pdfastmatch 1%
669     }%
670     \edef\PdfRender@String{%
671       \expandafter\strip@prefix\pdfastmatch 2%
672     }%
673     \ifx\PdfRender@String\ltx@empty
674     \else
675       \expandafter\expandafter\expandafter\PdfRender@MatchPattern
676       \expandafter\expandafter\expandafter#1%
677     \fi
678   \fi
679 }

```

\PdfRender@GetFillColor

```

680 \def\PdfRender@GetFillColor{%
681   \global\let\PdfRender@FillColor\ltx@empty
682   \begingroup
683   \ifPdfRender@Match

```

```

684 \let\PdfRender@Pattern\PdfRender@PatternFillColor
685 \edef\PdfRender@String{\ltx@space\current@color\ltx@space}%
686 \PdfRender@MatchPattern\PdfRender@FillColor
687 \else
688 \edef\current@color{\current@color\ltx@space}%
689 \let\PdfRender@OP\relax
690 \PdfRender@FindOp{g}0%
691 \PdfRender@FindOp{G}1%
692 \PdfRender@FindOp{rg}0%
693 \PdfRender@FindOp{RG}1%
694 \PdfRender@FindOp{k}0%
695 \PdfRender@FindOp{K}1%
696 \PdfRender@FilterOp 0\PdfRender@FillColor
697 \fi
698 \endgroup
699 }

```

\PdfRender@GetStrokeColor

```

700 \def\PdfRender@GetStrokeColor{%
701 \global\let\PdfRender@StrokeColor\ltx@empty
702 \begingroup
703 \ifPdfRender@Match
704 \let\PdfRender@Pattern\PdfRender@PatternStrokeColor
705 \edef\PdfRender@String{\ltx@space\current@color\ltx@space}%
706 \PdfRender@MatchPattern\PdfRender@StrokeColor
707 \else
708 \edef\current@color{\current@color\ltx@space}%
709 \let\PdfRender@OP\relax
710 \PdfRender@FindOp{g}0%
711 \PdfRender@FindOp{G}1%
712 \PdfRender@FindOp{rg}0%
713 \PdfRender@FindOp{RG}1%
714 \PdfRender@FindOp{k}0%
715 \PdfRender@FindOp{K}1%
716 \PdfRender@FilterOp 1\PdfRender@StrokeColor
717 \fi
718 \endgroup
719 }

720 \ifPdfRender@Match
721 \expandafter\PdfRender@AtEnd
722 \fi%

```

\PdfRender@FindOp

```

723 \def\PdfRender@FindOp#1#2{%
724 \def\PdfRender@temp##1 #1 ##2\@nil{%
725 ##1%
726 \ifx\##2\%
727 \expandafter\@gobble
728 \else
729 \PdfRender@OP{#1}##2%
730 \expandafter\@firstofone
731 \fi
732 {%
733 \PdfRender@temp##2\@nil
734 }%
735 }%
736 \edef\current@color{%
737 \@firstofone{\expandafter\PdfRender@temp\current@color} #1 \@nil
738 }%
739 }

```

\PdfRender@FilterOp

```

740 \def\PdfRender@FilterOp#1#2{%
741   \expandafter\PdfRender@@FilterOp\expandafter#1\expandafter#2%
742     \current@color\PdfRender@OP-{}-{}%
743 }

```

\PdfRender@@FilterOp

```

744 \def\PdfRender@@FilterOp#1#2#3\PdfRender@OP#4#5{%
745   \ifx\#4#5\%
746   \else
747     \ifnum#1=#5 %
748       \xdef#2{#3 #4}%
749     \fi
750   \expandafter\PdfRender@@FilterOp\expandafter#1\expandafter#2%
751   \fi
752 }

```

```

753 \PdfRender@AtEnd%
754 \</package>

```

## 3 Test

### 3.1 Catcode checks for loading

```

755 \<test1>
756 \catcode`\{=1 %
757 \catcode`\}=2 %
758 \catcode`\#=6 %
759 \catcode`\@=11 %
760 \expandafter\ifx\csname count@\endcsname\relax
761   \countdef\count@=255 %
762 \fi
763 \expandafter\ifx\csname @gobble\endcsname\relax
764   \long\def\@gobble#1{}%
765 \fi
766 \expandafter\ifx\csname @firstofone\endcsname\relax
767   \long\def\@firstofone#1{#1}%
768 \fi
769 \expandafter\ifx\csname loop\endcsname\relax
770   \expandafter\@firstofone
771 \else
772   \expandafter\@gobble
773 \fi
774 {%
775   \def\loop#1\repeat{%
776     \def\body{#1}%
777     \iterate
778   }%
779   \def\iterate{%
780     \body
781     \let\next\iterate
782   \else
783     \let\next\relax
784   \fi
785   \next
786 }%
787 \let\repeat=\fi
788 }%
789 \def\RestoreCatcodes{}
790 \count@=0 %
791 \loop
792   \edef\RestoreCatcodes{%
793     \RestoreCatcodes

```

```

794 \catcode\the\count@=\the\catcode\count@\relax
795 }%
796 \ifnum\count@<255 %
797 \advance\count@ 1 %
798 \repeat
799
800 \def\RangeCatcodeInvalid#1#2{%
801 \count@=#1\relax
802 \loop
803 \catcode\count@=15 %
804 \ifnum\count@<#2\relax
805 \advance\count@ 1 %
806 \repeat
807 }
808 \def\RangeCatcodeCheck#1#2#3{%
809 \count@=#1\relax
810 \loop
811 \ifnum#3=\catcode\count@
812 \else
813 \errmessage{%
814 Character \the\count@\space
815 with wrong catcode \the\catcode\count@\space
816 instead of \number#3%
817 }%
818 \fi
819 \ifnum\count@<#2\relax
820 \advance\count@ 1 %
821 \repeat
822 }
823 \def\space{ }
824 \expandafter\ifx\csname LoadCommand\endcsname\relax
825 \def\LoadCommand{\input pdfrender.sty\relax}%
826 \fi
827 \def\Test{%
828 \RangeCatcodeInvalid{0}{47}%
829 \RangeCatcodeInvalid{58}{64}%
830 \RangeCatcodeInvalid{91}{96}%
831 \RangeCatcodeInvalid{123}{255}%
832 \catcode`\@=12 %
833 \catcode`\=0 %
834 \catcode`\%=14 %
835 \LoadCommand
836 \RangeCatcodeCheck{0}{36}{15}%
837 \RangeCatcodeCheck{37}{37}{14}%
838 \RangeCatcodeCheck{38}{47}{15}%
839 \RangeCatcodeCheck{48}{57}{12}%
840 \RangeCatcodeCheck{58}{63}{15}%
841 \RangeCatcodeCheck{64}{64}{12}%
842 \RangeCatcodeCheck{65}{90}{11}%
843 \RangeCatcodeCheck{91}{91}{15}%
844 \RangeCatcodeCheck{92}{92}{0}%
845 \RangeCatcodeCheck{93}{96}{15}%
846 \RangeCatcodeCheck{97}{122}{11}%
847 \RangeCatcodeCheck{123}{255}{15}%
848 \RestoreCatcodes
849 }
850 \Test
851 \csname @@end\endcsname
852 \end
853 </test1>

```

### 3.2 Simple test file

```

854 <*test2>
855 \NeedsTeXFormat{LaTeX2e}
856 \ProvidesFile{pdfrender-test2.tex}[2016/05/17]
857 \documentclass{article}
858 \usepackage{color}
859 \usepackage{pdfrender}[2016/05/17]
860 \begin{document}
861 Hello World
862 \newpage
863 Start
864 \textpdfrender{%
865   TextRenderingMode=1,%
866   LineWidth=.1,%
867   LineCapStyle=2,%
868   LineJoinStyle=1,%
869   MiterLimit=1.2,%
870   LineDashPattern=[2 2]0,%
871   RenderingIntent=Saturation,%
872 }{Hello\newpage World}
873 Stop
874 \par
875 \newlength{\LineWidth}
876 \setlength{\LineWidth}{.5pt}
877 Start
878 \textpdfrender{%
879   FillColor=yellow,%
880   StrokeColor=[cmyk]{1,.5,0,0},%
881   TextRenderingMode=FillStroke,%
882   LineWidth=.5\LineWidth,%
883   LineCapStyle=Round,%
884   LineJoinStyle=Bevel,%
885 }{Out-\par\newpage line}
886 Stop
887 \end{document}
888 </test2>

```

### 3.3 Further tests

Robustness and bookmarks.

```

889 <*test3>
890 \NeedsTeXFormat{LaTeX2e}
891 \ProvidesFile{pdfrender-test3.tex}[2016/05/17]
892 \documentclass{article}
893 \usepackage{pdfrender}[2016/05/17]
894 \usepackage{hyperref}
895 \usepackage{bookmark}
896 \begin{document}
897 \tableofcontents
898 \section{%
899   \textpdfrender{%
900     TextRenderingMode=1,%
901     LineCapStyle=2,%
902     LineJoinStyle=1,%
903     MiterLimit=1.2,%
904     LineDashPattern=[2 2]0,%
905     RenderingIntent=Saturation,%
906   }{Hello World}%
907 }
908 \end{document}
909 </test3>

```

Color algorithm if `\pdfmatch` is not available.

```

910 <*test4>

```

```

911 \NeedsTeXFormat{LaTeX2e}
912 \ProvidesFile{pdfrender-test4.tex}[2016/05/17]
913 \documentclass[12pt]{article}
914 \usepackage{pdfrender}[2016/05/17]
915 \usepackage{color}
916 \usepackage{qstest}
917 \IncludeTests{*}
918 \LogTests{log}{*}{*}
919 \makeatletter
920 \newcommand*{\CheckColor}[1]{%
921   \Expect{#1}*\current@color}%
922 }
923 \makeatother
924 \begin{document}
925 \begin{qstest}{color}{color}%
926   \CheckColor{0 g 0 G}%
927   \Huge\bfseries
928   \noindent
929   \textpdfrender{%
930     TextRenderingMode=2,%
931     LineWidth=.5,%
932     FillColor=yellow,%
933     StrokeColor=blue,%
934   }{%
935     \CheckColor{0 0 1 0 k 0 0 1 RG}%
936     Blue(Yellow)\%
937     \textpdfrender{%
938       FillColor=green,%
939     }{%
940       \CheckColor{0 1 0 rg 0 0 1 RG}%
941       Blue(Green)%
942     }\%
943     \CheckColor{0 0 1 0 k 0 0 1 RG}%
944     Blue(Yellow)\%
945     \textpdfrender{%
946       StrokeColor=red,%
947     }{%
948       \CheckColor{0 0 1 0 k 1 0 0 RG}%
949       Red(Yellow)%
950     }\%
951     \CheckColor{0 0 1 0 k 0 0 1 RG}%
952     Blue(Yellow) %
953   }%
954 \end{qstest}%
955 \begin{qstest}{colorlast}{colorlast}%
956   \makeatletter
957   \def\Test#1#2#3{%
958     \begingroup
959     \def\current@color{#1}%
960     \textpdfrender{#2}{%
961       \CheckColor{#3}%
962     }%
963     \endgroup
964   }%
965   \Test{1 g 0 0 1 RG 0 0 1 0 k 0.5 G}%
966     {StrokeColor=green}%
967     {0 0 1 0 k 0 1 0 RG}%
968   \Test{1 g 0 0 1 RG 0 0 1 0 k 0.5 G}%
969     {FillColor=red}%
970     {1 0 0 rg 0.5 G}%
971 \end{qstest}%
972 \end{document}

```

973  $\langle$ /test4 $\rangle$

### 3.4 Compatibility with plain T<sub>E</sub>X

```
974  $\langle$ *test5 $\rangle$ 
975 \input luatex85.sty
976 \pdfoutput=1 %
977 \hsize=6.5in
978 \vsize=8.9in
979 \pdfpagewidth=\hsize
980 \pdfpageheight=\vsize
981 \parfillskip=0pt plus 1fil\relax
982 \input pdfrender.sty\relax
983 \catcode`\{=1 %
984 \catcode`\}=2 %
985 \let\OrgMakeFootLine\makefootline
986 \def\makefootline{%
987   \begingroup\normalcolor\OrgMakeFootLine\endgroup
988 }
989 \font\f=ec-lmr10 scaled 3000\relax
990 \f
991 Before %
992 \textpdfrender{%
993   TextRenderingMode=1,%
994   LineWidth=.1,%
995 }{Hello\par\vfill\penalty-10000 World} %
996 After %
997 \par
998 \vfill
999 \penalty-10000 %
1000 \csname @@end\endcsname\end
1001  $\langle$ /test5 $\rangle$ 
```

## 4 Installation

### 4.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

[CTAN:macros/latex/contrib/oberdiek/pdfrender.dtx](http://ctan.org/pkg/pdfrender) The source file.

[CTAN:macros/latex/contrib/oberdiek/pdfrender.pdf](http://ctan.org/pkg/pdfrender) Documentation.

**Bundle.** All the packages of the bundle ‘oberdiek’ are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

[CTAN:install/macros/latex/contrib/oberdiek.tds.zip](http://ctan.org/pkg/pdfrender)

*TDS* refers to the standard “A Directory Structure for T<sub>E</sub>X Files” ([CTAN:tds/tds.pdf](http://ctan.org/pkg/ttds)). Directories with `texmf` in their name are usually organized this way.

### 4.2 Bundle installation

**Unpacking.** Unpack the `oberdiek.tds.zip` in the TDS tree (also known as `texmf` tree) of your choice. Example (linux):

```
unzip oberdiek.tds.zip -d ~/texmf
```

---

<sup>1</sup><http://ctan.org/pkg/pdfrender>

**Script installation.** Check the directory TDS:scripts/oberdiek/ for scripts that need further installation steps. Package `attachfile2` comes with the Perl script `pdfatfi.pl` that should be installed in such a way that it can be called as `pdfatfi`. Example (linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

### 4.3 Package installation

**Unpacking.** The `.dtx` file is a self-extracting docstrip archive. The files are extracted by running the `.dtx` through plain  $\TeX$ :

```
tex pdfrender.dtx
```

**TDS.** Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

```
pdfrender.sty      → tex/generic/oberdiek/pdfrender.sty
pdfrender.pdf      → doc/latex/oberdiek/pdfrender.pdf
test/pdfrender-test1.tex → doc/latex/oberdiek/test/pdfrender-test1.tex
test/pdfrender-test2.tex → doc/latex/oberdiek/test/pdfrender-test2.tex
test/pdfrender-test3.tex → doc/latex/oberdiek/test/pdfrender-test3.tex
test/pdfrender-test4.tex → doc/latex/oberdiek/test/pdfrender-test4.tex
test/pdfrender-test5.tex → doc/latex/oberdiek/test/pdfrender-test5.tex
pdfrender.dtx      → source/latex/oberdiek/pdfrender.dtx
```

If you have a `docstrip.cfg` that configures and enables `docstrip`'s TDS installing feature, then some files can already be in the right place, see the documentation of `docstrip`.

### 4.4 Refresh file name databases

If your  $\TeX$  distribution (`te $\TeX$` , `mik $\TeX$` , ...) relies on file name databases, you must refresh these. For example, `te $\TeX$`  users run `texhash` or `mktexlsr`.

### 4.5 Some details for the interested

**Unpacking with  $\LaTeX$ .** The `.dtx` chooses its action depending on the format:

**plain  $\TeX$ :** Run `docstrip` and extract the files.

**$\LaTeX$ :** Generate the documentation.

If you insist on using  $\LaTeX$  for `docstrip` (really, `docstrip` does not need  $\LaTeX$ ), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{pdfrender.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

**Generating the documentation.** You can use both the `.dtx` or the `.drv` to generate the documentation. The process can be configured by the configuration file `ltxdoc.cfg`. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with `pdf $\LaTeX$` :

```
pdflatex pdfrenderer.dtx
makeindex -s gind.ist pdfrenderer.idx
pdflatex pdfrenderer.dtx
makeindex -s gind.ist pdfrenderer.idx
pdflatex pdfrenderer.dtx
```

## 5 Catalogue

The following XML file can be used as source for the [T<sub>E</sub>X Catalogue](#). The elements `caption` and `description` are imported from the original XML file from the Catalogue. The name of the XML file in the Catalogue is `pdfrenderer.xml`.

```
1002 <*catalogue>
1003 <?xml version='1.0' encoding='us-ascii'?>
1004 <!DOCTYPE entry SYSTEM 'catalogue.dtd'>
1005 <entry datestamp='$Date$' modifier='$Author$' id='pdfrenderer'>
1006 <name>pdfrenderer</name>
1007 <caption>Control rendering parameters.</caption>
1008 <authorref id='auth:oberdiek'>/>
1009 <copyright owner='Heiko Oberdiek' year='2010'>/>
1010 <license type='lppl1.3'>/>
1011 <version number='1.4'>/>
1012 <description>
1013   The package provides interfaces for the user to control PDF
1014   parameters, such as line width or text rendering mode. The
1015   control operations work in a manner very similar to that of the
1016   <xref refid='color'>color</xref> package.
1017 <p/>
1018   The package is part of the <xref refid='oberdiek'>oberdiek</xref> bundle.
1019 </description>
1020 <documentation details='Package documentation'
1021   href='ctan:/macros/latex/contrib/oberdiek/pdfrenderer.pdf'>/>
1022 <ctan file='true' path='/macros/latex/contrib/oberdiek/pdfrenderer.dtx'>/>
1023 <miktex location='oberdiek'>/>
1024 <texlive location='oberdiek'>/>
1025 <install path='/macros/latex/contrib/oberdiek/oberdiek.tds.zip'>/>
1026 </entry>
1027 </catalogue>
```

## 6 Acknowledgement

**Friedrich Vosberg** asked in the newsgroup `de.comp.text.tex` for the font outline feature [2].

**Gaius Pupus** proposed the basic method using `\pdfliteral` in this thread [3].

**Rolf Niepraschk** added color support [4].

## 7 References

- [1] Adobe Systems Incorporated. *PDF Reference – Adobe Portable Document format – Version 1.7*. 6th ed. 2006. URL: [http://www.adobe.com/devnet/acrobat/pdfs/pdf\\_reference\\_1-7.pdf](http://www.adobe.com/devnet/acrobat/pdfs/pdf_reference_1-7.pdf).
- [2] Friedrich Vosberg, *Text in Buchstabenumrissen*, `de.comp.text.tex`, 2010-01-22. URL: <http://groups.google.com/group/de.comp.text.tex/msg/f442310ac8b2d506>.
- [3] Gaius Pupus, *Re: Text in Buchstabenumrissen*, `de.comp.text.tex`, 2010-01-23. URL: <http://groups.google.com/group/de.comp.text.tex/msg/95d890d77ac47eb1>.

- [4] Rolf Niepraschk, *Re: Text in Buchstabenumrissen*, de.comp.text.tex, 2010-01-24. URL: <http://groups.google.com/group/de.comp.text.tex/msg/4eb61a5879db54db>.

## 8 History

### [2010/01/26 v1.0]

- The first version.

### [2010/01/27 v1.1]

- Macros `\pdfrender` and `\textpdfrender` are made robust.
- Color extraction rewritten for the case that `\pdfmatch` is not available. This fixes wrong color assignments in case of nesting.
- Color extraction of case `\pdfmatch` is fixed for the case that the color string contains several fill or several stroke operations.

### [2010/01/28 v1.2]

- Dependency from package `color` is removed.
- Compatibility for plain `TEX` and even `iniTEX` added.

### [2016/05/14 v1.3]

- Use package `luatex85` for compatibility with new `LuaTEX`.

### [2016/05/17 v1.4]

- Documentation updates.
- adjust `luatex85` reference so that it works in plain `TeX`.

## 9 Index

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