

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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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^AT_EX's color interface.

At different places L^AT_EX 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^AT_EX3 should generalize L^AT_EX 2_ε's color interface.

1.1 Usage

In L^AT_EX 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_EX and even iniT_EX:

```
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>T_EX dimen</i>
LineCapStyle	0	Butt
	1	Round
	2	ProjectingSquare

Parameter	Value	Alias
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 $\varepsilon\text{-}\text{\TeX}$'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=[cmyk]{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 (*package)
```

Reload check, especially if the package is not used with L^AT_EX.

```
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  [2010/01/28 v1.2 Access to some PDF graphics parameters (H0)]%
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

163 \PdfRender@RequirePackage{ifpdf}[2010/01/28]
164 \PdfRender@RequirePackage{infwarerr}[2007/09/09]
165 \PdfRender@RequirePackage{ltxcmds}[2010/01/28]

166 \ifpdf
167   \ltx@ifundefined{pdfcolorstackinit}{%
168     \@PackageWarning{pdfrender}{%
169       Missing \string\pdfcolorstackinit
170     }%
171   }%

```

```

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

\pdfrender

188     \def\pdfrender#1{%

\textpdfrender

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

190 }{%

\pdfrender

191     \newcommand*\pdfrender}[1]{}%

\textpdfrender

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

193 }%
194 \expandafter\PdfRender@AtEnd
195 \fi%
```

2.2 Enable color support of L^AT_EX

```

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

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
```

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

```

\PdfRender@ColorSetGroupHook
211 \def\PdfRender@ColorSetGroupHook{}

\PdfRender@TestBox
212 \def\PdfRender@TestBox#1{%
213   \setbox0=\color@hbox#1\color@endbox
214 }

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

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

\PdfRender@PatchColor
255 \def\PdfRender@PatchColor{%
256   \PdfRender@PatchNormalColor
257   \PdfRender@PatchColorSetGroup
258 }

259 \PdfRender@PatchColor
260 \ltx@ifundefined{AtBeginDocument}{}{}%
261 \AtBeginDocument{\PdfRender@PatchColor}%
262 }

```



```

\AfterPackage is provided by package scrfile.
263 \ltx@ifundefined{AfterPackage}{%
264 }{%
265   \AfterPackage{color}{\PdfRender@PatchColor}%
266   \AfterPackage{xcolor}{\PdfRender@PatchColor}%
267   \AfterPackage{etoolbox}{%
268     \AfterEndPreamble{\PdfRender@PatchColor}%
269   }%
270 }%

\AfterEndPreamble is provided by package etoolbox.
271 \ltx@ifundefined{AfterEndPreamble}{%
272 }{%
273   \AfterEndPreamble{\PdfRender@PatchColor}%
274 }%

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

```

\PdfRender@texorpdfstring

```

276 \def\PdfRender@texorpdfstring{%
277   \ltx@ifundefined{texorpdfstring}\ltx@firstoftwo\texorpdfstring
278 }

```

\pdfrender

```

279 \ltx@ifundefined{DeclareRobustCommand}%
280 \ltx@firstoftwo\ltx@secondoftwo
281 {%
282   \def\pdfrender#1%
283 }{%
284   \newcommand{\pdfrender}{}%
285   \DeclareRobustCommand*\pdfrender[1]%
286 }%
287 {%
288   \PdfRender@texorpdfstring{%
289     \PdfRender@PatchNormalColor
290     \global\let\PdfRender@FillColor\ltx@empty
291     \global\let\PdfRender@StrokeColor\ltx@empty
292     \kvsetkeys{PDFRENDER}{#1}%
293     \PdfRender@SetColor
294   }{}%
295 }

```

\textpdfrender

```

296 \ltx@ifundefined{DeclareRobustCommand}%
297 \ltx@firstoftwo\ltx@secondoftwo
298 {%
299   \long\def\textpdfrender#1#2%
300 }{%
301   \newcommand{\textpdfrender}{}%
302   \DeclareRobustCommand{\textpdfrender}[2]%
303 }%
304 {%
305   \PdfRender@texorpdfstring{%
306     \begingroup
307       \pdfrender{#1}%
308       #2%
309     \endgroup
310   }{#2}%
311 }

```

\ifPdfRender@Values

```

312 \PdfRender@newif{Values}

```

\PdfRender@NewClassValues

```
313 \def\PdfRender@NewClassValues#1#2#3#4{%  
314   \PdfRender@Valuestrue  
315   \PdfRender@NewClass{#1}{#2}{#3}{#4}{}%  
316 }
```

\PdfRender@NewClass

```
317 \def\PdfRender@NewClass#1#2#3#4#5{%  
318   \PdfRender@newif{Active#1}%  
319   \expandafter\def\csname PdfRender@Default#1\endcsname{#2}%  
320   \expandafter\let\csname PdfRender@Current#1\expandafter\endcsname  
321     \csname PdfRender@Default#1\endcsname  
322   \ifPdfRender@Stack  
323     \expandafter\edef\csname PdfRender@Init#1\endcsname{%  
324       \global\chardef  
325       \expandafter\noexpand\csname PdfRender@Stack#1\endcsname=%  
326         \noexpand\pdfcolorstackinit page direct{%  
327           \noexpand#3%  
328           \expandafter\noexpand\csname PdfRender@Default#1\endcsname  
329         }\relax  
330       \noexpand\@PackageInfo{pdfrender}{%  
331         New color stack '#1' = \noexpand\number  
332         \expandafter\noexpand\csname PdfRender@Stack#1\endcsname  
333       }%  
334       \gdef\expandafter\noexpand\csname PdfRender@Init#1\endcsname{%}%  
335     }%  
336     \expandafter\edef\csname PdfRender@Set#1\endcsname{%  
337       \expandafter\noexpand\csname PdfRender@Init#1\endcsname  
338       \noexpand\pdfcolorstack  
339       \expandafter\noexpand\csname PdfRender@Stack#1\endcsname  
340       push{%  
341         #3{\expandafter\noexpand\csname PdfRender@Current#1\endcsname}%  
342       }%  
343       \noexpand\aftergroup  
344       \expandafter\noexpand\csname PdfRender@Reset#1\endcsname  
345     }%  
346     \expandafter\edef\csname PdfRender@Reset#1\endcsname{%  
347       \expandafter\noexpand\csname PdfRender@Init#1\endcsname  
348       \noexpand\pdfcolorstack  
349       \expandafter\noexpand\csname PdfRender@Stack#1\endcsname  
350       pop\relax  
351     }%  
352   \else  
353     \expandafter\edef\csname PdfRender@Set#1\endcsname{%  
354       \noexpand\pdfliteral direct{%  
355         #3{\expandafter\noexpand\csname PdfRender@Current#1\endcsname}%  
356       }%  
357       \noexpand\aftergroup  
358       \expandafter\noexpand\csname PdfRender@Reset#1\endcsname  
359     }%  
360     \expandafter\edef\csname PdfRender@Reset#1\endcsname{%  
361       \noexpand\pdfliteral direct{%  
362         #3{\expandafter\noexpand\csname PdfRender@Current#1\endcsname}%  
363       }%  
364     }%  
365   \fi  
366   \expandafter\edef\csname PdfRender@Normal#1\endcsname{%  
367     \let  
368     \expandafter\noexpand\csname PdfRender@Current#1\endcsname  
369     \expandafter\noexpand\csname PdfRender@Default#1\endcsname  
370     \noexpand\PdfRender@Set{#1}%  
371   }%
```

```

372 \expandafter\ltx@GlobalAppendToMacro\expandafter\PdfRender@NormalColorHook
373 \expandafter{%
374   \csname PdfRender@Normal#1\endcsname
375 }%
376 \ltx@GlobalAppendToMacro\PdfRender@ColorSetGroupHook{%
377   \PdfRender@Set{#1}%
378 }%
379 \ifPdfRender@Values
380   \kv@parse@normalized{#4}{%
381     \expandafter\let\csname PdfRender@#1\kv@key\endcsname\kv@key
382     \ifx\kv@value\relax
383       \else
384         \expandafter\let\csname PdfRender@#1\kv@value\endcsname\kv@key
385       \fi
386     \ltx@gobbletwo
387   }%
388   \PdfRender@define@key{PDFRENDER}{#1}{%
389     \global\csname PdfRender@Active#1true\endcsname
390     \def\PdfRender@Current{##1}%
391     \PdfRender@SetValidateValues{#1}%
392   }%
393   \PdfRender@Valuesfalse
394 \else
395   \PdfRender@define@key{PDFRENDER}{#1}{%
396     \global\csname PdfRender@Active#1true\endcsname
397     \expandafter\def\csname PdfRender@Current#1\endcsname{##1}%
398     \ltx@ifundefined{PdfRender@PostProcess#1}{%
399       }{%
400         \csname PdfRender@PostProcess#1\endcsname
401       }%
402     \PdfRender@SetValidate{#1}{#4}{#5}%
403   }%
404 \fi
405 }%

```

\PdfRender@define@key

```

406 \ltx@ifundefined{define@key}{%
407   \def\PdfRender@define@key#1#2{%
408     \expandafter\def\csname KV@#1@#2\endcsname##1%
409   }%
410 }{%
411   \let\PdfRender@define@key\define@key
412 }

```

\PdfRender@Set

```

413 \def\PdfRender@Set#1{%
414   \csname ifPdfRender@Active#1\endcsname
415   \csname PdfRender@Set#1\expandafter\endcsname
416   \fi
417 }

```

\PdfRender@Reset

```

418 \def\PdfRender@Reset#1{%
419   \csname ifPdfRender@Active#1\endcsname
420   \csname PdfRender@Reset#1\expandafter\endcsname
421   \fi
422 }

```

\PdfRender@ErrorInvalidValue

```

423 \def\PdfRender@ErrorInvalidValue#1{%
424   \PackageError{pdfrender}{%
425     Ignoring parameter setting for ‘#1’\MessageBreak

```

```

426     because of invalid value %
427     '\csname PdfRender@Current#1\endcsname'%
428   }\@ehc
429   \expandafter\let\csname PdfRender@Current#1\endcsname\ltx@empty
430 }%

```

\PdfRender@SetValidate

```

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

```

\PdfRender@SetValidateValues

```

451 \def\PdfRender@SetValidateValues#1{%
452   \ltx@ifundefined{PdfRender@#1@\PdfRender@Current}{%
453     \expandafter\let\csname PdfRender@Current#1\endcsname
454     \PdfRender@Current
455     \PdfRender@ErrorInvalidValue{#1}%
456   }{%
457     \expandafter\edef\csname PdfRender@Current#1\endcsname{%
458       \csname PdfRender@#1@\PdfRender@Current\endcsname
459     }%
460     \csname PdfRender@Set#1\endcsname
461   }%
462 }

```

\PdfRender@OpValue

```

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

```

\PdfRender@OpName

```

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

```

2.4 Declare and setup parameters

```

465 \PdfRender@NewClassValues{TextRenderingMode}%
466     {0}%
467     {\PdfRender@OpValue{Tr}}{%
468     0=Fill,%
469     1=Stroke,%
470     2=FillStroke,%
471     3=Invisible,%
472     4=FillClip,%
473     5=StrokeClip,%
474     6=FillStrokeClip,%
475     7=Clip,%
476 }%

```

```

477 \PdfRender@NewClass{LineWidth}{1}{\PdfRender@OpValue{w}}{%
478   [0-9]+\string\.[0-9]*|\string\.[0-9]+%
479 }{%
480 \ltx@ifundefined{dimexpr}{%
481   \def\PdfRender@dimexpr{%
482 }{%
483   \let\PdfRender@dimexpr\dimexpr
484 }
485 \def\PdfRender@PostProcessLineWidth{%
486   \begingroup
487   \afterassignment\PdfRender@@PostProcessLineWidth
488   \dimen0=\PdfRender@dimexpr\PdfRender@CurrentLineWidth bp %
489   \PdfRender@let\PdfRender@relax\PdfRender@relax
490 }
491 \let\PdfRender@let\let
492 \let\PdfRender@relax\relax
493 \def\PdfRender@@PostProcessLineWidth#1\PdfRender@let{%
494   \ifx\#1\%
495     \endgroup
496   \else
497     \dimen0=.996264\dimen0 % 72/72.27
498     \edef\x{\endgroup
499       \def\noexpand\PdfRender@CurrentLineWidth{%
500         \strip@pt\dimen0%
501       }%
502     }%
503     \expandafter\x
504   \fi
505 }
506 \PdfRender@NewClassValues{LineCapStyle}{0}{\PdfRender@OpValue{J}}{%
507   0=Butt,%
508   1=Round,%
509   2=ProjectingSquare,%
510 }%
511 \PdfRender@NewClassValues{LineJoinStyle}{0}{\PdfRender@OpValue{j}}{%
512   0=Miter,%
513   1=Round,%
514   2=Bevel,%
515 }%
516 \PdfRender@NewClass{MiterLimit}{10}{\PdfRender@OpValue{M}}{%
517   [0-9]*[1-9][0-9]*\string\.[0-9]*|%
518   [0-9]*\string\.[0-9]*[1-9][0-9]*%
519 }{%
520 \PdfRender@NewClass{Flatness}{0}{\PdfRender@OpValue{i}}{%
521   100(\string\.[0-9]*|\string\.[0-9]*|\string\.[0-9]+%
522 }{%
523 \PdfRender@NewClass{LineDashPattern}{[]0}{\PdfRender@OpValue{d}}{%
524   \string\[
525   ( ?([0-9]+\string\.[0-9]*|\string\.[0-9]+) ?)*%
526   \string\] ?%
527   ([0-9]+\string\.[0-9]*|\string\.[0-9]+)%
528 }{%
529 \PdfRender@NewClassValues{RenderingIntent}%
530   {RelativeColorimetric}%
531   {\PdfRender@OpName{ri}}{%
532   AbsoluteColorimetric,%
533   RelativeColorimetric,%
534   Saturation,%
535   Perceptual,%
536 }%

```

2.5 Fill and stroke color support

```

537 \PdfRender@define@key{PDFRENDER}{FillColor}{%
538   \begingroup
539     \def\PdfRender@Color{#1}%
540     \ifx\PdfRender@Color\ltx@empty
541       \global\let\PdfRender@FillColor\ltx@empty
542     \else
543       \PdfRender@ColorAvailable{%
544         \PdfRender@TestBox{%
545           \expandafter\PdfRender@TryColor\PdfRender@Color\ltx@empty
546           \PdfRender@GetFillColor
547           \ifx\PdfRender@FillColor\ltx@empty
548             \@PackageWarning{pdfrender}{%
549               Cannot extract fill color\MessageBreak
550               from value ‘#1’%
551             }%
552           \fi
553         }%
554       }%
555     \fi
556   \endgroup
557 }
558 \PdfRender@define@key{PDFRENDER}{StrokeColor}{%
559   \begingroup
560     \def\PdfRender@Color{#1}%
561     \ifx\PdfRender@Color\ltx@empty
562       \global\let\PdfRender@StrokeColor\ltx@empty
563     \else
564       \PdfRender@ColorAvailable{%
565         \PdfRender@TestBox{%
566           \expandafter\PdfRender@TryColor\PdfRender@Color\ltx@empty
567           \PdfRender@GetStrokeColor
568           \ifx\PdfRender@StrokeColor\ltx@empty
569             \@PackageWarning{pdfrender}{%
570               Cannot extract stroke color\MessageBreak
571               from value ‘#1’%
572             }%
573           \fi
574         }%
575       }%
576     \fi
577   \endgroup
578 }

```

\PdfRender@ColorAvailable

```

579 \def\PdfRender@ColorAvailable{%
580   \@ifundefined{set@color}{%
581     \@PackageError{pdfrender}{%
582       Ignoring color options, because neither\MessageBreak
583       package ‘color’ nor package ‘xcolor’ is loaded%
584     }\@ehc
585     \global\let\PdfRender@ColorAvailable\ltx@gobble
586   }{%
587     \global\let\PdfRender@ColorAvailable\ltx@firstofone
588   }%
589   \PdfRender@ColorAvailable
590 }

```

\PdfRender@TryColor

```

591 \def\PdfRender@TryColor{%
592   \@ifnextchar[\color\PdfRender@@TryColor
593 }

```

\PdfRender@@TryColor

```

594 \def\PdfRender@TryColor#1\ltx@empty{%
595   \expandafter\color\expandafter{\PdfRender@Color}%
596 }

```

\PdfRender@SetColor

```

597 \def\PdfRender@SetColor{%
598   \chardef\PdfRender@NeedsCurrentColor=0 %
599   \ifx\PdfRender@FillColor\ltx@empty
600     \ifx\PdfRender@StrokeColor\ltx@empty
601       \else
602         \edef\PdfRender@CurrentColor{%
603           \noexpand\PdfRender@FillColor\ltx@space\PdfRender@StrokeColor
604         }%
605         \chardef\PdfRender@NeedsCurrentColor=1 %
606       \fi
607     \else
608       \ifx\PdfRender@StrokeColor\ltx@empty
609         \edef\PdfRender@CurrentColor{%
610           \PdfRender@FillColor\ltx@space\noexpand\PdfRender@StrokeColor
611         }%
612         \chardef\PdfRender@NeedsCurrentColor=2 %
613       \else
614         \edef\current@color{%
615           \PdfRender@FillColor\ltx@space\PdfRender@StrokeColor
616         }%
617         \set@color
618       \fi
619     \fi
620     \ifnum\PdfRender@NeedsCurrentColor=1 %
621       \PdfRender@GetFillColor
622       \ifx\PdfRender@FillColor\ltx@empty
623         \@PackageWarning{pdfrender}{%
624           Cannot extract current fill color%
625         }%
626       \else
627         \edef\current@color{\PdfRender@CurrentColor}%
628         \set@color
629       \fi
630     \else
631       \ifnum\PdfRender@NeedsCurrentColor=2 %
632         \PdfRender@GetStrokeColor
633         \ifx\PdfRender@StrokeColor\ltx@empty
634           \@PackageWarning{pdfrender}{%
635             Cannot extract current stroke color%
636           }%
637         \else
638           \edef\current@color{\PdfRender@CurrentColor}%
639           \set@color
640         \fi
641       \fi
642     \fi
643 }

```

\PdfRender@PatternFillColor

```

644 \edef\PdfRender@PatternFillColor{ % space
645   (%)
646   [0-9\string\.] + g|
647   [0-9\string\.] + [0-9\string\.] + [0-9\string\.] + rg|
648   [0-9\string\.] + [0-9\string\.] + %
649   [0-9\string\.] + [0-9\string\.] + k%
650   ) % space
651   (.*)$%

```

```

652 }

\PdfRender@PatternStrokeColor

653 \edef\PdfRender@PatternStrokeColor{ % space
654   (%
655     [0-9\string\.] + G|%
656     [0-9\string\.] + [0-9\string\.] + [0-9\string\.] + RG|%
657     [0-9\string\.] + [0-9\string\.] + %
658     [0-9\string\.] + [0-9\string\.] + K%
659   ) % space
660   (.*)$%
661 }

\PdfRender@MatchPattern

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

\PdfRender@GetFillColor

677 \def\PdfRender@GetFillColor{%
678   \global\let\PdfRender@FillColor\ltx@empty
679   \begingroup
680     \if\PdfRender@Match
681       \let\PdfRender@Pattern\PdfRender@PatternFillColor
682       \edef\PdfRender@String{\ltx@space\current@color\ltx@space}%
683       \PdfRender@MatchPattern\PdfRender@FillColor
684     \else
685       \edef\current@color{\current@color\ltx@space}%
686       \let\PdfRender@OP\relax
687       \PdfRender@FindOp{g}0%
688       \PdfRender@FindOp{G}1%
689       \PdfRender@FindOp{rg}0%
690       \PdfRender@FindOp{RG}1%
691       \PdfRender@FindOp{k}0%
692       \PdfRender@FindOp{K}1%
693       \PdfRender@FilterOp 0\PdfRender@FillColor
694     \fi
695   \endgroup
696 }

\PdfRender@GetStrokeColor

697 \def\PdfRender@GetStrokeColor{%
698   \global\let\PdfRender@StrokeColor\ltx@empty
699   \begingroup
700     \if\PdfRender@Match
701       \let\PdfRender@Pattern\PdfRender@PatternStrokeColor
702       \edef\PdfRender@String{\ltx@space\current@color\ltx@space}%
703       \PdfRender@MatchPattern\PdfRender@StrokeColor
704     \else
705       \edef\current@color{\current@color\ltx@space}%

```



```

706 \let\PdfRender@OP\relax
707 \PdfRender@FindOp{g}0%
708 \PdfRender@FindOp{G}1%
709 \PdfRender@FindOp{rg}0%
710 \PdfRender@FindOp{RG}1%
711 \PdfRender@FindOp{k}0%
712 \PdfRender@FindOp{K}1%
713 \PdfRender@FilterOp 1\PdfRender@StrokeColor
714 \fi
715 \endgroup
716 }

717 \ifPdfRender@Match
718 \expandafter\PdfRender@AtEnd
719 \fi%

```

\PdfRender@FindOp

```

720 \def\PdfRender@FindOp#1#2{%
721 \def\PdfRender@temp##1 #1 ##2\@nil{%
722 ##1%
723 \ifx\##2\%
724 \expandafter\@gobble
725 \else
726 \PdfRender@OP{#1}#2%
727 \expandafter\@firstofone
728 \fi
729 {%
730 \PdfRender@temp##2\@nil
731 }%
732 }%
733 \edef\current@color{%
734 \@firstofone{\expandafter\PdfRender@temp\current@color} #1 \@nil
735 }%
736 }

```

\PdfRender@FilterOp

```

737 \def\PdfRender@FilterOp#1#2{%
738 \expandafter\PdfRender@@FilterOp\expandafter#1\expandafter#2%
739 \current@color\PdfRender@OP{#1}%
740 }

```

\PdfRender@@FilterOp

```

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

750 \PdfRender@AtEnd%
751 \end{package}

```

3 Test

3.1 Catcode checks for loading

```

752 \test1\
753 \catcode'\{=1 %

```

```

754 \catcode'\}=2 %
755 \catcode'\#=6 %
756 \catcode'\@=11 %
757 \expandafter\ifx\csname count@\endcsname\relax
758   \countdef\count@=255 %
759 \fi
760 \expandafter\ifx\csname @gobble\endcsname\relax
761   \long\def@gobble#1{%
762 \fi
763 \expandafter\ifx\csname @firstofone\endcsname\relax
764   \long\def@firstofone#1{#1}%
765 \fi
766 \expandafter\ifx\csname loop\endcsname\relax
767   \expandafter@firstofone
768 \else
769   \expandafter@gobble
770 \fi
771 {%
772   \def\loop#1\repeat{%
773     \def\body{#1}%
774     \iterate
775   }%
776   \def\iterate{%
777     \body
778     \let\next\iterate
779   \else
780     \let\next\relax
781   \fi
782   \next
783 }%
784 \let\repeat=\fi
785 }%
786 \def\RestoreCatcodes{
787 \count@=0 %
788 \loop
789   \edef\RestoreCatcodes{
790     \RestoreCatcodes
791     \catcode\the\count@=\the\catcode\count@\relax
792   }%
793 \ifnum\count@<255 %
794   \advance\count@ 1 %
795 \repeat
796
797 \def\RangeCatcodeInvalid#1#2{%
798   \count@=#1\relax
799   \loop
800     \catcode\count@=15 %
801   \ifnum\count@<#2\relax
802     \advance\count@ 1 %
803   \repeat
804 }
805 \def\RangeCatcodeCheck#1#2#3{%
806   \count@=#1\relax
807   \loop
808     \ifnum#3=\catcode\count@
809   \else
810     \errmessage{%
811       Character \the\count@\space
812       with wrong catcode \the\catcode\count@\space
813       instead of \number#3%
814     }%
815   \fi

```

```

816 \ifnum\count@<#2\relax
817 \advance\count@ 1 %
818 \repeat
819 }
820 \def\space{ }
821 \expandafter\ifx\csname LoadCommand\endcsname\relax
822 \def\LoadCommand{\input pdfrender.sty\relax}%
823 \fi
824 \def\Test{%
825 \RangeCatcodeInvalid{0}{47}%
826 \RangeCatcodeInvalid{58}{64}%
827 \RangeCatcodeInvalid{91}{96}%
828 \RangeCatcodeInvalid{123}{255}%
829 \catcode'\@=12 %
830 \catcode'\=0 %
831 \catcode'\%=14 %
832 \LoadCommand
833 \RangeCatcodeCheck{0}{36}{15}%
834 \RangeCatcodeCheck{37}{37}{14}%
835 \RangeCatcodeCheck{38}{47}{15}%
836 \RangeCatcodeCheck{48}{57}{12}%
837 \RangeCatcodeCheck{58}{63}{15}%
838 \RangeCatcodeCheck{64}{64}{12}%
839 \RangeCatcodeCheck{65}{90}{11}%
840 \RangeCatcodeCheck{91}{91}{15}%
841 \RangeCatcodeCheck{92}{92}{0}%
842 \RangeCatcodeCheck{93}{96}{15}%
843 \RangeCatcodeCheck{97}{122}{11}%
844 \RangeCatcodeCheck{123}{255}{15}%
845 \RestoreCatcodes
846 }
847 \Test
848 \csname @@end\endcsname
849 \end
850 </test1>

```

3.2 Simple test file

```

851 <*test2>
852 \NeedsTeXFormat{LaTeX2e}
853 \ProvidesFile{pdfrender-test2.tex}[2010/01/28]
854 \documentclass{article}
855 \usepackage{color}
856 \usepackage{pdfrender}[2010/01/28]
857 \begin{document}
858 Hello World
859 \newpage
860 Start
861 \textpdfrender{%
862 TextRenderingMode=1,%
863 LineWidth=.1,%
864 LineCapStyle=2,%
865 LineJoinStyle=1,%
866 MiterLimit=1.2,%
867 LineDashPattern=[2 2]0,%
868 RenderingIntent=Saturation,%
869 }{Hello\newpage World}
870 Stop
871 \par
872 \newlength{\LineWidth}
873 \setlength{\LineWidth}{.5pt}
874 Start
875 \textpdfrender{%

```

```

876 FillColor=yellow,%
877 StrokeColor=[cmyk]{1,.5,0,0},%
878 TextRenderingMode=FillStroke,%
879 LineWidth=.5\LineWidth,%
880 LineCapStyle=Round,%
881 LineJoinStyle=Bevel,%
882 }{Out-\par\newpage line}
883 Stop
884 \end{document}
885 \end{test2}

```

3.3 Further tests

Robustness and bookmarks.

```

886 (*test3)
887 \NeedsTeXFormat{LaTeX2e}
888 \ProvidesFile{pdfrender-test3.tex}[2010/01/28]
889 \documentclass{article}
890 \usepackage{pdfrender}[2010/01/28]
891 \usepackage{hyperref}
892 \usepackage{bookmark}
893 \begin{document}
894 \tableofcontents
895 \section{%
896   \textpdfrender{%
897     TextRenderingMode=1,%
898     LineCapStyle=2,%
899     LineJoinStyle=1,%
900     MiterLimit=1.2,%
901     LineDashPattern=[2 2]0,%
902     RenderingIntent=Saturation,%
903   }{Hello World}%
904 }
905 \end{document}
906 \end{test3}

```

Color algorithm if \pdfmatch is not available.

```

907 (*test4)
908 \NeedsTeXFormat{LaTeX2e}
909 \ProvidesFile{pdfrender-test4.tex}[2010/01/28]
910 \documentclass[12pt]{article}
911 \usepackage{pdfrender}[2010/01/28]
912 \usepackage{color}
913 \usepackage{qstest}
914 \IncludeTests{*}
915 \LogTests{log}{*}{*}
916 \makeatletter
917 \newcommand*{\CheckColor}[1]{%
918   \Expect{#1}{\current@color}%
919 }
920 \makeatother
921 \begin{document}
922   \begin{qstest}{color}{color}%
923     \CheckColor{0 g 0 G}%
924     \Huge\bfseries
925     \noindent
926     \textpdfrender{%
927       TextRenderingMode=2,%
928       LineWidth=.5,%
929       FillColor=yellow,%
930       StrokeColor=blue,%
931     }{%
932       \CheckColor{0 0 1 0 k 0 0 1 RG}%

```

```

933     Blue(Yellow)\%
934     \textpdfrender{%
935         FillColor=green,%
936     }{%
937         \CheckColor{0 1 0 rg 0 0 1 RG}%
938         Blue(Green)%
939     }\%
940     \CheckColor{0 0 1 0 k 0 0 1 RG}%
941     Blue(Yellow)\%
942     \textpdfrender{%
943         StrokeColor=red,%
944     }{%
945         \CheckColor{0 0 1 0 k 1 0 0 RG}%
946         Red(Yellow)%
947     }\%
948     \CheckColor{0 0 1 0 k 0 0 1 RG}%
949     Blue(Yellow) %
950 }%
951 \end{qstest}%
952 \begin{qstest}{colorlast}{colorlast}%
953     \makeatletter
954     \def\Test#1#2#3{%
955         \begingroup
956         \def\current@color{#1}%
957         \textpdfrender{#2}{%
958             \CheckColor{#3}%
959         }%
960         \endgroup
961     }%
962     \Test{1 g 0 0 1 RG 0 0 1 0 k 0.5 G}%
963         {StrokeColor=green}%
964         {0 0 1 0 k 0 1 0 RG}%
965     \Test{1 g 0 0 1 RG 0 0 1 0 k 0.5 G}%
966         {FillColor=red}%
967         {1 0 0 rg 0.5 G}%
968 \end{qstest}%
969 \end{document}
970 \end{test4}

```

3.4 Compatibility with plain T_EX

```

971 (*test5)
972 \pdfoutput=1 %
973 \hsize=6.5in
974 \vsize=8.9in
975 \pdfpagewidth=\hsize
976 \pdfpageheight=\vsize
977 \parfillskip=0pt plus 1fil\relax
978 \input pdfrender.sty\relax
979 \catcode'\{=1 %
980 \catcode'\}=2 %
981 \let\OrgMakeFootLine\makefootline
982 \def\makefootline{%
983     \begingroup\normalcolor\OrgMakeFootLine\endgroup
984 }
985 \font\font=ec-lmr10 scaled 3000\relax
986 \font\font
987 Before %
988 \textpdfrender{%
989     TextRenderingMode=1,%
990     LineWidth=.1,%
991 }{Hello\par\vfill\penalty-10000 World} %

```

```

992 After %
993 \par
994 \vfill
995 \penalty-10000 %
996 \csmname @@end\endcsmname\end
997 </test5>

```

4 Installation

4.1 Download

Package. This package is available on CTAN¹:

[CTAN:macros/latex/contrib/oberdiek/pdfrender.dtx](#) The source file.

[CTAN:macros/latex/contrib/oberdiek/pdfrender.pdf](#) 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](#)

TDS refers to the standard “A Directory Structure for \TeX Files” ([CTAN:tds/tds.pdf](#)). 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
```

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

```

¹<http://ftp.ctan.org/tex-archive/>

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 `mktextlsr`.

4.5 Some details for the interested

Attached source. The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk pdfrender.pdf unpack_files output .
```

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

5 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].

6 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.

- [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>.

7 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.

8 Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; plain numbers refer to the code lines where the entry is used.

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