

The pdfcolparcolumns package

Heiko Oberdiek
<oberdiek@uni-freiburg.de>

2010/01/11 v1.3

Abstract

Since version 1.40 pdfTeX supports several color stacks. This package uses them to fix color problems in package parcolumns.

Contents

1	Usage	2
1.1	Option rulebetweenecolor	2
1.2	Future	2
2	Implementation	2
2.1	Identification	2
2.2	Load packages	2
2.2.1	Package parcolumns	2
2.2.2	Package pdfcol	3
2.2.3	Package infwarerr	3
2.3	Color stack macros	3
2.4	Patches	3
2.4.1	Init stacks	3
2.4.2	Switch stack	4
2.4.3	Set current stack color	4
3	Test	6
4	Installation	7
4.1	Download	7
4.2	Bundle installation	7
4.3	Package installation	7
4.4	Refresh file name databases	7
4.5	Some details for the interested	8
5	References	8
6	History	8
	[2007/07/26 v1.0]	8
	[2007/09/09 v1.1]	8
	[2008/08/11 v1.2]	9
	[2010/01/11 v1.3]	9
7	Index	9

1 Usage

```
\usepackage{pdfcolparcolumns}
```

The package `pdfcolparcolumns` loads package `parcolumns` [1]. If color stacks are available then the macros of `parcolumns` are patched to add support for color stacks.

1.1 Option `rulebetweencolor`

Package `pdfcolparcolumns` also fixes the color for the rule between columns (if `rulebetween` is set). Default color is `\normalcolor`. But this can be changed by using option `rulebetweencolor`. It takes a color specification as value. If the value is empty, then the default (`\normalcolor`) is used. Examples:

```
rulebetweencolor=blue,  
rulebetweencolor={red},  
rulebetweencolor={}, % \normalcolor is used  
rulebetweencolor=[rgb]{1,0,.5} % see below
```

If used inside the optional argument of environment `parcolumns` and the value contains an optional argument, then whole value must be put in curly braces:

```
\begin{parcolumns}[  
  rulebetween,  
  rulebetweencolor=[rgb]{1,0,.5},  
{2}  
  ...  
\end{parcolumns}
```

This option `rulebetweencolor` can also be set using `\setkeys`:

```
\setkeys{parcolumns}{rulebetweencolor=green}
```

1.2 Future

Currently package `parcolumns` does not seem to be maintained. Nevertheless if there will be a new version that adds support for color stacks, then this package may become obsolete.

2 Implementation

2.1 Identification

```
1 (*package)  
2 \NeedsTeXFormat{LaTeX2e}  
3 \ProvidesPackage{pdfcolparcolumns}%  
4 [2010/01/11 v1.3 Color stacks support for parcolumns (HO)]%
```

2.2 Load packages

2.2.1 Package `parcolumns`

Currently package `parcolumns` does not define options. Thus it is just a precaution that the options of package `pdfcolparcolumns` are passed to package `parcolumns`.

```
5 \DeclareOption*{%  
6   \PassOptionsToPackage{\CurrentOption}{parcolumns}%  
7 }  
8 \ProcessOptions\relax  
9 \RequirePackage{parcolumns}[2004/11/25]
```

2.2.2 Package pdfcol

```
10 \RequirePackage{pdfcol}[2007/09/09]
11 \ifpdfcolAvailable
12 \else
13   \PackageInfo{pdfcolparcolumns}{%
14     Loading aborted, because color stacks are not available%
15   }%
16   \expandafter\endinput
17 \fi
```

2.2.3 Package infwarerr

```
18 \RequirePackage{infwarerr}[2007/09/09]
```

2.3 Color stack macros

`\pcpc@MaxStack` Macro `\pcpc@MaxStack` holds the highest number of allocated stacks.

```
19 \global\chardef\pcpc@MaxStack=\z@
```

`\pcpc@InitStacks` Macro `\pcpc@InitStacks` takes the number of columns as argument and ensures that there are enough color stacks for all columns.

```
20 \def\pcpc@InitStacks#1{%
21   \ifnum#1>\pcpc@MaxStack
22     \begingroup
23       \count@\pcpc@MaxStack
24       \loop
25         \advance\count@\@ne
26         \pdfcolInitStack{pcpc@\the\count@}%
27       \ifnum#1>\count@
28         \repeat
29       \global\chardef\pcpc@MaxStack=\count@
30     \endgroup
31   \fi
32 }
```

`\pcpc@SwitchStack`

```
33 \def\pcpc@SwitchStack#1{%
34   \pdfcolSwitchStack{pcpc@\number#1}%
35 }
```

`\pcpc@SetCurrent`

```
36 \def\pcpc@SetCurrent#1{%
37   \pdfcolSetCurrent{pcpc@\number#1}%
38 }
```

2.4 Patches

Now the color stack macros are patched into the macros of package `parcolumns`.

2.4.1 Init stacks

`\pcpc@InitStacks` should go into the definition of environment `parcolumns`. `\pc@allococolumns` is executed there and nowhere else, thus we hook into it.

```
39 \g@addto@macro\pc@allococolumns{%
40   \pcpc@InitStacks\pc@columncount
41 }
```

2.4.2 Switch stack

`\pcpc@SwitchStack` should be called by marco `\colchunk@`. However it is easier to patch `\pc@setcolumnwidth` that is executed in `\colchunk@` only.

```
42 \g@addto@macro\pc@setcolumnwidth{%  
43   \pcpc@SwitchStack\pc@columnctr  
44 }
```

2.4.3 Set current stack color

`\pcpc@SetCurrent` is set at the begin of each line. It must be inserted into `\pc@placeboxes`. Unhappily there is no easy way. Therefore we check and redefine `\pc@placeboxes`.

```
45 \begingroup  
46   \def\x{%  
47     \global\let\@tempa\relax  
48     \count@\z@  
49     \hb@xt@\linewidth{%  
50       \vfuzz30ex %  
51       \vbadness\@M  
52       \splittopskip\z@skip  
53       \loop  
54       \ifnum\count@<\pc@columncount  
55         \advance\count@\@ne  
56         \expandafter\ifvoid\csname pc@column@\number\count@\endcsname  
57           \hskip\csname pc@column@width@\number\count@\endcsname  
58         \else  
59           \expandafter\setbox\expandafter\@tempboxa\expandafter  
60             \vsplit\csname pc@column@\number\count@\endcsname  
61             to \dp\strutbox  
62             \vbox{%  
63               \unvbox\@tempboxa  
64             }%  
65         \fi  
66         \expandafter\ifvoid\csname pc@column@\number\count@\endcsname  
67         \else  
68           \global\let\@tempa\pc@placeboxes  
69         \fi  
70         \ifnum\count@<\pc@columncount  
71           \strut  
72           \hfill  
73           \ifpc@rulebetween  
74             \vrule  
75             \hfill  
76           \fi  
77         \fi  
78         \repeat  
79       }%  
80     \@tempa  
81   }%  
82   \ifx\x\pc@placeboxes  
83   \else  
84     \@PackageWarningNoLine{pdfcolparcolumns}{%  
85       Command \string\pc@placeboxes\space has changed.\MessageBreak  
86       Supported versions of package ‘parcolumns’:\MessageBreak  
87       \space\space 2004/08/05.\MessageBreak  
88       The redefinition of \string\pc@placeboxes\space may not%  
89       \MessageBreak  
90       behave correctly depending on the changes%  
91     }%  
92   \fi  
93 \endgroup
```

\pc@placeboxes

```

94 \renewcommand*{\pc@placeboxes}{%
95   \global\let\@tempa\relax
96   \count@\z@
97   \hb@xt@\linewidth{%
98     \vfuzz30ex %
99     \vbadness\@M
100    \splittopskip\z@skip
101    \loop
102    \ifnum\count@<\pc@columncount
103      \advance\count@\@ne
104      \expandafter\ifvoid\csname pc@column@\number\count@\endcsname
105      \hskip\csname pc@column@width@\number\count@\endcsname
106      \else
107        \expandafter\setbox\expandafter\@tempboxa\expandafter
108        \vsplit\csname pc@column@\number\count@\endcsname
109        to \dp\strutbox
110        \vbox{%
111          \pcpc@SetCurrent\count@
112          \unvbox\@tempboxa
113        }%
114      \fi
115      \expandafter\ifvoid\csname pc@column@\number\count@\endcsname
116      \else
117        \global\let\@tempa\pc@placeboxes
118      \fi
119      \ifnum\count@<\pc@columncount
120        \strut
121        \hfill
122        \ifpc@rulebetween
123          \begingroup
124            \pcpc@RuleBetweenColor
125            \vrule
126          \endgroup
127          \hfill
128        \fi
129      \fi
130    \repeat
131  }%
132  \@tempa
133 }
```

\pcpc@RuleBetweenColorDefault

```

134 \def\pcpc@RuleBetweenColorDefault{%
135   \normalcolor
136 }
```

\pcpc@RuleBetweenColor

```

137 \let\pcpc@RuleBetweenColor\pcpc@RuleBetweenColorDefault

138 \define@key{parcolumns}{rulebetweencolor}{%
139   \edef\pcpc@temp{#1}%
140   \ifx\pcpc@temp\@empty
141     \let\pcpc@RuleBetweenColor\pcpc@RuleBetweenColorDefault
142   \else
143     \edef\pcpc@temp{%
144       \noexpand\@ifnextchar [{%
145         \def\noexpand\pcpc@RuleBetweenColor{%
146           \noexpand\color\pcpc@temp
147         }%
148         \noexpand\pcpc@GobbleNil
149       }{%
```

```

150      \def\noexpand\pcpc@RuleBetweenColor{%
151      \noexpand\color{\pcpc@temp}%
152      }%
153      \noexpand\pcpc@GobbleNil
154      }%
155      \pcpc@temp\noexpand\@nil
156      }%
157      \pcpc@temp
158      \fi
159 }

```

\pcpc@GobbleNil

```

160 \long\def\pcpc@GobbleNil#1\@nil{}
161 </package>

```

3 Test

The test file is a modified version of the file that Donald Goodman has posted in [comp.text.tex](#): “Re: xcolor glitches”¹

```

162 (*test1)
163 \NeedsTeXFormat{LaTeX2e}
164 \AtEndDocument{%
165   \typeout{%
166     \typeout{*****}%
167     \typeout{*** \space Check the PDF file manually! \space ***}%
168     \typeout{*****}%
169     \typeout{%
170   }
171 \documentclass{article}
172 \usepackage{xcolor}
173 \usepackage{pdfcolparcolumns}
174
175 \newcommand{\instruct}[1]{%
176   \noindent
177   \footnotesize
178   \textcolor{red}{#1}%
179 }
180
181 \begin{document}
182   \begin{parcolumns}[colwidths={1=2.3in,2=2.3in},sloppy]{2}%
183     \colchunk[1]{%
184       \instruct{Et non dicitur versus} %
185       Fidelium anim\ae\ %
186       \instruct{%
187         sed immediate subiungitur antiphona finalis %
188         beat\ae\ Mari\ae\ Virginis%
189       } %
190       100.%
191     }%
192     \colchunk[2]{%
193       \instruct{%
194         And the verse %
195         \textcolor{black}{May the souls of the faithful} %
196         is not said, but the final antiphon of the %
197         Blessed Virgin Mary, %
198         \textcolor{black}{100,} %
199         is immediately joined.%
200       }%
201     }%

```

¹Url: <http://groups.google.com/group/comp.text.tex/msg/8eda74ed292012bb>

```

202 \end{parcolumns}%
203 \end{document}
204 </test1>

```

4 Installation

4.1 Download

Package. This package is available on CTAN²:

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

[CTAN:macros/latex/contrib/oberdiek/pdfcolparcolumns.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 T_EX 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-T_EX:

```
tex pdfcolparcolumns.dtx
```

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

```

pdfcolparcolumns.sty      → tex/latex/oberdiek/pdfcolparcolumns.sty
pdfcolparcolumns.pdf     → doc/latex/oberdiek/pdfcolparcolumns.pdf
test/pdfcolparcolumns-test1.tex → doc/latex/oberdiek/test/pdfcolparcolumns-test1.tex
pdfcolparcolumns.dtx     → source/latex/oberdiek/pdfcolparcolumns.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 T_EX distribution (teT_EX, mikT_EX, ...) relies on file name databases, you must refresh these. For example, teT_EX users run `texhash` or `mktextlsr`.

²[ftp://ftp.ctan.org/tex-archive/](http://ftp.ctan.org/tex-archive/)

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 pdfcolparcolumns.pdf unpack_files output .
```

Unpacking with L^AT_EX. The `.dtx` chooses its action depending on the format:

plain-T_EX: Run `docstrip` and extract the files.

L^AT_EX: Generate the documentation.

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

```
latex \let\install=y\input{pdfcolparcolumns.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 pdfL^AT_EX:

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

5 References

- [1] Jonathan Sauer: *The parcolumns package*; 2004/11/25;
[CTAN:macros/latex/contrib/sauerj/parcolumns.pdf](http://ctan.org/ctan/ma/macros/latex/contrib/sauerj/parcolumns.pdf).
- [2] Heiko Oberdiek: *The pdfcol package*; 2007/09/09;
[CTAN:macros/latex/contrib/oberdiek/pdfcol.pdf](http://ctan.org/ctan/ma/macros/latex/contrib/oberdiek/pdfcol.pdf).

6 History

[2007/07/26 v1.0]

- First version, published in the newsgroup [comp.text.tex](http://groups.google.com/group/comp.text.tex) with the name `parcolumns-colorstacks`: “[Re: xcolor glitches](http://groups.google.com/group/comp.text.tex/msg/56bd897b11bca414)”³

[2007/09/09 v1.1]

- CTAN version, package name renamed to `pdfcolparcolumns`.
- Uses package `pdfcol`.
- Documentation added.
- Test file added.

³Url: <http://groups.google.com/group/comp.text.tex/msg/56bd897b11bca414>

[2008/08/11 v1.2]

- Code is not changed.
- URLs updated.

[2010/01/11 v1.3]

- Fix for rule color.
- New option `rulebetweencolor` for environment `parcolumns`.

7 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; numbers in roman refer to the code lines where the entry is used.

Symbols		G	
<code>\@M</code>	51, 99	<code>\g@addto@macro</code>	39, 42
<code>\@PackageWarningNoLine</code>	84	H	
<code>\@empty</code>	140	<code>\hb@xt@</code>	49, 97
<code>\@ifnextchar</code>	144	<code>\hfill</code>	72, 75, 121, 127
<code>\@ne</code>	25, 55, 103	<code>\hskip</code>	57, 105
<code>\@nil</code>	155, 160	I	
<code>\@tempa</code>	47, 68, 80, 95, 117, 132	<code>\ifnum</code>	21, 27, 54, 70, 102, 119
<code>\@tempboxa</code>	59, 63, 107, 112	<code>\ifpc@rulebetween</code>	73, 122
		<code>\ifpdfcolAvailable</code>	11
<code>_</code>	185, 188	<code>\ifvoid</code>	56, 66, 104, 115
A		<code>\ifx</code>	82, 140
<code>\advance</code>	25, 55, 103	<code>\instruct</code>	175, 184, 186, 193
<code>\ae</code>	185, 188	L	
<code>\AtEndDocument</code>	164	<code>\linewidth</code>	49, 97
B		<code>\loop</code>	24, 53, 101
<code>\begin</code>	181, 182	M	
C		<code>\MessageBreak</code>	85, 86, 87, 89
<code>\chardef</code>	19, 29	N	
<code>\colchunk</code>	183, 192	<code>\NeedsTeXFormat</code>	2, 163
<code>\color</code>	146, 151	<code>\newcommand</code>	175
<code>\count@</code>	23, 25, 26, 27, 29, 48, 54, 55, 56, 57, 60, 66, 70, 96, 102, 103, 104, 105, 108, 111, 115, 119	<code>\noindent</code>	176
<code>\csname</code>	56, 57, 60, 66, 104, 105, 108, 115	<code>\normalcolor</code>	135
<code>\CurrentOption</code>	6	<code>\number</code>	34, 37, 56, 57, 60, 66, 104, 105, 108, 115
D		P	
<code>\DeclareOption</code>	5	<code>\PackageInfo</code>	13
<code>\define@key</code>	138	<code>\PassoptionsToPackage</code>	6
<code>\documentclass</code>	171	<code>\pc@alloccolumns</code>	39
<code>\dp</code>	61, 109	<code>\pc@columncount</code>	40, 54, 70, 102, 119
E		<code>\pc@columnctr</code>	43
<code>\end</code>	202, 203	<code>\pc@placeboxes</code>	68, 82, 85, 88, 94
<code>\endcsname</code>	56, 57, 60, 66, 104, 105, 108, 115	<code>\pc@setcolumnwidth</code>	42
<code>\endinput</code>	16	<code>\pcpc@GobbleNil</code>	148, 153, 160
F		<code>\pcpc@InitStacks</code>	20, 40
<code>\footnotesize</code>	177	<code>\pcpc@MaxStack</code>	19, 21, 23, 29
		<code>\pcpc@RuleBetweenColor</code>	124, 137, 141, 145, 150
		<code>\pcpc@RuleBetweenColorDefault</code>	134, 137, 141

\pcpc@SetCurrent	36, 111		
\pcpc@SwitchStack	33, 43		
\pcpc@temp	139, 140, 143, 146, 151, 155, 157		
\pdfcolInitStack	26		
\pdfcolSetCurrent	37		
\pdfcolSwitchStack	34		
\ProcessOptions	8		
\ProvidesPackage	3		
R			
\renewcommand	94		
\repeat	28, 78, 130		
\RequirePackage	9, 10, 18		
S			
\setbox	59, 107		
\space	85, 87, 88, 167		
\splittopskip	52, 100		
\strut	71, 120		
\strutbox	61, 109		
		T	
		\textcolor	178, 195, 198
		\the	26
		\typeout	165, 166, 167, 168, 169
		U	
		\unvbox	63, 112
		\usepackage	172, 173
		V	
		\vbadness	51, 99
		\vbox	62, 110
		\vfuzz	50, 98
		\vrule	74, 125
		\vsplit	60, 108
		X	
		\x	46, 82
		Z	
		\z@	19, 48, 96
		\z@skip	52, 100