

The pdfcolparcolumns package

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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.

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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@alloccolumns` is executed there and nowhere else, thus we hook into it.

```
39 \g@addto@macro\pc@alloccolumns{%
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     }%
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 \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 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 \TeX distribution (e \TeX , m \TeX , ...) relies on file name databases, you must refresh these. For example, e \TeX users run `texhash` or `mktexlsr`.

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/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/macros/latex/contrib/oberdiek/pdfcol.pdf).

6 History

[2007/07/26 v1.0]

- First version, published in the newsgroup `comp.text.tex` with the name `parcolumns-colorstacks`: “[Re: xcolor glitches](#)”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`.

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