

The pdfcolparcolumns package

Heiko Oberdiek
<oberdiek@uni-freiburg.de>

2007/09/09 v1.1

Abstract

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

Contents

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

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 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 [2007/09/09 v1.1 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 macro `\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 \begin{group}
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            \vrule
124            \hfill
125          \fi
126        \fi
127      \repeat
128    }%
129    \@tempa
130 }

```

131 `</package>`

3 Test

The test file is a modified version of the file that Donald Goodman has posted in `comp.text.tex`.

```
132 <*test1>
133 \NeedsTeXFormat{LaTeX2e}
134 \AtEndDocument{%
135   \typeout{%
136     \typeout{*****}%
137     \typeout{*** \space Check the PDF file manually! \space ***}%
138     \typeout{*****}%
139   \typeout}%
140 }
141 \documentclass{article}
142 \usepackage{xcolor}
143 \usepackage{pdfcolparcolumns}
144
145 \newcommand{\instruct}[1]{%
146   \noindent
147   \footnotesize
148   \textcolor{red}{#1}%
149 }
150
151 \begin{document}
152   \begin{parcolumns}[colwidths={1=2.3in,2=2.3in},sloppy]{2}%
153     \colchunk[1]{%
154       \instruct{Et non dicitur versus} %
155       Fidelium anim\ae %
156       \instruct{%
157         sed immediate subiungitur antiphona finalis %
158         beat\ae Mari\ae Virginis%
159       } %
160       100.%
161     }%
162     \colchunk[2]{%
163       \instruct{%
164         And the verse %
165         \textcolor{black}{May the souls of the faithful} %
166         is not said, but the final antiphon of the %
167         Blessed Virgin Mary, %
168         \textcolor{black}{100,} %
169         is immediately joined.%
170       }%
171     }%
172   \end{parcolumns}%
173 \end{document}
174 </test1>
```

4 Installation

4.1 Download

Package. This package is available on CTAN¹:

[CTAN:macros/latex/contrib/oberdiek/pdfcolparcolumns.dtx](http://ftp.ctan.org/tex-archive/macros/latex/contrib/oberdiek/pdfcolparcolumns.dtx) The source file.

[CTAN:macros/latex/contrib/oberdiek/pdfcolparcolumns.pdf](http://ftp.ctan.org/tex-archive/macros/latex/contrib/oberdiek/pdfcolparcolumns.pdf) Documentation.

¹<http://ftp.ctan.org/tex-archive/>

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):

<code>pdfcolparcolumns.sty</code>	→ <code>tex/latex/oberdiek/pdfcolparcolumns.sty</code>
<code>pdfcolparcolumns.pdf</code>	→ <code>doc/latex/oberdiek/pdfcolparcolumns.pdf</code>
<code>test/pdfcolparcolumns-test1.tex</code>	→ <code>doc/latex/oberdiek/test/pdfcolparcolumns-test1.tex</code>
<code>pdfcolparcolumns.dtx</code>	→ <code>source/latex/oberdiek/pdfcolparcolumns.dtx</code>

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, miK_TE_X, ...) relies on file name databases, you must refresh these. For example, teT_EX 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 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.
- [2] Heiko Oberdiek: *The pdfcol package*; 2007/09/09;
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-colorstack`.

[2007/09/09 v1.1]

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

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		B	
<code>\@M</code>	..... 51, 99	<code>\begin</code>	..... 151, 152
<code>\@PackageWarningNoLine</code>	..... 84	C	
<code>\@ne</code>	..... 25, 55, 103	<code>\chardef</code>	..... 19, 29
<code>\@tempa</code>	..... 47, 68, 80, 95, 117, 129	<code>\colchunk</code>	..... 153, 162
<code>\@tempboxa</code>	..... 59, 63, 107, 112	<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>\_</code>	..... 155, 158	<code>\csname</code>	56, 57, 60, 66, 104, 105, 108, 115
A		<code>\CurrentOption</code>	..... 6
<code>\advance</code>	..... 25, 55, 103	D	
<code>\ae</code>	..... 155, 158	<code>\DeclareOption</code>	..... 5
<code>\AtEndDocument</code>	..... 134		

<code>\documentclass</code>	141	<code>\pc@columnctr</code>	43
<code>\dp</code>	61, 109	<code>\pc@placeboxes</code>	68, 82, 85, 88, 94
E		<code>\pc@setcolumnwidth</code>	42
<code>\end</code>	172, 173	<code>\pcpc@InitStacks</code>	20, 40
<code>\endcsname</code>		<code>\pcpc@MaxStack</code>	19, 21, 23, 29
. 56, 57, 60, 66, 104, 105, 108, 115		<code>\pcpc@SetCurrent</code>	36, 111
<code>\endinput</code>	16	<code>\pcpc@SwitchStack</code>	33, 43
F		<code>\pdfcolInitStack</code>	26
<code>\footnotesize</code>	147	<code>\pdfcolSetCurrent</code>	37
G		<code>\pdfcolSwitchStack</code>	34
<code>\g@addto@macro</code>	39, 42	<code>\ProcessOptions</code>	8
H		<code>\ProvidesPackage</code>	3
<code>\hb@xt@</code>	49, 97	R	
<code>\hfill</code>	72, 75, 121, 124	<code>\renewcommand</code>	94
<code>\hskip</code>	57, 105	<code>\repeat</code>	28, 78, 127
I		<code>\RequirePackage</code>	9, 10, 18
<code>\ifnum</code>	21, 27, 54, 70, 102, 119	S	
<code>\ifpc@rulebetween</code>	73, 122	<code>\setbox</code>	59, 107
<code>\ifpdfcolAvailable</code>	11	<code>\space</code>	85, 87, 88, 137
<code>\ifvoid</code>	56, 66, 104, 115	<code>\splittopskip</code>	52, 100
<code>\ifx</code>	82	<code>\strut</code>	71, 120
<code>\instruct</code>	145, 154, 156, 163	<code>\strutbox</code>	61, 109
L		T	
<code>\linewidth</code>	49, 97	<code>\textcolor</code>	148, 165, 168
<code>\loop</code>	24, 53, 101	<code>\the</code>	26
M		<code>\typeout</code>	135, 136, 137, 138, 139
<code>\MessageBreak</code>	85, 86, 87, 89	U	
N		<code>\unvbox</code>	63, 112
<code>\NeedsTeXFormat</code>	2, 133	<code>\usepackage</code>	142, 143
<code>\newcommand</code>	145	V	
<code>\noindent</code>	146	<code>\vbadness</code>	51, 99
<code>\number</code>	34,	<code>\vbox</code>	62, 110
37, 56, 57, 60, 66, 104, 105, 108, 115		<code>\vfuzz</code>	50, 98
P		<code>\vrule</code>	74, 123
<code>\PackageInfo</code>	13	<code>\vsplit</code>	60, 108
<code>\PassoptionsToPackage</code>	6	X	
<code>\pc@alloccolumns</code>	39	<code>\x</code>	46, 82
<code>\pc@columncount</code> ..	40, 54, 70, 102, 119	Z	
		<code>\z@</code>	19, 48, 96
		<code>\z@skip</code>	52, 100