

The pdfcolparcolumns package

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

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 [2019/12/29 v1.5 Color stacks for parcolumns (H0)]%
```

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 \beginngroup
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@\@one
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 Installation

3.1 Download

Package. This package is available on CTAN¹:

[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:pkg/tds](#)). Directories with `texmf` in their name are usually organized this way.

3.2 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
```

3.3 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
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`.

3.4 Refresh file name databases

If your T_EX distribution (T_EX Live, MiK_T_EX, ...) relies on file name databases, you must refresh these. For example, T_EX Live users run `texhash` or `mktextlsr`.

¹[CTAN:pkg/pdfcolparcolumns](#)

3.5 Some details for the interested

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
```

4 References

- [1] Jonathan Sauer: *The parcolumns package*; 2004/11/25;
[CTAN:pkg/parcolumns](#).
- [2] Heiko Oberdiek: *The pdfcol package*; 2007/09/09;
[CTAN:pkg/pdfcol](#).

5 History

[2007/07/26 v1.0]

- First version, published in the newsgroup [comp.text.tex](#) with the name parcolumns-colorstacks: “[Re: xcolor glitches](#)”²

[2007/09/09 v1.1]

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

[2008/08/11 v1.2]

- Code is not changed.
- URLs updated.

²Url: <https://groups.google.com/group/comp.text.tex/msg/56bd897b11bca414>

[2010/01/11 v1.3]

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

[2016/05/16 v1.4]

- Documentation updates.

[2019/12/29 v1.5]

- `\PassOptionsToPackage` not `\PassoptionsToPackage`

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