

The `pdfcolparallel` package

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Abstract

This packages fixes bugs in `parallel` and improves color support by using several color stacks that are provided by pdftEX since version 1.40.

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1 Usage

```
\usepackage{pdfcolparallel}
```

The package `pdfcolparallel` loads package `parallel` [1] and redefines some macros to fix bugs.

If color stacks are available then package `parallel` is further patched to support them.

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

1.1 Option `rulebetweencolor`

Package `pdfcolparallel` also fixes the color for the rule between columns. Default color is `\normalcolor`. But this can be changed by using option `rulebetweencolor` for `\setkeys{parallel}` (see package `keyval`). The option takes a color specification as value. If the value is empty, then the default (`\normalcolor`) is used. Examples:

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

1.2 Future

If there will be a new version of package `parallel` that adds support for color stacks, then this package may become obsolete.

2 Implementation

2.1 Identification

```
1 {*package}  
2 \NeedsTeXFormat{LaTeX2e}  
3 \ProvidesPackage{pdfcolparallel}%  
4 [2019/12/29 v1.5 Color stacks support for parallel (HO)]%
```

2.2 Load and fix package `parallel`

Package `parallel` is loaded. Before options of package `pdfcolparallel` are passed to package `parallel`.

```
5 \DeclareOption*{  
6   \PassOptionsToPackage{\CurrentOption}{parallel}}%  
7 }  
8 \ProcessOptions\relax  
9 \RequirePackage{parallel}[2003/04/13]  
10 \RequirePackage{inifwarerr}[2007/09/09]
```

```
\pcp@ColorPatch  
11 \begingroup\expandafter\expandafter\expandafter\endgroup  
12 \expandafter\ifx\csname currentgrouplevel\endcsname\relax  
13   \def\pcp@ColorPatch{}%  
14 \else  
15   \def\pcp@ColorPatch{}%  
16   \@ifundefined{set@color}{%  
17     \gdef\pcp@ColorPatch{}%  
18   }{%  
19     \gdef\pcp@ColorPatch{}%  
20     \gdef\pcp@ColorResets{}%  
21     \bgroup  
22     \aftergroup\pcp@ColorResets  
23     \aftergroup\egroup  
24     \let\pcp@OrgSetColor\set@color  
25     \let\set@color\pcp@SetColor  
26     \edef\pcp@GroupLevel{\the\currentgrouplevel}%  
27   }%  
28 }%  
29 \pcp@ColorPatch  
30 }%
```

```

\pcp@SetColor
31 \def\pcp@SetColor{%
32   \ifnum\pcp@GroupLevel=\currentgrouplevel
33     \let\pcp@OrgAfterGroup\aftergroup
34     \def\aftergroup{%
35       \g@addto@macro\pcp@ColorResets
36     }%
37     \pcp@OrgSetColor
38     \let\aftergroup\pcp@OrgAfterGroup
39   \else
40     \pcp@OrgSetColor
41   \fi
42 }%
43 \fi

\pcp@CmdCheckRedef
44 \def\pcp@CmdCheckRedef#1{%
45   \begingroup
46     \def\pcp@cmd{#1}%
47     \afterassignment\pcp@CmdDo
48     \long\def\reserved@a
49   }%
50 \def\pcp@CmdDo{%
51   \expandafter\ifx\pcp@cmd\reserved@a
52   \else
53     \edef\x*{\expandafter\string\pcp@cmd}%
54     \@PackageWarningNoLine{pdfcolparallel}{%
55       Command \x* has changed.\MessageBreak
56       Supported versions of package ‘parallel’: \MessageBreak
57       \space\space 2003/04/13\MessageBreak
58       The redefinition of \x* may\MessageBreak
59       not behave correctly depending on the changes%
60     }%
61   \fi
62   \expandafter\endgroup
63   \expandafter\def\pcp@cmd
64 }

65 \def\pcp@SwitchStack#1#2{}
66 \def\pcp@SetCurrent#1{}

\ParallelText
67 \pcp@CmdCheckRedef\ParallelText{%
68   \everypar{}%
69   \restorepar
70   \begingroup
71     \hbadness=3000 %
72     \let\footnote=\ParallelFootnote
73     \ParallelWhichBox=0 %
74     \global\setbox\ParallelBox=\vbox\bgroup
75       \hsize=\ParallelWidth
76       \aftergroup\ParallelAfterText
77     \begingroup
78       \afterassignment\ParallelCheckOpenBrace
79       \let\x=%
80     }{%
81   \everypar{}%
82   \restorepar
83   \nobreakfalse
84   \begingroup
85     \hbadness=3000 %
86     \let\footnote=\ParallelFootnote

```

```

87      \ParallelWhichBox=0 %
88      \global\setbox\ParallelLBox=\vbox\bgroup
89          \hsize=\ParallelLWidth
90          \linewidth=\ParallelLWidth
91          \pcp@SwitchStack{Left}\ParallelLBox
92          \aftergroup\ParallelAfterText
93          \pcp@ColorPatch
94          \begingroup
95              \afterassignment\ParallelCheckOpenBrace
96              \let\x=%
97 }

\ParallelRTText
98 \pcp@CmdCheckRedef\ParallelRTText{%
99     \everypar{}%
100    \restorepar
101    \begingroup
102        \hbadness=3000 %
103        \ifnum\ParallelFNMode=\@ne
104            \let\footnote=\ParallelRFootnote
105        \else
106            \let\footnote=\ParallelLFootnote
107        \fi
108        \ParallelWhichBox=\@ne
109        \global\setbox\ParallelRBox=\vbox\bgroup
110            \hsize=\ParallelRWidth
111            \aftergroup\ParallelAfterText
112            \begingroup
113                \afterassignment\ParallelCheckOpenBrace
114                \let\x=%
115            }{%
116                \everypar{}%
117                \restorepar
118                \nobreakfalse
119                \begingroup
120                    \hbadness=3000 %
121                    \ifnum\ParallelFNMode=\@ne
122                        \let\footnote=\ParallelRFootnote
123                    \else
124                        \let\footnote=\ParallelLFootnote
125                    \fi
126                    \ParallelWhichBox=\@ne
127                    \global\setbox\ParallelRBox=\vbox\bgroup
128                        \hsize=\ParallelRWidth
129                        \linewidth=\ParallelRWidth
130                        \pcp@SwitchStack{Right}\ParallelRBox
131                        \aftergroup\ParallelAfterText
132                        \pcp@ColorPatch
133                        \begingroup
134                            \afterassignment\ParallelCheckOpenBrace
135                            \let\x=%
136 }

\ParallelParTwoPages
137 \pcp@CmdCheckRedef\ParallelParTwoPages{%
138     \ifnum\ParallelBoolVar=\@ne
139         \par
140         \begingroup
141             \global\ParallelWhichBox=\@ne
142             \newpage
143             \vbadness=10000 %
144             \vfuzz=3ex %
145             \splittopskip=z@skip

```

```

146      \loop%
147          \ifnum\ParallelBoolVar=\@ne%
148              \ifnum\ParallelWhichBox=\@ne
149                  \ifvoid\ParallelLBox
150                      \mbox{} %
151                      \newpage
152                  \else
153                      \global\ParallelWhichBox=\z@
154                  \fi
155              \else
156                  \ifvoid\ParallelRBox
157                      \mbox{} %
158                      \newpage
159                  \else
160                      \global\ParallelWhichBox=\@ne
161                  \fi
162              \fi
163          \ifnum\ParallelWhichBox=\z@
164              \ifodd\thepage
165                  \mbox{} %
166                  \newpage
167              \fi
168              \hbox to\textwidth{%
169                  \vbox{\vsplit\ParallelLBox to.98\textheight}%
170              }%
171          \else
172              \ifodd\thepage\relax
173              \else
174                  \mbox{} %
175                  \newpage
176              \fi
177              \hbox to\textwidth{%
178                  \vbox{\vsplit\ParallelRBox to.98\textheight}%
179              }%
180          \fi
181          \vspace*\{\fill}%
182          \newpage
183      \fi
184      \ifvoid\ParallelLBox
185          \ifvoid\ParallelRBox
186              \global\ParallelBoolVar=\z@
187          \fi
188      \fi
189      \ifnum\ParallelBoolVar=\@ne
190          \repeat
191          \par
192          \endgroup
193      \fi
194 }{%

```

Additional fixes:

- Unnecessary white space removed.
- `\ifodd\thepage` changed to `\ifodd\value{page}`.

```

195  \ifnum\ParallelBoolVar=\@ne
196      \par
197      \begingroup
198          \global\ParallelWhichBox=\@ne
199          \newpage
200          \vbadness=10000 %
201          \vfuzz=3ex %
202          \splittopskip=\z@skip

```

```

203      \loop%
204          \ifnum\ParallelBoolVar=\@ne%
205              \ifnum\ParallelWhichBox=\@ne
206                  \ifvoid\ParallelLBox
207                      \mbox{ }%
208                      \newpage
209                  \else
210                      \global\ParallelWhichBox=\z@
211                  \fi
212              \else
213                  \ifvoid\ParallelRBox
214                      \null
215                      \newpage
216                  \else
217                      \global\ParallelWhichBox=\@ne
218                  \fi
219              \fi
220              \ifnum\ParallelWhichBox=\z@
221                  \ifodd\value{page}%
222                      \null
223                      \newpage
224                  \fi
225                  \hbox to\textwidth{%
226                      \pcp@SetCurrent{Left}%
227                      \setbox\z@=\vsplit\ParallelLBox to.98\textheight
228                      \vbox to.98\textheight{%
229                          \texttop
230                          \unvbox\z@
231                          \textbottom
232                      }%
233                  }%
234              \else
235                  \ifodd\value{page}%
236                  \else
237                      \mbox{ }%
238                      \newpage
239                  \fi
240                  \hbox to\textwidth{%
241                      \pcp@SetCurrent{Right}%
242                      \setbox\z@=\vsplit\ParallelRBox to.98\textheight
243                      \vbox to.98\textheight{%
244                          \texttop
245                          \unvbox\z@
246                          \textbottom
247                      }%
248                  }%
249              \fi
250              \vspace*\{\fill}%
251              \newpage
252          \fi
253          \ifvoid\ParallelLBox
254              \ifvoid\ParallelRBox
255                  \global\ParallelBoolVar=\z@
256              \fi
257          \fi
258          \ifnum\ParallelBoolVar=\@ne
259              \repeat
260              \par
261          \endgroup
262          \pcp@SetCurrent{}%
263      \fi
264 }

```

2.3 Color stack support

```
265 \RequirePackage{pdfcol}[2007/12/12]
266 \ifpdfcolAvailable
267 \else
268   \PackageInfo{pdfcolparallel}{%
269     Loading aborted, because color stacks are not available%
270   }%
271   \expandafter\endinput
272 \fi
273 \pdfcolInitStack{pcp@Left}
274 \pdfcolInitStack{pcp@Right}

\pcp@Box
275 \newbox\pcp@Box

\pcp@SwitchStack
276 \def\pcp@SwitchStack#1#2{%
277   \pdfcolSwitchStack{pcp@#1}%
278   \global\setbox\pcp@Box=\vbox to 0pt{%
279     \pdfcolSetCurrentColor
280   }%
281   \aftergroup\pcp@FixBox
282   \aftergroup#2%
283 }

\pcp@FixBox
284 \def\pcp@FixBox#1{%
285   \global\setbox#1=\vbox{%
286     \unvbox\pcp@Box
287     \unvbox#1%
288   }%
289 }

\pcp@SetCurrent
290 \def\pcp@SetCurrent#1{%
291   \ifx\#1\%
292     \pdfcolSetCurrent{}%
293   \else
294     \pdfcolSetCurrent{pcp@#1}%
295   \fi
296 }
```

2.4 Redefinitions

```
\ParallelParOnePage
297 \pcp@CmdCheckRedef\ParallelParOnePage{%
298   \ifnum\ParallelBoolVar=0
299     \par
300     \begingroup
301       \leftmargin=\z@
302       \rightmargin=\z@
303       \parskip=\z@skip
304       \parindent=\z@
305       \vbadness=10000 %
306       \vfuzz=3ex %
307       \splittopskip=\z@skip
308       \loop
309         \ifnum\ParallelBoolVar=0
310           \noindent
311           \hbox to\textwidth{%
312             \hspace{\ParallelLeftMargin}
```

```

313          \hbox to\ParallelTextWidth{%
314              \ifvoid\ParallelLBox
315                  \hskip\ParallelLWidth
316              \else
317                  \ParallelWhichBox=\z@%
318                  \vbox{%
319                      \setbox\ParallelBoxVar
320                          =\vsplit\ParallelLBox to\dp\strutbox
321                      \unvbox\ParallelBoxVar
322                  }%
323              \fi
324              \strut
325              \ifnum\ParallelBoolMid=\@ne
326                  \hskip\ParallelMainMidSkip
327                  \vrule
328              \else
329                  \hss
330              \fi
331              \hss
332              \ifvoid\ParallelRBox
333                  \hskip\ParallelRWidth
334              \else
335                  \ParallelWhichBox=\@ne
336                  \vbox{%
337                      \setbox\ParallelBoxVar
338                          =\vsplit\ParallelRBox to\dp\strutbox
339                      \unvbox\ParallelBoxVar
340                  }%
341              \fi
342          }%
343      }%
344      \ifvoid\ParallelLBox
345          \ifvoid\ParallelRBox
346              \global\ParallelBoolVar=\z@
347          \fi
348          \fi%
349          \fi%
350          \ifnum\ParallelBoolVar=\@ne
351              \penalty\interlinepenalty
352              \repeat
353              \par
354          \endgroup
355      \fi
356  }%
357  \ifnum\ParallelBoolVar=\@ne
358      \par
359      \begingroup
360          \leftmargin=\z@
361          \rightmargin=\z@
362          \parskip=\z@skip
363          \parindent=\z@
364          \vbadness=10000 %
365          \vfuzz=3ex %
366          \splittopskip=\z@skip
367          \loop
368              \ifnum\ParallelBoolVar=\@ne
369                  \noindent
370                  \hbox to\textwidth{%
371                      \hskip\ParallelLeftMargin
372                      \hbox to\ParallelTextWidth{%
373                          \ifvoid\ParallelLBox
374                              \hskip\ParallelLWidth

```

```

375      \else
376          \pcp@SetCurrent{Left}%
377          \ParallelWhichBox=\z@
378          \vbox{%
379              \setbox\ParallelBoxVar
380                  =\vsplit\ParallelLBox to\dp\strutbox
381              \unvbox\ParallelBoxVar
382          }%
383      \fi
384      \strut
385      \ifnum\ParallelBoolMid=\@ne
386          \hskip\ParallelMainMidSkip
387          \begingroup
388              \pcp@RuleBetweenColor
389              \vrule
390          \endgroup
391      \else
392          \hss
393      \fi
394      \hss
395      \ifvoid\ParallelRBox
396          \hskip\ParallelRWidth
397      \else
398          \pcp@SetCurrent{Right}%
399          \ParallelWhichBox=\@ne
400          \vbox{%
401              \setbox\ParallelBoxVar
402                  =\vsplit\ParallelRBox to\dp\strutbox
403              \unvbox\ParallelBoxVar
404          }%
405      \fi
406      }%
407  }%
408  \ifvoid\ParallelLBox
409      \ifvoid\ParallelRBox
410          \global\ParallelBoolVar=\z@
411      \fi
412      \fi%
413      \fi%
414      \ifnum\ParallelBoolVar=\@ne
415          \penalty\interlinepenalty
416          \repeat
417          \par
418      \endgroup
419      \pcp@SetCurrent{}%
420  \fi
421 }

\pcp@RuleBetweenColorDefault
422 \def\pcp@RuleBetweenColorDefault{%
423     \normalcolor
424 }

\pcp@RuleBetweenColor
425 \let\pcp@RuleBetweenColor\pcp@RuleBetweenColorDefault

426 \RequirePackage{keyval}
427 \define@key{parallel}{rulebetweencolor}{%
428     \edef\pcp@temp{\#1}%
429     \ifx\pcp@temp\empty
430         \let\pcp@RuleBetweenColor\pcp@RuleBetweenColorDefault
431     \else
432         \edef\pcp@temp{%

```

```

433      \noexpand@ifnextchar[{%
434          \def\noexpand\pcp@RuleBetweenColor{%
435              \noexpand\color\pcp@temp
436          }%
437          \noexpand\pcp@GobbleNil
438      }{%
439          \def\noexpand\pcp@RuleBetweenColor{%
440              \noexpand\color{\pcp@temp}%
441          }%
442          \noexpand\pcp@GobbleNil
443      }%
444      \pcp@temp\noexpand@nil
445  }%
446  \pcp@temp
447 \fi
448 }

\pcp@GobbleNil
449 \long\def\pcp@GobbleNil#1@nil{}

450 </package>

```

3 Installation

3.1 Download

Package. This package is available on CTAN¹:

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

[CTAN:macros/latex/contrib/oberdiek/pdfcolparallel.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 pdfcolparallel.dtx
```

¹[CTAN:pkg/pdfcolparallel](#)

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

```
pdfcolparallel.sty → tex/latex/oberdiek/pdfcolparallel.sty  
pdfcolparallel.pdf → doc/latex/oberdiek/pdfcolparallel.pdf  
pdfcolparallel.dtx → source/latex/oberdiek/pdfcolparallel.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 `TeX` distribution (`TeX Live`, `MiKTeX`, ...) relies on file name databases, you must refresh these. For example, `TeX Live` users run `texhash` or `mktexlsr`.

3.5 Some details for the interested

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

plain TeX: 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{pdfcolparallel.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 pdfcolparallel.dtx  
makeindex -s gind.ist pdfcolparallel.idx  
pdflatex pdfcolparallel.dtx  
makeindex -s gind.ist pdfcolparallel.idx  
pdflatex pdfcolparallel.dtx
```

4 References

- [1] Matthias Eckermann: *The parallel-package*; 2003/04/13;
[CTAN:pkg/parallel](#).
- [2] Heiko Oberdiek: *The pdfcol package*; 2007/09/09;
[CTAN:pkg/pdfcol](#).

5 History

[2007/09/09 v1.0]

- First version.

[2007/12/12 v1.1]

- Adds patch for setting `\linewidth` to fix bug in package `parallel`.
- Package `parallel` is also fixed if color stacks are not available.
- Bug fix, switched stacks now initialized with current color.
- Fix for package `parallel`: `\raggedbottom` is respected.

[2008/08/11 v1.2]

- Code is not changed.
- URLs updated.

[2010/01/11 v1.3]

- Option ‘rulebetweencolor’ added.

[2016/05/16 v1.4]

- Documentation updates.

[2019/12/29 v1.5]

- `\PassOptionsToPackage` not `\PassoptionsToPackage`

6 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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