

# 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 (H0)]%
```

## 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{infwarerr}[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{}
```

\ParallelLText

```
67 \pcp@CmdCheckRedef\ParallelLText{%
68   \everypar{}%
69   \@restorepar
70   \begingroup
71   \hbadness=3000 %
72   \let\footnote=\ParallelLFootnote
73   \ParallelWhichBox=0 %
74   \global\setbox\ParallelLBox=\vbox\bgroup
75   \hsize=\ParallelLWidth
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=\ParallelLFootnote
```

```

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 }

```

\ParallelRText

```

98 \pcp@CmdCheckRedef\ParallelRText{%
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 \@nbreakfalse
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=\@ne
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=\@ne
310           \noindent
311           \hbox to\textwidth{%
312             \hskip\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     \beginingroup
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 CTAN<sup>1</sup>:

[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<sub>E</sub>X 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<sub>E</sub>X:

```
tex pdfcolparallel.dtx
```

---

<sup>1</sup>[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  $\text{T}_{\text{E}}\text{X}$  distribution ( $\text{T}_{\text{E}}\text{X}$  Live, MiK $\text{T}_{\text{E}}\text{X}$ , ...) relies on file name databases, you must refresh these. For example,  $\text{T}_{\text{E}}\text{X}$  Live users run `texhash` or `mktextlsr`.

### 3.5 Some details for the interested

**Unpacking with  $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ .** The `.dtx` chooses its action depending on the format:

**plain  $\text{T}_{\text{E}}\text{X}$ :** Run `docstrip` and extract the files.

**$\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ :** Generate the documentation.

If you insist on using  $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$  for `docstrip` (really, `docstrip` does not need  $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ ), 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 `pdf $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$` :

```
pdfflatex pdfcolparallel.dtx
makeindex -s gind.ist pdfcolparallel.idx
pdfflatex pdfcolparallel.dtx
makeindex -s gind.ist pdfcolparallel.idx
pdfflatex 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`

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