The `contour` package*

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Abstract

This package is based on an idea of Richard Pfeiffer (`richard.pfeiffer@t-online.de`). It generates a colored contour around a given text in order to enable printing text over a background without the need of a color box around the text.

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1 Introduction

Sometimes it is necessary to print text over a background that is not pure white e. g. in gnuplot plots. It is not always wished to plot the text in a rectangular box since this can cover important information or look poor. This package provides a solution to cover less space with the text and ensure readable text in the same time.

The used technique is quite simple. In a circle around the original text position the same text is printed evenly distributed 16 or 32 times. The default radius for the circle is 0.03 em.

*This file has version 1.03 last revised 2000/03/14, documentation dated 2000/03/14.

2 User interface

To use this package place

```
\usepackage{contour}
```

in the preamble of your document. No options are necessary.

The package provides the commands

```
\contour{<color>}{<text>} and
\contour*{<color>}{<text>}
```

which produce the text <text> with a colored contour around. The * variant makes 32 instead of 16 copies.

The radius of the circle (= thickness of the contour) can be changed using the command \contourlength{<length>}, where <length> is a length understood by LaTeX. The length is not expanded when defining the contour length but when using it. For example when using 0.05em, 0.05 em of the font used in the command \contour are used.

3 Example

The command

```
\colorbox{black}{This text is not visible \contour{yellow}{but this is}}
```

produces:

This text is not visible **but this is**

Another example is shown in figure 1.

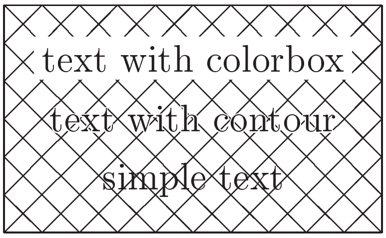


Figure 1: Comparison of the commands \colorbox{white}{<text>} and \contour{<text>}

In figure 2 you can see the looking of the output depending on the number of copies.

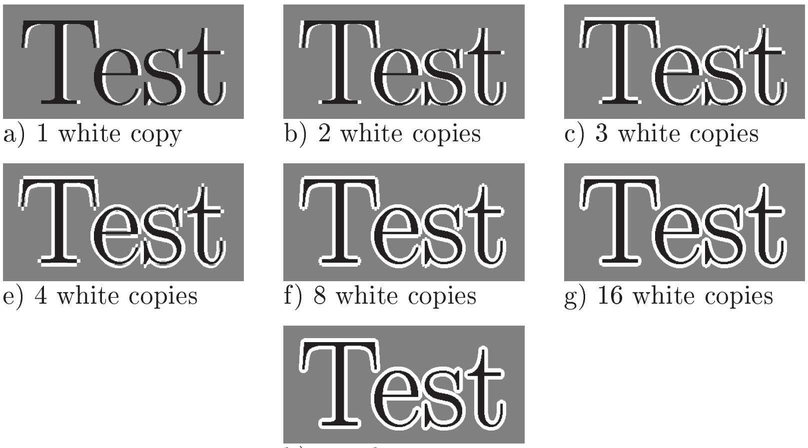
4 The implementation

Heading of the package:

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{contour}
         [\filedate\space version \fileversion]
\message{Package `contour', Version \fileversion\space of \filedate.}
```

This package requires the color package from the graphics bundle:

```
\RequirePackage{color}
```



a) 1 white copy b) 2 white copies c) 3 white copies
e) 4 white copies f) 8 white copies g) 16 white copies
h) 32 white copies

Figure 2: Looking of the contour with different numbers of copies

Set text to a specified relative position without using space:

```
\newcommand{\con@put}[3]{\makebox[0pt][l]{\hspace*{#1}\raisebox{#2}[0pt]{#3}}}
%old version (did not work with characters with depth (e.g. g, y, q))
%\newcommand{\con@put}[3]{\makebox(0,0)[lb]{\hspace*{#1}\vspace*{#2}#3}}
%old version (did not work within \makebox macro:
%\newcommand{\con@put}[3]{\hbox to 0pt{\hskip#1\vbox to 0pt{\vskip#2\vbox
%       to 0pt{\vss\noindent#3}\vss}\hss}}
```

Rename `\color` command to `con@color`. This is down in order to prevent the background text color from being changed:

```
\def\con@off{\let\con@color=\color%
           \def\color##1##2{##2}}%
```

Restor `color` command:

```
\def\con@on{\let\color=\con@color}
```

`\contourlength` Define the commands for changing the base length:

```
\newcommand{\contourlength}[1]{\def\contourbaselength{#1}}
\contourlength{0.03em}
```

Define new offset length:

```
\newlength{\con@length}
```

`\contour` The new macro for producing text with a white contour.

Devide between a normal and a star version.

```
\newcommand{\contour}{\@ifstar{\@contour[*]}{\@contour}}
```

The command itself. The optional parameter is used for the star version `\contour*`.

```
\newcommand{\@contour}[3][\@empty]{%
```

Specifiing the offset length relative to the text size

```
  \setlength{\con@length}{\contourbaselength}%
```

Put the text many times around the current text position.

0°, 90°, 180° and 270°:

```
  \con@put{1\con@length}{0\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-1\con@length}{0\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0\con@length}{1\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0\con@length}{-1\con@length}{\color{#2}\con@off#3\con@on}%
```

45°, 135°, 225° and 315°:

```
  \con@put{0.707\con@length}{0.707\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0.707\con@length}{-0.707\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.707\con@length}{0.707\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.707\con@length}{-0.707\con@length}{\color{#2}\con@off#3\con@on}%
```

22.5°, 67.5°, 112.5°, 157.5° . . . :

```
  \con@put{0.383\con@length}{0.924\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0.383\con@length}{-0.924\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.383\con@length}{0.924\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.383\con@length}{-0.924\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0.924\con@length}{0.383\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0.924\con@length}{-0.383\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.924\con@length}{0.383\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.924\con@length}{-0.383\con@length}{\color{#2}\con@off#3\con@on}%
```

11.25°, 33.75°, 56.25° . . . :

```
  %
\ifx#1\@empty%
\else%
  \con@put{0.195\con@length}{0.981\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0.195\con@length}{-0.981\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.195\con@length}{0.981\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.195\con@length}{-0.981\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0.981\con@length}{0.195\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0.981\con@length}{-0.195\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.981\con@length}{0.195\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.981\con@length}{-0.195\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0.556\con@length}{0.831\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0.556\con@length}{-0.831\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.556\con@length}{0.831\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.556\con@length}{-0.831\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0.831\con@length}{0.556\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{0.831\con@length}{-0.556\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.831\con@length}{0.556\con@length}{\color{#2}\con@off#3\con@on}%
  \con@put{-0.831\con@length}{-0.556\con@length}{\color{#2}\con@off#3\con@on}%
\fi%
  %
```

Print the normal text:

```
  #3%
}
```

The end of the style file

```
\endinput
```

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Numbers written in italic refer to the page where the corresponding entry is described, the ones underlined to the code line of the definition, the rest to the code lines where the entry is used.

Symbols

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\vspace 8
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