the gradientframe package*

Christian Raue

christian.raue@gmail.com
(after being exposed to gravity)

2011/02/13

Abstract

The gradientframe package provides a command, \gradientframe, for simple and discreet rectangular grayscale gradient frames around objects, such as figures or tables, to set them apart from the surrounding text.

Contents

Abstract ................................................. 1

Contents ................................................. 1

1 Introduction ....................................... 2

2 Usage .................................................. 2

3 Examples ............................................. 2
  3.1 Frame surrounding a figure ......................... 2
  3.2 Frame surrounding a figure with additional space 2
  3.3 Frame surrounding a figure with thicker frame lines and additional space 3
  3.4 Frame surrounding a table ......................... 3
  3.5 Frame surrounding a MetaPost figure .............. 4

4 Known issues ........................................ 4

5 Implementation ...................................... 5
  5.1 Package header .................................. 5
  5.2 Options for the \gradientframe command ........ 5
  5.3 Commands ........................................ 5

6 Change history ...................................... 7

*This document corresponds to gradientframe v0.2, dated 2011/02/13.
1 Introduction

The \gradientframe package is loaded in the usual way, i.e. by putting the line
\usepackage{gradientframe}
in the document's preamble. The \gradientframe package depends on the \color package which is
loaded by the \gradientframe package if not already done so far in the document's preamble.

2 Usage

To frame an object, such as figure, table, etc., use the \gradientframe{⟨object⟩} command. By
using \gradientframe*[⟨name=value,...⟩]{⟨object⟩}, the result can be influenced by providing
the following options by name:

- \linewidth (default value: 0.3px)
  defines each color's line width

- \padding (default value: 0mm)
  defines space between the object and the frame (applies to all four sides)

Also take a look at the following examples.

3 Examples

3.1 Frame surrounding a figure

\begin{center}
\gradientframe{\includegraphics{image.jpg}}
\end{center}

3.2 Frame surrounding a figure with additional space

\begin{center}
\gradientframe[padding=5mm]{\includegraphics{image.jpg}}
\end{center}
3.3 Frame surrounding a figure with thicker frame lines and additional space

\begin{center}
\gradientframe[linewidth=1px,padding=5mm]{\includegraphics{image.jpg}}
\end{center}

3.4 Frame surrounding a table

\begin{center}
\gradientframe{\
\begin{tabular}{r|l}
\textbf{column A} & \textbf{column B} \\
\hline
cell 1A & cell 1B \\
& cell 2B \\
& cell 3B \\
\hline
\end{tabular}}
\end{center}

Be careful not to produce unintentional space when breaking lines. Add comments at line endings if needed to prevent this, as shown in lines 2 and 8. Otherwise the result will look like this:

<table>
<thead>
<tr>
<th>column A</th>
<th>column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>cell 1A</td>
<td>cell 1B</td>
</tr>
<tr>
<td>cell 2A</td>
<td>cell 2B</td>
</tr>
<tr>
<td>cell 3A</td>
<td>cell 3B</td>
</tr>
</tbody>
</table>
3.5 Frame surrounding a MetaPost figure

If you want to draw a frame around a MetaPost (or in the case of this example, MetaUML) generated figure, use the \empuse command.

```
\begin{center}
\begin{empfile}
  \begin{empcmds}
    \input metauml;
    \begin{empdef}[unique_name](0,0)
      \save start, end;
      \Begin . start;
      \End . end;
      \leftToRight(15)(start, end);
      \drawObjects(start, end);
      \clink(transition)(start, end);
    \end{empdef}
  \end{empcmds}
  \gradientframe[padding=5mm]{\empuse{unique_name}}
\end{empfile}
\end{center}
```

Alternatively, you could outsource both, the \empdef environment and the \empuse command to a separate file, and use \input{(filename)} as argument to the \gradientframe command.

4 Known issues

When using a page color different than white in combination with a (partially) transparent object, the transparent area inside the frame will be white. To avoid this, a \colorbox has to be drawn around the object. So instead of

```
\pagecolor{color}
\gradientframe{object}
```

one should use

```
\pagecolor{color}
\gradientframe{\colorbox{color}{object}}
```

This issue will hopefully be addressed in a future version.
5 Implementation

5.1 Package header

\NeedsTeXFormat{LaTeX2e}[1999/12/01]
\ProvidesPackage{gradientframe}[2011/02/13 v0.2 simple gradient frames around objects]
\RequirePackage{color}
\RequirePackage{keyval}

5.2 Options for the \texttt{gradientframe} command

The \texttt{keyval} package is used to handle options given to the \texttt{gradientframe} command by name. These options are:

- \texttt{linewidth} – defines each color's line width

\begin{verbatim}
\define@key{gradientframe}{linewidth}{%
  \newdimen\gradientframe@linewidth\%
  \setlength{\gradientframe@linewidth}{#1}\%}
\end{verbatim}

- \texttt{padding} – defines space between the object and the innermost frame line

\begin{verbatim}
\define@key{gradientframe}{padding}{%
  \newdimen\gradientframe@padding\%
  \setlength{\gradientframe@padding}{#1}\%}
\end{verbatim}

\texttt{\gradientframe@defaults} The default values for these options are defined as follows:

\begin{verbatim}
\newcommand{\gradientframe@defaults}{%
  \setkeys{gradientframe}{
    linewidth=0.3px, \\
    padding=0mm
  }%}
\end{verbatim}

5.3 Commands

\texttt{\gradientframe@origlinewidth} This dimension is used internally to preserve the original line width defined by \texttt{\fboxrule}.

\begin{verbatim}
\newdimen\gradientframe@origlinewidth\%
\end{verbatim}

\texttt{\gradientframe@drawbox} This command uses two colors, for border and background, and draws one frame line.

\begin{verbatim}
\newcommand{\gradientframe@drawbox}[3]{% \
  \fcolorbox{#1}{#2}{#3}\%}
\end{verbatim}

\texttt{\gradientframe} This command draws the grayscale gradient frame around objects. This is achieved by drawing multiple frame lines side by side, each with a slightly different color.

\begin{verbatim}
\newcommand{\gradientframe}[2][{}% \
  \gradientframe@defaults% apply defaults \
  \setkeys{gradientframe}{#1}\% \
  % \
  \begingroup% limit redefinitions to this block \
  % backup original \fboxrule value \
  \setlength{\gradientframe@origlinewidth}{\fboxrule}\% \
  % \
  \setlength{\fboxrule}{\gradientframe@linewidth}\% \
  \setlength{\fboxsep}{\gradientframe@linewidth}\% space between frame and object \
  \gradientframe@drawbox{.98}{.96}{% \
  \gradientframe@drawbox{.94}{.92}{% \
\end{verbatim}
\gradientframe@drawbox{.90}{.88}{%
\gradientframe@drawbox{.86}{.84}{%
\gradientframe@drawbox{.82}{.80}{%
\gradientframe@drawbox{.78}{.76}{%
\gradientframe@drawbox{.74}{.72}{%
\setlength{\fboxrule}{\gradientframe@origlinewidth}\% restore original \fboxrule value
\setlength{\fboxsep}{\gradientframe@padding}\%
\gradientframe@drawbox{.70}{1}{#2}%
\endgroup%
%
}
### 6 Change history

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>v0.1</td>
<td>2011/02/10</td>
<td>Initial version.</td>
</tr>
<tr>
<td>v0.1a</td>
<td>2011/02/10</td>
<td>Changed file encoding to ISO-8859-1 due to issues on CTAN.</td>
</tr>
<tr>
<td>v0.2</td>
<td>2011/02/13</td>
<td>Applied several code improvements. Added key/value options for more flexibility. Note: This breaks backward compatibility, so change calls in the form \gradientframe[⟨width⟩]{⟨object⟩} to \gradientframe[padding=⟨width⟩]{⟨object⟩} in case of an update from previous versions.</td>
</tr>
</tbody>
</table>