Manual for sectionbox.sty version 1.01

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1 Introduction

The \LaTeX{} style file sectionbox.sty provides functionality to put sections, subsections, and sub-subsections within boxed minipages with ornaments (from fancybox.sty). It is mainly intended for use in conjunction with sciposter.cls or derived classes (e.g., IWIposter.cls), but it can be used in any context. It provides three new environments, sectionbox, subsectionbox, and subsubsectionbox, and various commands to change their appearance. Several lengths and colors can be set to further fine tune the section boxes at various levels. Due to the use of color boxes, dvi files do not always display properly. However dvips does yield satisfactory postscript files, so the package can be used for both pdf\LaTeX{} and regular \LaTeX{}.

2 Installation

Installation of the package only concerns unpacking the archive in a directory of your choice. It is most convenient to unpack the archive in a directory included in the \texttt{TEXINPUTS} environment variable (at our institute, in your \texttt{.TeX} directory in your home directory). Unpacking is done using the command:

\begin{verbatim}
tar -xzf sectionbox.tgz
\end{verbatim}

This archive contains the style file itself, a \texttt{README} file with copyright and the latest release information, this manual, and an example in a subdirectory \texttt{example}. The example requires sciposter.cls (also available via \url{www.ctan.org}). The example can be compiled using commands:

\begin{verbatim}
pdflatex sectionboxexample
bibtex sectionboxexample
pdflatex sectionboxexample
pdflatex sectionboxexample
\end{verbatim}

To test the example using regular \LaTeX{}, convert the .jpg and .png images to .eps first.

3 Environments Provided

The package provides three environments:

\begin{verbatim}
sectionbox Box containing section or part of section. May not be nested within each other.
subsectionbox Box containing subsection or part of subsection, may be nested within sectionbox, but not within another subsectionbox
subsubsectionbox Box containing subsubsection or part of subsubsection, may be nested within a sectionbox or subsectionbox, but not within another subsubsectionbox
\end{verbatim}
1 Boxed section

Some content.

Some more content.

Figure 1: Example of sectionbox syntax: The top example includes the section header, but does not alter the default width of the box in this two-column example, the bottom reduces the box width, and omits the section header.

2 Boxed section

Some content.

2.1 Boxed subsection

More stuff

2.1.1 Boxed subsubsection

Bla bla

Figure 2: Nested sectionbox, subsectionbox, and subsubsectionbox environments

The syntax for sectionbox is:

\begin{sectionbox}\{<width>\}\{<section title>\}
\<content>\n\end{sectionbox}

The optional parameter sets the width of the sectionbox (default \columnwidth). If the mandatory section title parameter is empty no section header is generated. An example is shown in Figure 1. Because the environments put their contents in a minipage, it is not possible to insert floating environments such as figure, table, or algorithm into a sectionbox. If the document class is sciposter or its derivatives, it is possible, because these environments are redefined to non-floating counterparts. A sectionbox can itself be inserted into a figure, table, or other float.

It is not possible to nest sectionbox environments. If nested boxes are desired, subsectionbox and subsubsectionbox environments can be used.

Leaving the section title empty can be handy if a section does not fit into a single column on a poster (see sectionboxexample.tex). It can also be used to create any fancy boxed minipage environment in which two others (subsectionbox and subsubsectionbox) can easily be nested. If it is desirable to put a \section* into a sectionbox, also leave the section title parameter empty, and insert the \section* command into the contents of the box. A bibliography environment can be inserted in the same way.

Environments subsectionbox and subsubsectionbox have exactly the same syntax, but produce subsection, and subsubsection headers respectively. The default width is also smaller by twice \sectboxmargin. An example is shown in Figure 2.
Table 1: Commands provided by sectionbox.sty

<table>
<thead>
<tr>
<th>Command</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>\framesectionbox</td>
<td>Sets box around sectionbox to single frame</td>
</tr>
<tr>
<td>\doublesectionbox</td>
<td>Sets box around sectionbox to doublebox</td>
</tr>
<tr>
<td>\shadowsectionbox</td>
<td>Sets box around sectionbox to shadowbox</td>
</tr>
<tr>
<td>\framesubsectionbox</td>
<td>Sets box around subsectionbox to single frame</td>
</tr>
<tr>
<td>\doublesubsectionbox</td>
<td>Sets box around subsectionbox to doublebox</td>
</tr>
<tr>
<td>\shadowsubsectionbox</td>
<td>Sets box around subsectionbox to shadowbox</td>
</tr>
<tr>
<td>\framesubsubsectionbox</td>
<td>Sets box around subsectionbox to single frame</td>
</tr>
<tr>
<td>\doublesubsubsectionbox</td>
<td>Sets box around subsectionbox to doublebox</td>
</tr>
<tr>
<td>\shadowsubsubsectionbox</td>
<td>Sets box around subsectionbox to shadowbox</td>
</tr>
</tbody>
</table>

3 Boxed section

Some content in a double box.

3.1 Boxed subsection

More stuff in a shadow box

3.1.1 Boxed subsubsection

Also in a shadow box

3.1.2 Another boxed subsubsection

Back to a single box

Figure 3: Setting different frame borders.

4 Commands Provided

The package provides nine commands to manipulate the appearance of each of the environments. These commands are shown in Table 1. None of these commands have any parameters. The default setting is single frames for all levels. The commands \framesectionbox, \framesubsectionbox, and \framesubsubsectionbox are chiefly needed if the user wants to switch back to single frame boxes after the style has been changed to double or shadow boxes. This is illustrated in Figure 3.

5 Color Selection

Three sets of three colors are defined for this package. One set of colors is defined for each of the three environments. These colors are given in Table 2. Altering the defaults can be done at any point by redefining these colors. An example is shown in Figure 4. Whilst this combination is pretty horrific, it does demonstrate the effect.
Table 2: Colors defined by \texttt{sectionbox.sty}

<table>
<thead>
<tr>
<th>color</th>
<th>Function</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>sectboxrulecol</td>
<td>color of outline of sectionbox</td>
<td>black</td>
</tr>
<tr>
<td>subsectboxrulecol</td>
<td>likewise for subsectionbox</td>
<td>black</td>
</tr>
<tr>
<td>sectboxfillcol</td>
<td>fill color of sectionbox</td>
<td>light grey</td>
</tr>
<tr>
<td>subsectboxfillcol</td>
<td>likewise for subsectionbox</td>
<td>light grey</td>
</tr>
<tr>
<td>sectboxtextcol</td>
<td>color of text in sectionbox</td>
<td>black</td>
</tr>
<tr>
<td>subsectboxtextcol</td>
<td>likewise for subsectionbox</td>
<td>black</td>
</tr>
<tr>
<td>subsectboxtextcol</td>
<td>likewise for subsectionbox</td>
<td>black</td>
</tr>
</tbody>
</table>

3 Boxed section

Some content in a double box.

3.1 Boxed subsection

More stuff in a shadow box.

3.1.1 Boxed subsubsection

Also in a shadow box.

3.1.2 Another boxed subsubsection

Back to a single box.

Figure 4: Setting different colors: inserting the code on the left into the example of Figure 3 produces the result on the right.
6 Lengths

The package sets certain lengths from other packages, in particular \texttt{fancybox.sty}. Most importantly, \texttt{\fboxrule} is set to 0.0014/\texttt{\paperwidth} in portrait mode, and 0.0014/\texttt{\paperheight} in landscape, and \texttt{\shadowsize} is set to 0.0042/\texttt{\paperwidth} in portrait, and 0.0042/\texttt{\paperheight} in landscape mode. This ensures scaling of the line weights with the paper size. Both definitions are global, and will affect any other fancy box in the document. They can be redefined in the usual way.

Within each environment, \texttt{\fboxsep} is first set to 0.5/\texttt{\fboxrule}, to ensure the color box lies flush with the border of the box. It is then set to \texttt{\colboxsep} for use within the colorbox, to ensure a decent spacing between the content of the color box and its edges. If a different value is needed within the content of a \texttt{(sub)sub)sectionbox, it will have to be redefined.

7 Dependencies and Conflicts

Style file \texttt{sectionbox.sty} requires the following packages:

- \texttt{calc}
- \texttt{color}
- \texttt{fancybox}
- \texttt{ifthen}

Most of these packages are either part of the standard \texttt{LATEX} distribution or can be obtained from \texttt{www.ctan.org}.

7.1 Known problems

7.1.1 Colour problem in multicols environment

The colour of the lefthand and top borders (but not the other borders) of the first sectionbox in the second column (and perhaps further columns) is drawn in black, rather than the selected color only in pdf\texttt{LATEX} and only if a blank line precedes the sectionbox. The reason for this seems to be a color-stack problem in the pdf\texttt{LATEX} driver, rather than an error in the code in \texttt{sectionbox.sty}, because the \texttt{LATEX} version works properly combined with either \texttt{dvips} followed by \texttt{ps2pdf} or \texttt{dvipdf}. If you want to use pdf\texttt{LATEX}, remove any blank lines before the top sectionbox of a column and add a “hard” line break to the end of preceding line:

\begin{verbatim}
%content of last section box of first column
\end{sectionbox}\
\begin{sectionbox}{First sectionbox of second column}
\end{verbatim}

See also the (new) example provided. Thanks to Antonio Baptista (Universidade Nova de Lisboa) for this work-around.

7.1.2 Inclusion of float environments

Note: Because the environments put their contents in a \texttt{minipage}, it is not possible to use floating environments such as \texttt{figure}, \texttt{table}, or \texttt{algorithm} inside a \texttt{(sub)sub)sectionbox environment. If the document class is \texttt{sciposter} or one of its derivatives, it is possible, because the \texttt{figure}, \texttt{table}, and \texttt{algorithm} environments are redefined to non-floating counterparts by \texttt{sciposter}.