The \texttt{tabularborder} package *

Johannes Fink

April 15, 2010

\textbf{Abstract}

This package changes the space for horizontal lines at the left side and the right side of a \texttt{tabular} (but not \texttt{array}) to zero space.

\textbf{Contents}

1 Introduction \hfill 1

2 Usage \hfill 2

2.1 Basic Example \hfill 2
2.2 Odd Example \hfill 3
2.3 Improved Example \hfill 3
2.4 Sophisticated Example \hfill 4
2.5 Example Using Helpers \hfill 4
2.6 Example Using Helpers \hfill 5
2.7 Array Example \hfill 5
2.8 Example Using Tabular Star Form \hfill 5
2.9 Nested Tabular Example \hfill 6

3 Implementation \hfill 6

3.1 Additional Helpers \hfill 7

1 \textbf{Introduction}

Usually, the \texttt{tabular} environment adds a space of \texttt{\tabcolsep} on the left side and on the right side of the text. For this reason a \texttt{\hline}, or a \texttt{\toprule}, etc. will exceed the text by the total length of 2 \texttt{\tabcolsep}.

\begin{tabular}{cccc}
\texttt{col 1} & \texttt{col 2} & \texttt{col 3} & \texttt{col 4} \\
\texttt{multicol 1-2} & \texttt{multicol 3-4}
\end{tabular}

*This document corresponds to \texttt{tabularborder v1.0a}, dated 2010/04/14.
If some publishers, or authors, respectively, do not like these additional length of the horizontal lines, the \texttt{tabular} must be reformatted.

\begin{tabular}{llll}
\toprule
\multicolumn{2}{l}{multicol 1-2} & \multicolumn{2}{l}{multicol 3-4} \\
\bottomrule
\end{tabular}

\texttt{\begin{tabular}{@{}llll@{}}} 
\toprule 
\multicolumn{2}{@{}l}{multicol 1-2} & \multicolumn{2}{@{}}{multicol 3-4} \\
\bottomrule 
\end{tabular}}

Formatting is done with \texttt{@{}}, as shown above. Note that the \texttt{\textbackslash multicol} commands must be formatted separately. In a longer project, such as a thesis or book, this reformattting may be a time consuming and a tedious task. In particular, if the supervisor of a thesis work changes his opinion about the layout several times in the course of correcting.

This package changes the leading and trailing spaces automatically into zero without the need of inserting the \texttt{@{}}.

\begin{tabular}{llll}
\toprule 
\multicolumn{2}{l}{col 1 & col 2 & col 3 & col4} & multicol 1-2 & multicol 3-4 \\
\bottomrule 
\end{tabular}

Of course, with such an arrangement, outer vertical lines do not make sense, and actually, they are displaced if tried anyway. By the way, we are using here the package \texttt{booktabs}.

2 Usage

Here are some examples:

2.1 Basic Example

\begin{tabular}{llll}
\toprule 
\multicolumn{2}{l}{col 1 & col 2 & col 3 & col4} & multicol 1-2 & multicol 3-4 \\
\bottomrule 
\end{tabular}
Source code:
\begin{tabular}{llll}
\toprule
col 1 & col 2 & col 3 & col 4\\
\multicolumn{2}{l}{multicol 1-2} & \multicolumn{2}{l}{multicol 3-4}\\
\bottomrule
\end{tabular}

### 2.2 Odd Example

Vertical lines look odd here:

\begin{tabular}{|ll|ll|}
\hline
col 1 & col 2 & col 3 & col 4\\
\multicolumn{2}{l}{multicol 1-2} & \multicolumn{2}{l}{multicol 3-4}\\
\hline
\end{tabular}

Source code:
\begin{tabular}{|ll|ll|}
\hline
col 1 & col 2 & col 3 & col 4\\
\multicolumn{2}{|l|}{multicol 1-2} & \multicolumn{2}{l|}{multicol 3-4}\\
\hline
\end{tabular}

### 2.3 Improved Example

But we may switch off the \texttt{tabularborder} package with \texttt{tboff}.

\begin{tabular}{|ll|ll|}
\hline
col 1 & col 2 & col 3 & col 4\\
\multicolumn{2}{|l|}{multicol 1-2} & \multicolumn{2}{l|}{multicol 3-4}\\
\hline
\end{tabular}

Source code:
\begin{tabular}{|ll|ll|}
\hline
col 1 & col 2 & col 3 & col 4\\
\multicolumn{2}{|l|}{multicol 1-2} & \multicolumn{2}{l|}{multicol 3-4}\\
\hline
\end{tabular}

But we had still to manipulate the \texttt{multicolumn} command. And now switch on again with \texttt{tbon}. 

3
2.4 Sophisticated Example

<table>
<thead>
<tr>
<th>Article</th>
<th>Price/[USD]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beer</td>
<td>3.40</td>
</tr>
<tr>
<td>Whisky</td>
<td>8.20</td>
</tr>
</tbody>
</table>

Source code:

\begin{tabular}{>{\sf}l|r@{}l}
\toprule
Article & \multicolumn{2}{c}{Price/[USD]} \\ \\
\midrule
Beer & \hskip4ex 3&.40\&
Whisky & 8&.20 \&
\bottomrule
\end{tabular}

2.5 Example Using Helpers

<table>
<thead>
<tr>
<th>Article</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beer</td>
<td>Note that this article can be sold only in special shops</td>
</tr>
<tr>
<td>Whisky</td>
<td>---</td>
</tr>
</tbody>
</table>

Source code:

\begin{tabular}
{b{0.5\tabcolwidthii}\hangindent2ex}%
\{b{0.5\tabcolwidthii}\hangindent2ex}
\toprule
Article & Remark \\
\midrule
Beer & Note that this article can be sold only in special shops \\
Whisky & --- \\
\bottomrule
\end{tabular}
2.6 Example Using Helpers

<table>
<thead>
<tr>
<th>Article</th>
<th>Code</th>
<th>Subcode</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beer</td>
<td>B</td>
<td>12</td>
<td>Note that this article can be sold only in special shops</td>
</tr>
<tr>
<td>Whisky</td>
<td>W</td>
<td>10</td>
<td>---</td>
</tr>
</tbody>
</table>

Source code:
\begin{tabular}{b{0.25\textwidth}b{0.25\textwidth}b{0.25\textwidth}b{0.25\textwidth}}
\toprule
Article & Code & Subcode & Remark \\
\midrule
Beer & B & 12 & Note that this article can be sold only in special shops \\
Whisky & W & 10 & --- \\
\bottomrule
\end{tabular}

2.7 Array Example

The array environment is left as before:

\[
x^2 + y^2 = z^2
\]

Source code:
\[
\begin{array}{lcr}
\toprule
x^2 + y^2 &=& z^2\\
\bottomrule
\end{array}
\]

2.8 Example Using Tabular Star Form

The following does not make sense:

5
<table>
<thead>
<tr>
<th>first column</th>
<th>second column</th>
</tr>
</thead>
<tbody>
<tr>
<td>first column</td>
<td>next second column</td>
</tr>
</tbody>
</table>

Source code:
\begin{tabular}{lr}
\toprule
first column & second column \\
first column & next second column \\
\bottomrule
\end{tabular}

2.9 Nested Tabular Example

A nested tabular:

<table>
<thead>
<tr>
<th>first column</th>
<th>second column</th>
</tr>
</thead>
<tbody>
<tr>
<td>first column</td>
<td>next second column</td>
</tr>
</tbody>
</table>

\multicolumn{2}{l}{\begin{tabular}{ll}
\textsuperscript{a} & A nested tabular, longer in this field now \\
\end{tabular}}\
\end{tabular}

Source code:
\begin{tabular}{ll}
\toprule
first column & second column \\
first column & next second column \\
\bottomrule
\multicolumn{2}{l}{\begin{tabular}{ll}
\textsuperscript{a} & A nested tabular, longer in this field now \ \\
\end{tabular}}\end{tabular}

3 Implementation

\RequirePackage

This package has been tested based on the following package:
1 \RequirePackage{booktabs}
2 \RequirePackage{array}[2003/12/17 v2.4a Tabular extension package (FMi)]

However, the examples given here are working with version v2.4c too.

\tb@ialign

We redefine \ialign, \tabskip into -\col@sep:
\begin{verbatim}
3 \newcommand{\tb@ialign}{\everycr{\tabskip-\col@sep\ialign}}
\end{verbatim}

Here we change definitions so that only the tabular is involved.
The following allows to switch back to the original settings by \tboff and reacti-
vate by \tbon.
\newcommand{\@tb@tbtabarray}{}
\newcommand{\tbon}{\global{\let\@tb@tbtabarray\tb@tbtabarray}}
\newcommand{\tboff}{\global{\let\@tb@tbtabarray\@tabarray}}
\tb@array We change the definition of the macro \@@array and rename it. Only three changes
are needed, but we must place the full macro.
\newcommand{\tb@array}{}
\def{\tb@array[#1]#2}{\@tempdima \ht \strutbox\advance \@tempdima by\extrarowheight\setbox \@arstrutbox \hbox{\vrule\@height \arraystretch \@tempdima\@depth \arraystretch \dp \strutbox\@width \z@}}\
\begingroup\@mkpream{#2}\xdef{\@preamble{\noexpand{\tb@ialign} \@halignto\bgroup \@arstrut \tabskip \z@skip \@preamble}}\endgroup\@arrayleft\if#1t\vtop\else\if#1b\vbox\else\vcenter\fi\fi\bgroup\let\@sharp\protect\relax\lineskip \z@\baselineskip \z@\m@th\let\\@arraycr \tabularnewline\let\par\@empty\@preamble}

3.1 Additional Helpers
Here are some additional definitions that facilitate the handling of a tabular. An example is given in section 2.6.
| 36 | \ifdefined\tabcolwidthi\else\newlength{\tabcolwidthi}\fi |
| 37 | \ifdefined\tabcolwidthii\else\newlength{\tabcolwidthii}\fi |
| 38 | \ifdefined\tabcolwidthiii\else\newlength{\tabcolwidthiii}\fi |
| 39 | \ifdefined\tabcolwidthiv\else\newlength{\tabcolwidthiv}\fi |
| 40 | \setlength{\tabcolwidthi}{\textwidth} |
| 41 | \addtolength{\tabcolwidthi}{-0\tabcolsep} |
| 42 | \setlength{\tabcolwidthii}{\textwidth} |
| 43 | \addtolength{\tabcolwidthii}{-2\tabcolsep} |
| 44 | \setlength{\tabcolwidthiii}{\textwidth} |
| 45 | \addtolength{\tabcolwidthiii}{-4\tabcolsep} |
| 46 | \setlength{\tabcolwidthiv}{\textwidth} |
| 47 | \addtolength{\tabcolwidthiv}{-6\tabcolsep} |