The sidenotes package*

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Abstract

This package tries to allow the typesetting of rich content in the margin. This includes text, but also figures, captions, tables and citations. This is common in science textbooks such as Feynman's *Lectures on Physics*.

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1 Usage

\sidenote

The macro is very similar to the footnote macro and tries to emulate its behavior. But like the name says, the note is put in the margin, hence the name sidenote. It has the same parameters as footnote, plus an additional offset: \sidenote[number][offset]{text}. The sidenote moves up or down (floats) to not overlap with other floats in the margin if no offset is given. and all the sidenotes are subsequently numbered. The first, optional parameter will manually change the numbering. The sidenote will be fixed at a particular position in the margin if the offset parameter is used.

\sidenotemark

Sidenote tries to mimic the footnote behavior and tries to provide the same solutions. Sometimes it is not possible to directly call a sidenote macro, e.g. in particular environments. Then, you can also use \sidenotemark[number] and \sidenotemark[number] [offset] {text} commands. \sidenotemark puts a mark at the current position. Then, outside of the environment that causes the

\sidenotetext

^{*}This document corresponds to sidenotes v0.93, dated 2012/04/07.

trouble, it is possible the call \sidenotetext[number][offset]{text} to actually make the sidenote. The first, optional parameter will change the numbering of the sidenote and the offset parameter will change the position manually.

\sidecaption

The \sidecaption[entry] [offset] {text} macro can be used if the caption of a figure or table is supposed to be in the margin. The caption has to be adjacent to the figure, so a float is not an option here. Therefore, the caption might overlap with sidenotes that have to be manually adjusted. Please note, that the formatting is done by the caption package by defining a sidecaption style. This macro has a sister \sidecaption*[offset] {text} that generates no entry.

\sidecaption*

marginfigure

The marginfigure environment puts a figure and its caption in the margin. Instead of \begin{figure}[htbp] use \begin{marginfigure}[offset]. The offset switches the behavior from float to fixed position.

margintable

The margintable environment works similarly, but with table environments. Use \begin{margintable}[offset] instead of \begin{table}[htbp].

figure*

table*

The figure* environment is used to position figures across the full page, i.e. the text width plus margin. The captions type can be changed by changing the widefigure style. The table* environment is very similar, but for tables. Use widetable for its caption style.

2 Technical note

When writing the package, we tried to provide a minimum extension to standard LATEX for typesetting rich content in the margin. Also, we tried to not break compatibility with packages the user might want to additionally load in a custom class file or a document. However, the following packages are needed by this package and might introduce side effects with other packages.

3 Required packages

marginnote supports another command to create notes in the margin. The notes are not floats and can be shifted up or down.

caption is used to set figure and table captions in the margin and to allow formatting of these captions.

xifthen is used to test for empty, optional arguments.

twoopt is used to define macros with two optional arguments.

changepage is used to correctly shift figure* and table*. It has to use the option [strict].

4 Implementation

We need a counter similar to the footnote counter and we want to have a buffer.

```
1 \newcounter{sidenote} % make counter
               2 \newcounter{@sidenotes@buffer}
               3 \setcounter{sidenote}{1} % init counter
               4 \def\@sidenotes@ifnextchar#1#2#3{%
               5 \left( \frac{42}{\%} \right)
               6 \def\@sidenotes@bufferb{#3}\futurelet\@sidenotes@bufferc\@sidenotes@ifnextchar@real}%
               7 \def\@sidenotes@ifnextchar@real{%
               8\ifx\@sidenotes@bufferc\@sidenotes@buffera\@sidenotes@buffera\
               9 \else\let\@sidenotes@bufferd\@sidenotes@bufferb\fi\@sidenotes@bufferd}%
   \sidenote Introduce the sidenote macro with an additional optional argument to set the
              offset.
              10 \newcommandtwoopt{\sidenote}[3][][]{%
              11 \sidenotemark[#1]%
              12 \sidenotetext[#1][#2]{#3}%
              13 \ensuremath{\mbox{\tt 0.07em}}\
              14 {\@sidenotes@ifnextchar\sidecite{\kern-0.07em\textsuperscript{,}}{}}%
              15 }
\sidenotemark Sidenotemark is supposed to work similarly to footnotemark.
              16 \newcommand{\sidenotemark}[1][]{%
              17 \nobreak\hspace{0.1pt}\nobreak%
              18 \ifthenelse{\isempty{#1}}%
              19 {\textsuperscript{\thesidenote}%
              20 \refstepcounter{sidenote}}% if no argument is given use sidenote counter%
              21 {\setcounter{@sidenotes@buffer}{\value{sidenote}}%
              22 \setcounter{sidenote}{#1}%
              23 \textsuperscript{\thesidenote}% print out the argument otherwise
              24 \setcounter{sidenote}{\value{@sidenotes@buffer}}}%
              25 \@sidenotes@ifnextchar\sidenote{\textsuperscript{,}}{}%
              26 \ignorespaces%
              27 }%
\sidenotetext Sidenotetext is supposed to work similarly to footnotetext. The additional, op-
              tional argument sets the offset.
              28 \newcommandtwoopt{\sidenotetext}[3][][]{%
              29 \ifthenelse{\isempty{#1}}{% sitenotemark given?
              30 \addtocounter{sidenote}{-1}%
              31 \ifthenelse{\isempty{#2}}% offset given?
              32 {\marginpar{\textsuperscript{\thesidenote}{} #3}}%
              33 {\marginnote{\textsuperscript{\thesidenote}{} #3}[#2]}%
              34 \addtocounter{sidenote}{1}}%
              35 {\ifthenelse{\isempty{#2}}% offset given?
              36 {\marginpar{\textsuperscript{#1} #3}}%
              37 {\marginnote{\textsuperscript{#1} #3}[#2]}}%
```

38 }%

```
\sidecaption Sidecaption puts the caption in the margin. It never floats with the other text in
                                                          the margin, since it has to be next to the figure. Sidecaption* works similarly to
                                                          sidecaption, but without an entry.
                                                          39 \DeclareCaptionStyle{sidecaption}{font=footnotesize}
                                                          40 \verb|\newcommand{\sidecaption}{\cite{caption} for the command of the caption of
                                                          42 \captionsetup{style=sidecaption}%
                                                          43 \ \texttt{\caption[\#1]} \ \texttt{\caption} \ \texttt{\ca
                                                          44 \newcommand{\@sidenotes@sidecaption@starred}[2][]{\%
                                                          45 \captionsetup{style=sidecaption}%
                                                          46 \left[ \frac{\#2}}{\max[nnote{\caption*{\#2}}]{\{marginnote{\caption*{\#2}}}{\{marginnote{\caption*{\#2}}}{\{marginnote{\caption*{\#2}}}{\{marginnote{\caption*{\#2}}}{\{marginnote{\caption*{\#2}}}{\{marginnote{\caption*{\#2}}}{\{marginnote{\caption*{\#2}}}{\{marginnote{\caption*{\#2}}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\caption*{\#2}}\}}{\{marginnote{\
                                                        The marginfigure is similar to the figure environment. But the figure is put in the
marginfigure
                                                          margin.
                                                          48 \newsavebox{\@sidenotes@sidefigurebox}
                                                          49 \newboolean{@sidenotes@sidefigure@skip}
                                                          50 \newcommand{\@sidenotes@sidefigure@skiplength}{}
                                                          51 \DeclareCaptionStyle{marginfigure}{font=footnotesize}
                                                          52 \newenvironment{marginfigure}[1][]%
                                                          53 {\ifthenelse{\isempty{#1}}% offset?
                                                          54 {\setboolean{@sidenotes@sidefigure@skip}{false}}%
                                                          55 {\setboolean{@sidenotes@sidefigure@skip}{true}%
                                                          56 \renewcommand{\@sidenotes@sidefigure@skiplength}{#1}}%
                                                          57 \ensuremath{\verb| lrbox|{\ensuremath{\verb| lrbox|}{\ensuremath{\verb| lrbox|}{\ensuremath{\verb| dsidenotes@sidefigurebox|}}}\%
                                                          58 \begin{minipage}{\marginparwidth}%
                                                          59 \captionsetup{type=figure,style=marginfigure}}%
                                                          60 {\end{minipage}%
                                                          61 \end{lrbox}%
                                                          62 \ifthenelse{\boolean{@sidenotes@sidefigure@skip}}% offset?
                                                          63 {\marginnote{\usebox{\@sidenotes@sidefigurebox}} [\@sidenotes@sidefigure@skiplength]}% offset
                                                          margintable The sidetable is similar to the table environment. But the table is put in the
                                                          margin.
                                                          66 \newsavebox{\@sidenotes@margintablebox}
                                                          67 \newboolean{@sidenotes@margintable@skip}
                                                          68 \newcommand{\@sidenotes@margintable@skiplength}{}
                                                          69 \DeclareCaptionStyle{margintable}{font=footnotesize}
                                                          70 \newenvironment{margintable}[1][]%
                                                          71 {\ifthenelse{\isempty{#1}}%
                                                          72 {\setboolean{@sidenotes@margintable@skip}{false}}%
                                                          73 {\setboolean{@sidenotes@margintable@skip}{true}%
                                                          74 \renewcommand{\@sidenotes@margintable@skiplength}{#1}}%
                                                          75 \begin{lrbox}{\@sidenotes@margintablebox}%
```

76 \begin{minipage}{\marginparwidth}%

78 {\end{minipage}%

77 \captionsetup{type=table,style=margintable}}%

```
79 \end{lrbox}%
         80 \ifthenelse{\boolean{@sidenotes@margintable@skip}}%
         81 {\marginnote{\usebox{\@sidenotes@margintablebox}} [\@sidenotes@margintable@skiplength]}%
         82 {\marginpar{\usebox{\@sidenotes@margintablebox}}} %
         83 }%
         The figure* environment provides a figure environment for figures across text and
figure*
         margin width
         84 \AtBeginDocument{%
         85 \newlength{\@sidenotes@extrawidth}
         86 \setlength{\@sidenotes@extrawidth}{\marginparwidth}
         87 \addtolength{\@sidenotes@extrawidth}{\marginparsep}
         89 \DeclareCaptionStyle{widefigure}{margin={Opt,-\@sidenotes@extrawidth},font=footnotesize}
         90 \newcommand{\@sidenotes@adjust}{%
         91
                \checkoddpage%
         92
                 \ifoddpage%
         93 %
         94
                 \else%
         95 \hspace{-\@sidenotes@extrawidth}%
                 \fi}
         96
         97 \renewenvironment{figure*}[1][htbp]{\begin{figure}[#1]%
                \@sidenotes@adjust%
                \captionsetup{style=widefigure}%
        100 }{\end{figure}}%
         The table* environment provides a table environment for figures across text and
table*
         margin width
        101 \DeclareCaptionStyle{widetable}{margin={0pt,-\@sidenotes@extrawidth},font=footnotesize}
        102 \renewenvironment{table*}[1][htbp]{\begin{table}[#1]%
        103
                \@sidenotes@adjust%
        104
                \captionsetup{style=widetable}%
        105 }{\end{table}}%
```

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Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

```
\mathbf{F}
                                             .... 2, 84
                                                                       \sidecaption* .... 2
environments:
                                                                       \sidenote ..... 1, \underline{10}
                                                  \mathbf{M}
    figure* .... 2, <u>84</u>
                                                                       \sidenotemark .... 1, \underline{16}
                                   marginfigure (environ-
    marginfigure ... 2, 48
                                                                       \sidenotetext .... 1, \underline{28}
                                            ment) . . . . . 2, 48
    margintable ... 2, \underline{66}
                                   margintable (environ-
    \mathtt{table*} \quad \dots \quad \mathcal{2}, \, \underline{101}
                                                                                       \mathbf{T}
                                            ment) \dots 2, <u>66</u>
                                                                       table* (environment)
               \mathbf{F}
                                                   \mathbf{S}
                                                                                figure* (environment)
                                    \sidecaption .... 1, \underline{39}
```

Change History

v0.2	v0.90
General: Initial version 1	General: added a section that
v0.3	the package needs twoopt and
marginfigure: define the sidefigure	changepage
environment without the environ	two opt package is required, the
package 4	definitions are too confusing
v0.4	otherwise 1
margintable: define the sidetable	marginfigure: the optional offset
environment without the environ	parameter is back, renamed en-
package 4	vironment from sidefigure to
v0.51	marginfigure 4
General: Extent the documentation	margintable: the optional offset
of the macros. $\dots \dots 1$	parameter is back, renamed
v0.52	environment from sidetable to
General: added a section that the	margintable
package needs marginnote, cap-	\sidenote: add optional offset for
tion and xifthen 2	sidenote 3
v0.53	\sidenotetext: add optional offset
\sidenote: bugfix, now optional	for sidenotetext
number and offset possible 3	v0.91
v0.61	General: deleted marginfullcite 1
General: documentation of sidetext 1	sidenotetextstyle is not needed
v0.7	any more
General: rewrite without optional	\sidecaption: sidecaption* accom-
offsets 1	panies sidecaption
v0.80	v0.92
\sidenote: unstar the newcom- mand	General: corrected typo in email ad-
\sidenotetext: unstar the new-	dress
command 3	v0.93
v0.81	General: regular ifnextchar gobbles
\sidenote: added a comma be-	trailing whitespaces, introduce
tween subsequent sidenotes 3	a new one that does not 3
v0.85	\sidenote: removed mandatory
table*: added the table* environ-	whitespace, new ifnextchar
ment 5	takes care of that 3
figure*: added the figure* environ-	\sidenotetext: add missing com-
ment 5	ment marks 3