The ragged2e-package*

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Abstract
This package provides new commands and environments for setting ragged text which are easy to configure to allow hyphenation. An earlier attempt to do this was the style \raggedright[8] by the same author.

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1 The problem
\LaTeX has three commands (\centering, \raggedleft, and \raggedright) and three environments (center, flushleft, and flushright) to typeset ragged text. The environments are based upon the commands (center uses \centering, flushleft \raggedright, and flushright \raggedleft).
These commands have, however, one serious flaw: they render hyphenation almost impossible, and thus the text looks too ragged, as

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the following example shows:

\raggedright:
"The \LaTeX\ document preparation system is a special version of Donald Knuth’s \TeX\ program. It is a sophisticated program designed to produce high-quality typesetting, especially for \textit{mathematical text}.” [5, p. xiii]

\RaggedRight:
plus 1fil, and every line will be filled with space to the right. But this isn’t a particularly good way to make ragged-right margins, because the infinite stretchability will assign zero badness to lines that are very short. To do a decent job of ragged-right setting, the trick is to set \rightskip so that it will stretch enough to make line breaks possible, yet not too much, because short lines should be considered bad. Furthermore the spaces between words should be fixed so that they do not stretch or shrink.”

2 Old “solutions”

2.1 \LaTeX

\LaTeX \ defines \ e.g. \texttt{\raggedright} as follows:

\begin{verbatim}
1 \begin{verbatim}
2 \def\raggedright{%
3 \let\center=\centerline
4 \rightskip\flushglue
5 \rightskip\rightskip
6 \leftskip=0\relax
7 \parindent=0\relax
8 \flushglue = \opt plus 1fil
9 \end{verbatim}
\end{verbatim}
\end{verbatim}

Initially, \texttt{\flushglue} is defined as \texttt{0}\,\texttt{\opt plus 1fil}.

\begin{verbatim}
\end{verbatim}

Thus the \texttt{\rightskip} is set to \texttt{\opt plus 1fil}. Knuth, however warns [4, p. 101]:

“For example, a person can set \texttt{\rightskip=0\opt}

2.2 plain

plain \LaTeX \ defines an special version of \texttt{\raggedright}, which operates the way Knuth describes it; but which can not be used with \LaTeX, because \LaTeX \ redefines \texttt{\raggedright}.

\begin{verbatim}
10 \begin{verbatim}
11 \def\raggedright{%
12 \rightskip=0\relax plus2em
13 \spaceskip=.3333em
14 \xspaceskip=.5em\relax
15 \flushglue = \opt plus1fil
16 \end{verbatim}
\end{verbatim}

plain provides also a version of \texttt{\raggedright} for typewriter fonts

\begin{verbatim}
15 \begin{verbatim}
16 \def\tt\raggedright{%
17 \rightskip=0\relax plus2em\relax
18 \end{verbatim}
\end{verbatim}

3 Our solution

Since the \texttt{plain} solution can not be used with \LaTeX, we have to redefine it and make it possible to configure it for personal preferences.
3 OUR SOLUTION

3.1 The macros

\Centering, \RaggedLeft, and \RaggedRight can be used in the same way as \centering, \raggedleft, and \raggedright: Just type the command, and after that the whole text will be set centered, ragged-left or ragged-right.

For example, we switched on \RaggedRight on the top of this text, and consequently this text was set ragged-right.

\justifying switches back to justified text after ragged text has been switched on.

The new commands \Centering, \RaggedLeft, and \RaggedRight are fully compatible with their counterparts in \LaTeX{}, but implement the plain solution and can be easily configured using the following parameters:

3.2 The parameters

<table>
<thead>
<tr>
<th>Command</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>\Centering</td>
<td>\CenteringLeftskip, \CenteringRightskip, \CenteringParfillskip, \CenteringParindent</td>
</tr>
<tr>
<td>\RaggedLeft</td>
<td>\RaggedLeftLeftskip, \RaggedLeftRightskip, \RaggedLeftParfillskip, \RaggedLeftParindent</td>
</tr>
<tr>
<td>\RaggedRight</td>
<td>\RaggedRightLeftskip, \RaggedRightRightskip, \RaggedRightParfillskip, \RaggedRightParindent</td>
</tr>
<tr>
<td>\justifying</td>
<td>\JustifyingParfillskip, \JustifyingParindent</td>
</tr>
</tbody>
</table>

All Parameters can be set with \setlength, e.g.

\setlength{\RaggedRightRightskip}{\textwidth plus 1em}

sets \RaggedRightRightskip to \textwidth plus 1em.

These are the \leftskips inserted by \Centering, \RaggedLeft, and \RaggedRight.

"\leftskip (glue at left of justified lines)" [4, p. 274]

\leftskip must be set to a finite value, to make hyphenation possible. Setting it to infinite values like \textwidth plus 1fil makes hyphenation almost impossible.

These are the \rightskips inserted by \Centering, \RaggedLeft, and \RaggedRight.

"\rightskip (glue at right of justified lines)" [4, p. 274]

\rightskip must be set to a finite value, to make hyphenation possible. Setting it to infinite values like \textwidth plus 1fil makes hyphenation almost impossible.

These are the \parfillskips inserted by \Centering, \RaggedLeft,
3 OUR SOLUTION

\RaggedRight, and \justifying.

```
\parfillskip (additional \rightskip at end of paragraphs)" [4, p. 274]
```

The normal setting for \parfillskip is Opt plus 1fil; the parameters are provided for testing combinations of \{left\right\}skip and \parfillskip.

These are the \parindents used by \Centering, \RaggedLeft, \RaggedRight, and \justifying.

```
\parindent (width of \indent)" [4, p. 274]
```

\parindent is the indent of the first line of a paragraph and should be set to Opt, since indented lines in ragged text do not look good.

The parameters have the following initial setting:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>\LaTeX{} setting</th>
<th>\ragged2e setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>\CenteringLeftskip</td>
<td>Opt plus 1fil</td>
<td>Opt plus 2em</td>
</tr>
<tr>
<td>\RaggedLeftLeftskip</td>
<td>Opt plus 1fil</td>
<td>Opt plus 2em</td>
</tr>
<tr>
<td>\RaggedRightLeftskip</td>
<td>Opt plus Opt</td>
<td>Opt plus Opt</td>
</tr>
<tr>
<td></td>
<td>minus Opt</td>
<td>minus Opt</td>
</tr>
<tr>
<td>\CenteringRightskip</td>
<td>Opt plus 1fil</td>
<td>Opt plus 2em</td>
</tr>
<tr>
<td>\RaggedLeftRightskip</td>
<td>Opt plus Opt</td>
<td>Opt plus Opt</td>
</tr>
<tr>
<td></td>
<td>minus Opt</td>
<td>minus Opt</td>
</tr>
<tr>
<td>\RaggedRightRightskip</td>
<td>Opt plus 1fil</td>
<td>Opt plus 2em</td>
</tr>
<tr>
<td>\CenteringParfillskip</td>
<td>Opt plus Opt</td>
<td>Opt plus Opt</td>
</tr>
<tr>
<td></td>
<td>minus Opt</td>
<td>minus Opt</td>
</tr>
<tr>
<td>\RaggedLeftParfillskip</td>
<td>Opt plus Opt</td>
<td>Opt plus Opt</td>
</tr>
<tr>
<td></td>
<td>minus Opt</td>
<td>minus Opt</td>
</tr>
<tr>
<td>\RaggedRightParfillskip</td>
<td>Opt plus 1fil</td>
<td>Opt plus 1fil</td>
</tr>
<tr>
<td>\CenteringParindent</td>
<td>Opt</td>
<td>Opt</td>
</tr>
<tr>
<td>\RaggedLeftParindent</td>
<td>Opt</td>
<td>Opt</td>
</tr>
<tr>
<td>\RaggedRightParindent</td>
<td>Opt</td>
<td>Opt</td>
</tr>
<tr>
<td>\JustifyingParfillskip</td>
<td>Opt plus 1fil</td>
<td>1em</td>
</tr>
</tbody>
</table>

3.3 The environments

Center Center is fully compatible with center, but uses \Centering instead of \centering.

FlushLeft FlushLeft is fully compatible with flushleft, but uses \RaggedRight instead of \raggedright.

FlushRight FlushRight is fully compatible with flushright, but uses \RaggedLeft

\*Actually we also set \RaggedRightRightskip higher than usual (Opt plus 4em) because of all the long command names which make linebreaking difficult.

\*For proportional and monospaced fonts.
4 OPTIONS

instead of \raggedleft.

\justify is like the other environments but uses \justifying.

E.g. FlushLeft can be used in the same way as flushleft:

\begin{FlushLeft}
{text, which is set ragged-right}
\end{FlushLeft}

4 Options

This package has the following options:

originalcommands The \LaTeX\-commands \texttt{\textbackslash centering}, \texttt{\textbackslash raggedleft}, and
\texttt{\textbackslash raggedright} and the \LaTeX\-environments \texttt{center}, \texttt{flushleft}, and
\texttt{flushright} remain unchanged.

It is the default.

newcommands The \LaTeX\-commands \texttt{\textbackslash centering}, \texttt{\textbackslash raggedleft}, and
\texttt{\textbackslash raggedright} and the \LaTeX\-environments \texttt{center}, \texttt{flushleft}, and
\texttt{flushright} are set equal to their counterparts defined by \texttt{ragged2e}.

Thus \texttt{\textbackslash raggedright} invokes \texttt{\textbackslash RaggedRight}. The original commands can be accessed under the Names \texttt{\LaTeX\textbackslash original name}, e.g.
\texttt{\LaTeX\textbackslash RaggedRight}.

originalparameters The parameters used by the commands implemented by \texttt{ragged2e} are initialized with the default settings used by \LaTeX.

newparameters The parameters used by the commands implemented by \texttt{ragged2e} are initialized with the default settings defined by \texttt{ragged2e}.

It is the default.

raggedrightboxes All \texttt{parboxes}, \texttt{minipages}, \texttt{marginpars} and p-columns of
\texttt{tabulars} and \texttt{arrays} are automatically set using \texttt{\textbackslash RaggedRight}.

footnotes This options sets all footnotes ragged-right by loading the
\texttt{footmisc}[2] package with the \texttt{ragged} option.

document This options sets the complete document ragged-right by executing a \texttt{\textbackslash RaggedRight} at \texttt{\begin{document}} and the \texttt{raggedrightboxes} and the \texttt{footnotes} options.

All other options are passed to the \texttt{footmisc} package if the \texttt{footnotes}
option is selected.

5 Required packages

This package requires the following package:
everySel[7] It is used to distinguish between monospaced and proportional fonts.

footmisc[2] It is used by the footnotes option; at least version 5.00 (2002/08/28) is needed.

6 Acknowledgements

A first version of this package for \LaTeX{}2.09 was named raggedr[8]. Laurent Siebenmann (lcs@tex.math.u-psud.fr) with his style ragged.sty[9] provided the final impulse for this new implementation.

The code for \texttt{\textbackslash justifying, justify} and the overloading of \texttt{\textbackslash arrayparboxrestore} is incorporated from the ragged[3] package by James Kilfinger (mapdn@csv.warwick.ac.uk).

Without the constant nagging of Rainer Sieger (rsieger@awi-bremerhaven.de) this package might not be.

Markus Kohm (markus.kohm@gmx.de) provided the code for \texttt{\textbackslash newline}.

Frank Mittelbach (frank.mittelbach@latex-project.org) provided the impetus for version 2.00.

References


[2] Robin Fairbairns. \texttt{footmisc} — a portmanteau package for customising footnotes in \LaTeX{}2\textsubscript{e}. \texttt{CTAN:tex-archive/macros/latex/contrib/supported/footmisc/footmisc.dtx}.

[3] James Kilfinger. \texttt{CTAN:tex-archive/macros/latex/contrib/other/misc/raggedr.sty}. \LaTeX{}2\textsubscript{e} package.


[6] Frank Mittelbach and Rainer Schöpf. The file \texttt{cmfonts.fdd} for use with \LaTeX{}2\textsubscript{e}. Part of the \LaTeX{}-distribution.

[7] Martin Schröder. The \texttt{everySel}-package. \texttt{CTAN:tex-archive/macros/latex/contrib/supported/ms/everySel.dtx}. \LaTeX{}2\textsubscript{e} package.

REFERENCES

[9] Laurent Siebenmann. \texttt{ragged.sty}. CTAN:tex-archive/macros/generic/ragged.sty. generic macro file for plain and \LaTeX.
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</tbody>
</table>