

# 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:

<pre>\raggedright: “The L<sup>A</sup>T<sub>E</sub>X document preparation system is a special version of Donald Knuth’s T<sub>E</sub>X program. T<sub>E</sub>X is a sophisticated program designed to produce high-quality typesetting, especially for mathematical text.” [5, p. xiii]</pre>	<pre>\RaggedRight: “The L<sup>A</sup>T<sub>E</sub>X document prepara- tion system is a special version of Donald Knuth’s T<sub>E</sub>X program. T<sub>E</sub>X is a sophis- ticated program designed to pro- duce high-quality typesetting, especially for mathematical text.” [5, p. xiii]</pre>
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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 L<sup>A</sup>T<sub>E</sub>X

L<sup>A</sup>T<sub>E</sub>X defines e. g. `\raggedright` as follows:

```
1 ⟨*latex⟩
2 \def\raggedright{%
3   \let\=\@centercr
4   \@rightskip\@flushglue
5   \rightskip\@rightskip
6   \leftskip\z@
7   \parindent\z@}
```

Initially, `\@flushglue` is defined as

```
8 \@flushglue = 0pt plus 1fil
9 ⟨/latex⟩
```

Thus the `\rightskip` is set to `0pt plus 1fil`. Knuth, however warns [4, p. 101]:

“For example, a person can set `\rightskip=0pt`

### 2.2 plain

plain T<sub>E</sub>X defines an special version of `\raggedright`, which operates the way Knuth describes it; but which can not be used with L<sup>A</sup>T<sub>E</sub>X, because L<sup>A</sup>T<sub>E</sub>X redefines `\raggedright`.

```
10 ⟨*plain⟩
11 \def\raggedright{%
12   \rightskip\z@ plus2em
13   \spaceskip.3333em
14   \xspaceskip.5em\relax}
```

plain provides also a version of `\raggedright` for typewriter fonts

```
15 \def\tttraggedright{%
16   \tt
17   \rightskip\z@ plus2em\relax}
18 ⟨/plain⟩
```

## 3 Our solution

Since the plain solution can not be used with L<sup>A</sup>T<sub>E</sub>X, we have to redefine it and make it possible to configure it for personal preferences.

### 3.1 The macros

`\Centering` `\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` `\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 L<sup>A</sup>T<sub>E</sub>X, but implement the plain solution and can be easily configured using the following parameters:

New feature  
2003/01/04

### 3.2 The parameters

Command	Uses
<code>\Centering</code>	<code>\CenteringLeftskip</code> , <code>\CenteringRightskip</code> , <code>\CenteringParfillskip</code> , <code>\CenteringParindent</code>
<code>\RaggedLeft</code>	<code>\RaggedLeftLeftskip</code> , <code>\RaggedLeftRightskip</code> , <code>\RaggedLeftParfillskip</code> , <code>\RaggedLeftParindent</code>
<code>\RaggedRight</code>	<code>\RaggedRightLeftskip</code> , <code>\RaggedRightRightskip</code> , <code>\RaggedRightParfillskip</code> , <code>\RaggedRightParindent</code>
<code>\justifying</code>	<code>\JustifyingParfillskip</code> , <code>\JustifyingParindent</code>

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

```
\setlength{RaggedRightRightskip}{Opt plus 1em}
```

sets `\RaggedRightRightskip` to `Opt plus 1em`.

`\CenteringLeftskip`  
`\RaggedLeftLeftskip`  
`\RaggedRightLeftskip`

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 `Opt plus 1fil` makes hyphenation almost impossible.

`\CenteringRightskip`  
`\RaggedLeftRightskip`  
`\RaggedRightRightskip`

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 `Opt plus 1fil` makes hyphenation almost impossible.

`\CenteringParfillskip`  
`\RaggedLeftParfillskip`  
`\RaggedRightParfillskip`

These are the `\parfillskips` inserted by `\Centering`, `\RaggedLeft`,

`\RaggedRight`, and `\justifying`.

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

The normal setting for `\parfillskip` is `0pt plus 1fil`; the parameters are provided for testing combinations of `\{left|right\}skip` and `\parfillskip`.

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

`\RaggedRightParindent` “`\parindent` (width of `\indent`)” [4, p. 274]  
`\JustifyingParindent`

`\parindent` is the indent of the first line of a paragraph and should be set to `0pt`, since indented lines in ragged text do not look good.

The parameters have the following initial setting:

Parameter	L <sup>A</sup> T <sub>E</sub> X setting	ragged2e setting
<code>\CenteringLeftskip</code>	<code>0pt plus 1fil</code>	<code>0pt plus 2em</code>
<code>\RaggedLeftLeftskip</code>	<code>0pt plus 1fil</code>	<code>0pt plus 2em</code>
<code>\RaggedRightLeftskip</code>	<code>0pt plus 0pt</code> <code>minus 0pt</code>	<code>0pt plus 0pt</code> <code>minus 0pt</code>
<code>\CenteringRightskip</code>	<code>0pt plus 1fil</code>	<code>0pt plus 2em</code>
<code>\RaggedLeftRightskip</code>	<code>0pt plus 0pt</code> <code>minus 0pt</code>	<code>0pt plus 0pt</code> <code>minus 0pt</code>
<code>\RaggedRightRightskip</code>	<code>0pt plus 1fil</code>	<code>0pt plus 2em</code>
<code>\CenteringParfillskip</code>	<code>0pt plus 0pt</code> <code>minus 0pt</code>	<code>0pt plus 0pt</code> <code>minus 0pt</code>
<code>\RaggedLeftParfillskip</code>	<code>0pt plus 0pt</code> <code>minus 0pt</code>	<code>0pt plus 0pt</code> <code>minus 0pt</code>
<code>\RaggedRightParfillskip</code>	<code>0pt plus 1fil</code>	<code>0pt plus 1fil</code>
<code>\CenteringParindent</code>	<code>0pt</code>	<code>0pt</code>
<code>\RaggedLeftParindent</code>	<code>0pt</code>	<code>0pt</code>
<code>\RaggedRightParindent</code>	<code>0pt</code>	<code>0pt</code>
<code>\JustifyingParfillskip</code>		<code>0pt plus 1fil</code>
<code>\JustifyingParindent</code>		<code>1em</code>

### 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 (`0pt plus 4em`) because of all the long command names which make linebreaking difficult.

\* For proportional and monospaced fonts.

instead of `\raggedleft`.

`justify` `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}
```

New feature  
2003/01/04

## 4 Options

This package has the following options:

`originalcommands` The L<sup>A</sup>T<sub>E</sub>X-commands `\centering`, `\raggedleft`, and `\raggedright` and the L<sup>A</sup>T<sub>E</sub>X-environments `center`, `flushleft`, and `flushright` remain unchanged.

It is the default.

`newcommands` The L<sup>A</sup>T<sub>E</sub>X-commands `\centering`, `\raggedleft`, and `\raggedright` and the L<sup>A</sup>T<sub>E</sub>X-environments `center`, `flushleft`, and `flushright` are set equal to their counterparts defined by `ragged2e`. Thus `\raggedright` invokes `\RaggedRight`. The original commands can be accessed under the Names `\LaTeX<original name>`, e.g. `\LaTeXraggedright`.

`originalparameters` The parameters used by the commands implemented by `ragged2e` are initialized with the default settings used by L<sup>A</sup>T<sub>E</sub>X.

`newparameters` The parameters used by the commands implemented by `ragged2e` are initialized with the default settings defined by `ragged2e`.

It is the default.

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

`footnotes` This options sets all footnotes ragged-right by loading the `footmisc[2]` package with the `ragged` option.

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

All other options are passed to the `footmisc` package if the `footnotes` option is selected.

New feature  
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New feature  
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New feature  
2003/01/18

## 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 L<sup>A</sup>T<sub>E</sub>X 2.09 was named `raggedri`[8]. Laurent Siebenmann (`lcs@topo.math.u-psud.fr`) with his style `ragged.sty`[9] provided the final impulse for this new implementation.

The code for `\justifying`, `justify` and the overloading of `\@arrayparboxrestore` is incorporated from the `raggedr`[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 `\@gnewline`.

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

## References

- [1] Johannes Braams, David Carlisle, Alan Jeffrey, Leslie Lamport, Frank Mittelbach, Chris Rowley, and Rainer Schöpf. `ltxmisc.dtx`. Part of the L<sup>A</sup>T<sub>E</sub>X-distribution.
- [2] Robin Fairbairns. `footmisc` — a portmanteau package for customising footnotes in L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>. CTAN:`tex-archive/macros/latex/contrib/supported/footmisc/footmisc.dtx`.
- [3] James Kilfinger. CTAN:`tex-archive/macros/latex/contrib/other/misc/raggedr.sty`. L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> package.
- [4] Donald E. Knuth. *The T<sub>E</sub>X Book*, volume A of *Computers & Typesetting*. Addison-Wesley, Reading, MA, USA, 1986.
- [5] Leslie Lamport. *L<sup>A</sup>T<sub>E</sub>X: A Document Preparation System*. Addison-Wesley, Reading, MA, USA, first edition, 1986.
- [6] Frank Mittelbach and Rainer Schöpf. The file `cmfonts.fdd` for use with L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>. Part of the L<sup>A</sup>T<sub>E</sub>X-distribution.
- [7] Martin Schröder. The `everysel`-package. CTAN:`tex-archive/macros/latex/contrib/supported/ms/everysel.dtx`. L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> package.
- [8] Martin Schröder. The `raggedri` document option. Was in CTAN:`tex-archive/macros/latex209/contrib/raggedright`. L<sup>A</sup>T<sub>E</sub>X 2.09 style, outdated.

- [9] Laurent Siebenmann. `ragged.sty`. CTAN:`tex-archive/macros/generic/ragged.sty`. generic macro file for plain and  $\text{\LaTeX}$ .

## Index

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.

Symbols		L	
<code>\@centercr</code> . . . . .	3	<code>\leftskip</code> . . . . .	6
<code>\@flushglue</code> . . . . .	4, 8	<code>\let</code> . . . . .	3
<code>\@rightskip</code> . . . . .	4, 5		
<code>\</code> . . . . .	3	P	
		<code>\parindent</code> . . . . .	7
C		R	
<code>Center</code> (environment) . . . . .	4	<code>\RaggedLeft</code> . . . . .	2
<code>\Centering</code> . . . . .	2	<code>\RaggedLeftLeftskip</code> . . . . .	3
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<code>\CenteringParfillskip</code> . . . . .	3	<code>\RaggedLeftParindent</code> . . . . .	3
<code>\CenteringParindent</code> . . . . .	3	<code>\RaggedLeftRightskip</code> . . . . .	3
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<code>FlushRight</code> (environment) . . . . .	4	<code>\tt</code> . . . . .	16
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<code>\justifying</code> . . . . .	2	<code>\xspaceskip</code> . . . . .	14
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## Change History

v1.00		v2.00	
General: New from <code>raggedright</code>		General: Allow all-lowercase	
V 1.21 . . . . .	1	versions of options and re-	
v1.01		moved documentation of	
General: Documentation im-		mixed-case versions. . . . .	4
proved . . . . .	1	Incorporated <code>raggedr</code> . . . . .	1
v1.02		New command <code>\justifying</code> . . . . .	2
General: Moved to LPPL . . . . .	1	New environment <code>justify</code> . . . . .	4



New option document . . . . .	5	Removed <code>\RaggedSpaceskip</code>	
New option footnotes . . . . .	5	and <code>\RaggedXSpaceskip</code> . . .	3
New option <code>raggedrightboxes</code> .	5		