

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

L^AT_EX 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 the following example shows:

`\raggedright`:
 “The L^AT_EX document preparation system is a special version of Donald Knuth’s T_EX program. T_EX is a sophisticated program designed to produce high-quality typesetting, especially for mathematical text.” [5, p. xiii]

`\RaggedRight`:
 “The L^AT_EX document preparation system is a special version of Donald Knuth’s T_EX program. T_EX is a sophisticated program designed to produce high-quality typesetting, especially for mathematical text.” [5, p. xiii]

2 Old “solutions”

2.1 L^AT_EX

L^AT_EX defines e.g. `\raggedright` as follows:

```
1 \langle latex \rangle
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 \langle latex \rangle
```

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

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

2.2 plain

`plain` T_EX defines an special version of `\raggedright`, which operates the way Knuth describes it; but which can not be used with L^AT_EX, because L^AT_EX redefines

`\raggedright`.

```
10 (*plain)
11 \def\raggedright{%
12   \rightskip\z@ plus2em
13   \spaceskip.333em
14   \xspaceskip.5em\relax}
```

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

```
15 \def\tt\raggedright{%
16   \tt
17   \rightskip\z@ plus2em\relax}
18 \end{plain}
```

3 Our solution

Since the `plain` solution can not be used with L^AT_EX, we have to redefine it and make it possible to configure it for personal preferences.

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 L^AT_EX, but implement the `plain` solution and can be easily configured using the following parameters:

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>

*For this documentation we also set `\RaggedRightRightskip` higher than usual (0pt plus 4em instead of 0pt plus 2em) because of all the long command names which make linebreaking difficult.

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

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

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

```
\CenteringLeftskip   These are the \leftskips inserted by \Centering, \RaggedLeft, and
\RaggedLeftLeftskip  \RaggedRight.
\RaggedRightLeftskip
```

“`\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  These are the \rightskips inserted by \Centering, \RaggedLeft, and
\RaggedLeftRightskip \RaggedRight.
\RaggedRightRightskip
```

“`\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 These are the \parfillskips inserted by \Centering, \RaggedLeft,
\RaggedLeftParfillskip \RaggedRight, and \justifying.
\RaggedRightParfillskip
\JustifyingParfillskip
```

“`\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`.

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

“`\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:

Parameter	L ^A T _E X setting	ragged2e setting [†]
<code>\CenteringLeftskip</code>	Opt plus 1fil	Opt plus 2em
<code>\RaggedLeftLeftskip</code>	Opt plus 1fil	Opt plus 2em
<code>\RaggedRightLeftskip</code>	Opt plus Opt minus Opt	Opt plus Opt minus Opt
<code>\CenteringRightskip</code>	Opt plus 1fil	Opt plus 2em
<code>\RaggedLeftRightskip</code>	Opt plus Opt minus Opt	Opt plus Opt minus Opt
<code>\RaggedRightRightskip</code>	Opt plus 1fil	Opt plus 2em
<code>\CenteringParfillskip</code>	Opt plus Opt minus Opt	Opt plus Opt minus Opt
<code>\RaggedLeftParfillskip</code>	Opt plus Opt minus Opt	Opt plus Opt minus Opt
<code>\RaggedRightParfillskip</code>	Opt plus 1fil	Opt plus 1fil
<code>\CenteringParindent</code>	Opt	Opt
<code>\RaggedLeftParindent</code>	Opt	Opt
<code>\RaggedRightParindent</code>	Opt	Opt
<code>\JustifyingParfillskip</code>		Opt plus 1fil
<code>\JustifyingParindent</code>		<code>\parindent</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` instead of `\raggedleft`.
- justify** `justify` is like the other environments but uses `\justifying`.

New feature
2003/01/04

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 L^AT_EX-commands `\centering`, `\raggedleft`, and `\raggedright` and the L^AT_EX-environments `center`, `flushleft`, and `flushright` remain unchanged.

It is the default.

[†]For proportional and monospaced fonts.

newcommands The L^AT_EX-commands `\centering`, `\raggedleft`, and `\raggedright` and the L^AT_EX-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 $\langle original name \rangle$` , e. g. `\LaTeXraggedright`.

originalparameters The parameters used by the commands implemented by `ragged2e` are initialized with the default settings used by L^AT_EX.

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

New feature
2003/01/18

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

New feature
2003/01/18

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

New feature
2003/01/18

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.

5 Required packages

This package requires the following packages:

`everyysel` [7] It is used to distinguish between monospaced and proportional fonts.

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

6 The implementation

19 `*package)`

6.1 Initial Code

`\if@raggedtwoe@originalcommands` `\if@raggedtwoe@originalcommands` is used to flag the use of the `originalcommands` or `newcommands` option.

20 `\newif\if@raggedtwoe@originalcommands`

`\if@raggedtwoe@originalparameters` `\if@raggedtwoe@originalparameters` is used to flag the use of the `originalparameters` or `newparameters` option.

21 `\newif\if@raggedtwoe@originalparameters`

```
\if@raggedtwoe@footmisc \if@raggedtwoe@footmisc is used to flag the use of the footnotes option.
22 \newif\if@raggedtwoe@footmisc
```

6.2 Declaration of options

6.2.1 originalcommands option

The `originalcommands` and `newcommands` options control the meaning of the \LaTeX -commands for ragged text: If `newcommands` is used the \LaTeX -commands are set equal to the commands defined by `ragged2e`.

```
23 \DeclareOption{OriginalCommands}{\@raggedtwoe@originalcommandstrue}
24 \DeclareOption{originalcommands}{\@raggedtwoe@originalcommandstrue}
25 \DeclareOption{NewCommands}{\@raggedtwoe@originalcommandsfalse}
26 \DeclareOption{newcommands}{\@raggedtwoe@originalcommandsfalse}
```

6.2.2 originalparameters option

The `originalparameters` and `newparameters` options control the defaults for the parameters used by the commands implemented by `ragged2e`: If `newparameters` is used the parameters are set to the values defined by `ragged2e`.

```
27 \DeclareOption{OriginalParameters}{\@raggedtwoe@originalparameterstrue}
28 \DeclareOption{originalparameters}{\@raggedtwoe@originalparameterstrue}
29 \DeclareOption{NewParameters}{\@raggedtwoe@originalparametersfalse}
30 \DeclareOption{newparameters}{\@raggedtwoe@originalparametersfalse}
```

6.2.3 raggedrightboxes option

The option `raggedrightboxes` sets all `\parboxes`, `minipages`, `\marginpars` and `p`-columns of `tabulars` and `arrays` using `\RaggedRight`. This is done by redefining `\@arrayparboxrestore`.

```
\@raggedtwoe@raggedrightboxes@opt \@raggedtwoe@raggedrightboxes@opt is the code executed via
\DeclareOption.
```

```
31 \newcommand*{\@raggedtwoe@raggedrightboxes@opt}{
```

First we check if `\@arrayparboxrestore` is unchanged.

```
32 \CheckCommand*{\@arrayparboxrestore}{%
33 \let\if@nbreak\iffalse
34 \let\if@noskipsec\iffalse
35 \let\par\@par
36 \let\-\@dischyph
37 \let'\@acci\let'\@accii\let\=\@acciii
38 \parindent\z@ \parskip\z@skip
39 \everypar{}%
40 \linewidth\hsize
41 \@totalleftmargin\z@
42 \leftskip\z@skip \rightskip\z@skip \@rightskip\z@skip
```

```

43 \parfillskip\@flushglue \lineskip\normallineskip
44 \baselineskip\normalbaselineskip
45 \sloppy}%

```

Then we redefine it by removing the setting of `\leftskip`, `\rightskip`, `\@rightskip` and `\parfillskip` and instead calling `\RaggedRight`.

```

46 \renewcommand{\arrayparboxrestore}{%
47 \let\if@nobreak\iffalse
48 \let\if@noskipsec\iffalse
49 \let\par\@par
50 \let\-\@dischyph
51 \let'\@acci\let'\@accii\let\=\@acciii
52 \parskip\z@skip
53 \everypar{}%
54 \linewidth\hsize
55 \@totalleftmargin\z@
56 \RaggedRight
57 \lineskip\normallineskip
58 \baselineskip\normalbaselineskip
59 \sloppy}%

```

Now we self-destroy so the command can be called more than once without causing harm (and it also frees up some space).

```

60 \let\@raggedtwoe@raggedrightboxes@opt\relax
61 }

```

Finally the declaration of the option.

```

62 \DeclareOption{raggedrightboxes}{\@raggedtwoe@raggedrightboxes@opt}

```

6.2.4 footnotes option

The option `footnotes` just sets a flag (`\if@raggedtwoe@footmisc`) to load the `footmisc` package and passes the option `ragged` to it.

```

63 \DeclareOption{footnotes}{%
64 \@raggedtwoe@footmisctrue
65 \PassOptionsToPackage{ragged}{footmisc}%
66 }

```

6.2.5 document option

The option `document` sets the complete document ragged-right by executing `\RaggedRight` via `\AtBeginDocument` and also executing the `raggedrightboxes` option.

`\@raggedtwoe@abdhook` `\@raggedtwoe@abdhook` is the code executed via `\AtBeginDocument`: Give a message on the terminal, execute `\RaggedRight` and self-destroy. We also make `\@tocrmarg` flexible; otherwise long lines in the table of contents (and similar tables) would not be broken because the `spaceskip` is rigid.

```

67 \newcommand{\@raggedtwoe@abdhook}{%

```

```

68 \PackageInfo{ragged2e}{ABD: executing \string\RaggedRight}%
69 \RaggedRight
70 \@ifundefined{@tocrmarg}{}{\edef\tocrmarg{\tocrmarg plus 2em}}%
71 \let\@raggedtwoe@abdhook\relax
72 }

```

`\@raggedtwoe@document@opt` `\@raggedtwoe@document@opt` is the code executed via `\DeclareOption`: Insert the code into `\AtBeginDocument`, execute the `raggedrightboxes` and `footnotes` options and self-destroy.

```

73 \newcommand{\@raggedtwoe@document@opt}{%
74 \AtBeginDocument{\@raggedtwoe@abdhook}%
75 \@raggedtwoe@raggedrightboxes@opt
76 \@raggedtwoe@footmisctrue
77 \let\@raggedtwoe@document@opt\relax
78 }

```

Finally the declaration of the option.

```

79 \DeclareOption{document}{\@raggedtwoe@document@opt}

```

6.2.6 Other options

All unused options are passed to the `footmisc` package if the `footnotes` option is selected; otherwise the usual error is raised.

```

80 \DeclareOption*{%
81 \if@raggedtwoe@footmisc
82 \PassOptionsToPackage{\CurrentOption}{footmisc}%
83 \else
84 \OptionNotUsed
85 \fi
86 }

```

6.3 Executing options

The default options are `originalcommands` and `newparameters`.

```

87 \ExecuteOptions{originalcommands,newparameters}
88 \ProcessOptions\relax

```

6.4 Loading packages

We need the `everysel` package.

```

89 \RequirePackage{everysel}

```

If the option `footnotes` is selected, we load the `footmisc` package after we are finished (`footmisc` detects our presence by looking for the definition of `\RaggedRight`, so we can not load it just now).

```

90 \if@raggedtwoe@footmisc
91 \RequirePackage{footmisc}[2002/08/28]
92 \fi

```

6.5 Allocations

```

\CenteringLeftskip First we allocate the parameters
\RaggedLeftLeftskip 93 \newlength{\CenteringLeftskip}
\RaggedRightLeftskip 94 \newlength{\RaggedLeftLeftskip}
\CenteringRightskip 95 \newlength{\RaggedRightLeftskip}
\RaggedLeftRightskip 96 \newlength{\CenteringRightskip}
\RaggedRightRightskip 97 \newlength{\RaggedLeftRightskip}
\CenteringParfillskip 98 \newlength{\RaggedRightRightskip}
\RaggedLeftParfillskip 99 \newlength{\CenteringParfillskip}
\RaggedRightParfillskip 100 \newlength{\RaggedLeftParfillskip}
\JustifyingParfillskip 101 \newlength{\RaggedRightParfillskip}
\CenteringParindent 102 \newlength{\JustifyingParfillskip}
\RaggedLeftParindent 103 \newlength{\CenteringParindent}
\RaggedRightParindent 104 \newlength{\RaggedLeftParindent}
\JustifyingParindent 105 \newlength{\RaggedRightParindent}
106 \newlength{\JustifyingParindent}

```

6.6 Initializations

Depending on `\if@raggedtwo@originalparameters` we initialize the parameters with the values \LaTeX uses for its own commands or with our new parameters.

```

107 \if@raggedtwo@originalparameters
108   \CenteringLeftskip\@flushglue
109   \RaggedLeftLeftskip\@flushglue
110   \RaggedRightLeftskip\z@skip
111   \CenteringRightskip\@flushglue
112   \RaggedLeftRightskip\z@skip
113   \RaggedRightRightskip\@flushglue
114   \CenteringParfillskip\z@skip
115   \RaggedLeftParfillskip\z@skip
116   \RaggedRightParfillskip\@flushglue
117   \CenteringParindent\z@
118   \RaggedLeftParindent\z@
119   \RaggedRightParindent\z@
120 \else
121   \CenteringLeftskip\z@\@plus\tw@ em
122   \RaggedLeftLeftskip\z@\@plus\tw@ em
123   \RaggedRightLeftskip\z@skip
124   \CenteringRightskip\z@\@plus\tw@ em
125   \RaggedLeftRightskip\z@skip
126   \RaggedRightRightskip\z@\@plus\tw@ em
127   \CenteringParfillskip\z@skip
128   \RaggedLeftParfillskip\z@skip
129   \RaggedRightParfillskip\@flushglue
130   \CenteringParindent\z@
131   \RaggedLeftParindent\z@
132   \RaggedRightParindent\z@
133 \fi
134 \JustifyingParfillskip\@flushglue

```

```
135 \JustifyingParindent\parindent
```

6.7 Distinguishing between monospaced and proportional fonts

To set ragged text with proportional fonts *and* monospaced fonts correctly, we must distinguish between these two kinds of fonts *everytime* a font is loaded. Otherwise the settings for e. g. a proportional fonts would be in effect if you start `\RaggedRight` in `\rmfamily` and then switch to `\ttfamily`.

The goal is to have a rigid interword space in all fonts. T_EX's interword space is `\fontdimen2` plus `\fontdimen3` minus `\fontdimen4`. This can be overwritten by setting `\spaceskip` (space between words, if nonzero) and `\xspaceskip` (space at the end of sentences, if nonzero).

We do the setting with the help of `everysel` [7], which allows us to define code which is (hopefully) executed after every fontchange in a L^AT_EX document.[‡]

```
\if@raggedtwoe@spaceskip \if@raggedtwoe@spaceskip signals the use of commands defined by
ragged2e to the command inserted into \selectfont. It is set to true by
these commands and restored to false by TEX when the scope of them
ends.
```

```
136 \newif\if@raggedtwoe@spaceskip
```

```
\@raggedtwoe@everyselectfont \@raggedtwoe@everyselectfont is our code inserted into \selectfont.
```

```
137 \newcommand{\@raggedtwoe@everyselectfont}{%
```

```
138 \if@raggedtwoe@spaceskip
```

If no command defined by `ragged2e` is in use, we do nothing. But if it is, we look at `\fontdimen3` to see if the current font is monospaced or not.

```
139 \ifdim\fontdimen\thr@@\font=\z@\relax
```

If it is, we set `\spaceskip` to `0pt` so the interword space will be the one specified by the font designer – which is rigid anyway for monospaced fonts.

```
140 \spaceskip\z@
```

```
141 \else
```

For proportional fonts we make the interword space rigid by setting `\spaceskip` to `\fontdimen2`.

```
142 \spaceskip\fontdimen\tw@\font
```

```
143 \fi
```

We have to reset the interword space if we are not active.

```
144 \else
```

```
145 \spaceskip\z@
```

[‡]It *is* executed after every `\selectfont`, so if you stay within NFSS and don't declare your fonts with commands like `\newfont` and then switch to them, it will work.

```

146 \fi
147 }
148 \EverySelectfont{\@raggedtwoe@everyselectfont}

```

6.8 The commands

`\@raggedtwoe@savedcr` We save the definition of `\` in `\@raggedtwoe@savedcr`.

```
149 \let\@raggedtwoe@savedcr\
```

`\@raggedtwoe@saved@gnewline` We save the definition of `\@gnewline` in `\@raggedtwoe@saved@gnewline`.

```
150 \let\@raggedtwoe@saved@gnewline\@gnewline
```

`\@raggedtwoe@gnewline` The following definition of a `\@gnewline` used by the ragged commands was suggested by Markus Kohm:

```

151 \newcommand*{\@raggedtwoe@gnewline}[1]{%
152   \ifvmode
153     \@nolnerr
154   \else
155     \unskip
156     \ifmode

```

In formulas we use the original code of `\@gnewline`.

```

157     \reserved@e {\reserved@f #1}\nobreak \hfil \break
158   \else
159     \reserved@e {\reserved@f #1}{\parskip\z@}\par}%
160   \fi
161 \fi
162 }

```

`\Centering` `\Centering` first lets `\` = `\@centercr`, but only if `\` has its original meaning, otherwise `\Center` would not work inside environments like `tabular` etc., in which `\` has a different meaning. It also sets `\@gnewline` to `\@raggedtwoe@gnewline`. Then, the `LATEX` and `TEX`-parameters are set. `\@rightskip` is `LATEX`'s version of `\rightskip`.

“Every environment, like the list environments, that set `\rightskip` to its ‘normal’ value set it to `\@rightskip`” [1]

Finally we signal the code inserted into `\selectfont` that we are active and call that code directly.

```

163 \newcommand{\Centering}{%
164   \ifx\\\@raggedtwoe@savedcr
165     \let\\\@centercr
166   \fi
167   \let\@gnewline\@raggedtwoe@gnewline
168   \leftskip\CenteringLeftskip
169   \@rightskip\CenteringRightskip
170   \rightskip\@rightskip

```

```

171 \parfillskip\CenteringParfillskip
172 \parindent\CenteringParindent
173 \@raggedtwo@spaceskiptrue
174 \@raggedtwo@everyselectfont
175 }

```

`\RaggedLeft` `\RaggedLeft` is like `\Centering`; it only uses other parameters.

```

176 \newcommand{\RaggedLeft}{%
177 \ifx\\@raggedtwo@savedcr
178 \let\\@centercr
179 \fi
180 \let@gnewline@raggedtwo@gnewline
181 \leftskip\RaggedLeftLeftskip
182 \@rightskip\RaggedLeftRightskip
183 \rightskip\@rightskip
184 \parfillskip\RaggedLeftParfillskip
185 \parindent\RaggedLeftParindent
186 \@raggedtwo@spaceskiptrue
187 \@raggedtwo@everyselectfont
188 }

```

`\RaggedRight` `\RaggedRight` is like `\Centering`; it only uses other parameters.

```

189 \newcommand{\RaggedRight}{%
190 \ifx\\@raggedtwo@savedcr
191 \let\\@centercr
192 \fi
193 \let@gnewline@raggedtwo@gnewline
194 \leftskip\RaggedRightLeftskip
195 \@rightskip\RaggedRightRightskip
196 \rightskip\@rightskip
197 \parfillskip\RaggedRightParfillskip
198 \parindent\RaggedRightParindent
199 \@raggedtwo@spaceskiptrue
200 \@raggedtwo@everyselectfont
201 }

```

`\justifying` `\justifying` switches back to the defaults used by L^AT_EX for typesetting justified text.

```

202 \newcommand{\justifying}{%
203 \let\\@raggedtwo@savedcr
204 \let@gnewline@raggedtwo@saved@gnewline
205 \leftskip\z@
206 \@rightskip\z@
207 \rightskip\@rightskip
208 \parfillskip\JustifyingParfillskip
209 \parindent\JustifyingParindent
210 \@raggedtwo@spaceskipfalse
211 \@raggedtwo@everyselectfont
212 }

```

6.9 The environments

Center The environments Center, FlushLeft, and \FlushRight are implemented like their counterparts in L^AT_EX: Start a trivlist and switch on the right
 FlushLeft
 FlushRight command.

```

213 \newenvironment{Center}{%
214   \trivlist
215   \Centering\item\relax
216   }{%
217   \endtrivlist
218   }
219 \newenvironment{FlushLeft}{%
220   \trivlist
221   \RaggedRight\item\relax
222   }{%
223   \endtrivlist
224   }
225 \newenvironment{FlushRight}{%
226   \trivlist
227   \RaggedLeft\item\relax
228   }{%
229   \endtrivlist
230   }
```

justify justify is similar to the other environments: Start a trivlist and use \justifying.

```

231 \newenvironment{justify}{%
232   \trivlist
233   \justifying\item\relax
234   }{%
235   \endtrivlist
236   }
```

6.10 Overloading the L^AT_EX-commands

If the option newcommands is used, we save the original L^AT_EX-commands and environments for ragged text and overload them.

```

237 \if@raggedtwoe@originalcommands
238 \else
239   \let\LaTeXcentering\centering
240   \let\LaTeXraggedleft\raggedleft
241   \let\LaTeXraggedright\raggedright
242   \let\centering\Centering
243   \let\raggedleft\RaggedLeft
244   \let\raggedright\RaggedRight
245   \let\LaTeXcenter\center
246   \let\endLaTeXcenter\endcenter
247   \let\LaTeXflushleft\flushleft
248   \let\endLaTeXflushleft\endflushleft
249   \let\LaTeXflushright\flushright
```

```

250 \let\endLaTeXflushright\endflushright
251 \let\center\Center
252 \let\endcenter\endCenter
253 \let\flushleft\FlushLeft
254 \let\endflushleft\endFlushLeft
255 \let\flushright\FlushRight
256 \let\endflushright\endFlushRight
257 \fi

258 </package>

```

7 Acknowledgements

A first version of this package for L^AT_EX 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.

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