luabidi
Bidirectional typesetting in LuaLaTeX

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*Current maintainer. Please submit bug reports and feature requests to https://github.com/bidi-tex/luabidi/issues.

1 Objectives

Luabidi is an attempt to provide bidirectional writing support for the LuaTeX engine in the same vein as the bidi package[1] enables bidirectional writing with X∃TeX. The most prominent user of this package is polyglossia[2] which uses luabidi with RTL languages and LuaTeX output (as opposed to bidi with X∃TeX). Note, however, that luabidi is much more limited than bidi. Currently, only a very basic subset of the latter's features is supported.

2 Package Options

arabmaths By default, luabidi generates left-to-right maths. If you would like to have right-to-left maths, use this option.

textwidthfootnoterule expands the footnote rule to the whole text width.

autofootnoterule sets the footnote rule right or left aligned, depending on the direction of the first footnote that follows the rule (*i.e.,* that comes on the current page).

3 User Commands

3.1 Main Text Direction

By default, the main directionality of the document is left-to-right. To change it to right-to-left, use the switch

`\setRTLmain`   `\setRTLmain`

This is advisable if your document consists mainly of right-to-left text.

3.2 Paragraph Text Direction

To change directionality for paragraphs, you can use the following switches:

`\setRTL`   **\setRTL** (alias: \setRL, \unsetLTR) changes paragraph direction to right-to-left.
`\setRL`
`\unsetLTR`   **\setLTR** (alias: \setLR, \unsetRTL) changes paragraph direction to left-to-right.
`\setLTR`
`\setLR`
`\unsetRTL`

Alternatively,you can also use the environments

```
\begin{RTL}
...
\end{RTL}
```

or

```
\begin{LTR}
...
\end{LTR}
```

3.3   Inline Text Direction

To change directionality for text chunks inside paragraphs, use

\RLE{...} (alias: \RL) changes the directionality locally to right-to-left.

\LRE{...} (alias: \LR) changes the directionality locally to left-to-right.

3.4   Footnotes

3.4.1   Horizontal Footnote Position

Luabidi provides two additional footnote commands in addition to standard

\footnote: \RTLfootnote ← and \LTRfootnote ←. The standard \footnote command thereby places the footnote always on the side that is currently the origin of direction: on the left side of the page in LTR paragraphs and on the right in RTL paragraphs.

\LTRfootnote, in contrast, always places the footnote on the left side, notwithstanding the current directionality. \RTLfootnote always places it on the right side. Like \footnote, \RTLfootnote and \LTRfootnote have an optional argument to customize the number.

3.4.2   Footnote Rule Length and Position

By default, the placement of the footnote rule depends on the main text directionality:

▸ In default mode (*i.e.,* if \setRTLmain is not used), the footnote rule is always set left-aligned (as usual in LTR documents).

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[1]See https://ctan.org/pkg/bidi.
[2]See https://ctan.org/pkg/polyglossia.

▸ If the main direction is RTL (*i.e.,* if `\setRTLmain` is used), the footnote rule is always set right-aligned (as usual in RTL documents)

`\leftfootnoterule`
v0.5
`\rightfootnoterule`
v0.5

However, with the switch `\leftfootnoterule` ←, all subsequent footnote rules are always placed on the left. Likewise, `\rightfootnoterule` ← causes all subsequent footnote rules to be always placed on the right.

`\autofootnoterule`
v0.5

The switch `\autofootnoterule` ← and the corresponding package option advise luabidi to automatically determine the rule position, depending on the directionality of the first footnote on the page. Note that this automatic can fail with footnotes at page boundaries that differ in directionality from the first footnote on the page. You can work around such cases by switching to `\rightfootnoterule` or `\leftfootnoterule` on these pages.

If you want a footnote rule that spans the whole text width, you can use the

`\textwidthfootnoterule`
v0.5

switch `\textwidthfootnoterule` ← or the respective package option.

The length of left and right footnote rules can be adjusted via

`\footenoterulewidth`

    `\setlength\footenoterulewidth{⟨length⟩}`

The predefined ⟨length⟩ is `0.4\columnwidth`.

4 Commands for Package Authors

The following tests are provided to be used in packages:

`\if@RTL`   **\if@RTL** determines whether the current paragraph direction is right-to-left.

`\if@RTLmain`   **\if@RTLmain** determines whether the main direction is right-to-left.

The following macros are provided:

`\@ensure@RTL`   **\@ensure@RTL{...}** Ensure that the argument is typeset RTL.

`\@ensure@LTR`   **\@ensure@LTR{...}** Ensure that the argument is typeset LTR.

`\@ensure@dir`
`\@ensure@maindir`

\@ensure@dir{...} (alias: \@ensure@maindir{...}) If used in RTL mode, the argument is put inside \RLE, if used in LTR mode, the argument is output as is.

`\hboxR`   **\hboxR{...}** ← Puts its argument in a RTL \hbox.
v0.5

5   Revision Log

v. 0.5 (???) Add `\RTLfootnote`, `\LTRfootnote`, and `\hboxR`; fix `autofootnoterule` option; add `\autofootnoterule`, `\leftfootnoterule`, `\rightfootnoterule` and `\textwidthfootnoterule`; add manual.

v. 0.4 (2019/08/24) Fix `\@ensure@RTL`.

v. 0.3 (2019/07/10) Fix compatibility with recent LuaTeX (this version was never released to CTAN).

v. 0.2 (2013/05/27) Fix additional files.

v. 0.1 (2009/04/01) Initial release.