

# Package ‘rbibutils’

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**Type** Package

**Title** Read 'Bibtex' Files and Convert Between Bibliography Formats

**Version** 2.2.16

**Description** Read and write 'Bibtex' files. Convert between bibliography formats, including 'Bibtex', 'Biblatex', 'PubMed', 'Endnote', and 'Bibentry'. Includes a port of the 'bibutils' utilities by Chris Putnam <<https://sourceforge.net/projects/bibutils/>>. Supports all bibliography formats and character encodings implemented in 'bibutils'.

**License** GPL-2

**URL** <https://geobosh.github.io/rbibutils/> (doc),  
<https://github.com/GeoBosh/rbibutils> (devel)

**BugReports** <https://github.com/GeoBosh/rbibutils/issues>

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**Suggests** testthat

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rbibutils-package	<i>Read 'Bibtex' Files and Convert Between Bibliography Formats</i>
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### Description

Read and write 'Bibtex' files. Convert between bibliography formats, including 'Bibtex', 'Biblatex', 'PubMed', 'Endnote', and 'Bibentry'. Includes a port of the 'bibutils' utilities by Chris Putnam <<https://sourceforge.net/projects/bibutils/>>. Supports all bibliography formats and character encodings implemented in 'bibutils'.

### Details

Package **rbibutils** provides an R port of the `bibutils` programs plus additional facilities. The main function, `bibConvert`, offers all conversions between bibliography formats supported by library `bibutils`. In addition, package **rbibutils** converts to and from R's `bibentry` Bibtex-based bibliography format.

The core functionality is provided by the `bibutils` programs which convert between various bibliography formats using a common MODS XML intermediate format, see the source cited below.

Currently we provide the function `bibConvert` for conversion between supported bibliography formats. For complete list of formats supported by the package, see the documentation of the original `bibutils` library.

`readBib` and `writeBib` import/export BiBTeX files. `readBibentry` and `writeBibentry` import/export R source files in which the references are represented by `bibentry()` calls. These functions were originally just wrappers around `bibConvert`. `readBib` has acquired additional features, including a direct import (without going through `bibConvert`) from BiBTeX files.

All encodings supported by the `bibutils` library are available for `bibConvert`.

Further functionality may be provided in future releases, in particular, the underlying C functions could be exposed to package authors. Further R wrappers may be added, as well. However, the scope of the package will remain conversion between formats based on `bibutils` and manipulation of the MODS XML intermediate format. **rbibutils** can be used also as an alternative to package **bibtex** (Francois 2020). For bibliography management see package **RefManager** (McLean 2017). For citations in R documentation (Rd or roxygen2) see package **Rdpack** (Boshnakov 2020).

## Supported input and output formats

Most formats are supported for both input and output, see the listings below. A format supported for input can be converted to any of the output formats.

The input is first converted to *MODS XML intermediate*, the latter is then converted to the requested output format. In **rbutils** there are currently two exceptions to this rule. First, the conversion from bibtex to bibentry offers the option to bypass the conversion to *MODS XML intermediate* and parse directly the bibtex file, see [readBib](#) for details. Second, the conversion from bibentry to BibTeX just uses a `print` method provided by R.

In the table below column Abbreviation shows the abbreviation for arguments `informat` and `outformat`, column `FileExt` gives the default file extension for that format, column `Input (Output)` contains TRUE if the format is supported for input (output) and FALSE otherwise. Column `Description` gives basic description of the format.

Abbreviation	FileExt	Input	Output	Description
ads	ads	FALSE	TRUE	ADS reference format
bib	bib	TRUE	TRUE	BibTeX
bibtex	bibtex	TRUE	TRUE	BibTeX
biblatex	biblatex	TRUE	TRUE	BibLaTeX
copac	copac	TRUE	FALSE	COPAC format references
ebi	ebi	TRUE	FALSE	EBI XML
end	end	TRUE	TRUE	EndNote (Refer format)
endx	endx	TRUE	FALSE	EndNote XML
isi	isi	TRUE	TRUE	ISI web of science
med	med	TRUE	FALSE	Pubmed XML references
nbib	nbib	TRUE	TRUE	Pubmed/National Library of Medicine nbib format
ris	ris	TRUE	TRUE	RIS format
R, r, Rstyle	R	TRUE	TRUE	R source file containing bibentry commands
rds	rds	TRUE	TRUE	bibentry object in a binary file created by <code>saveRDS()</code>
xml	xml	TRUE	TRUE	MODS XML intermediate
wordbib	wordbib	TRUE	TRUE	Word 2007 bibliography format

`bibentry` is the native R variant of BibTeX. It can be input directly from an R source file or from a binary `rds` file. The `"rds"` format is a compressed binary format. The `rds` file should contain a `bibentry` R object, saved from R with `saveRDS`. An R source file should contain one or more `bibentry` instructions, see [readBibentry](#) for details of the contents.

A `bibentry` object can be written to a file as a binary (`"rds"`) object or as an R source file, see [bibConvert](#) and [writeBib](#) for details.

ADS is the reference format of the Smithsonian Astrophysical Observatory (SAO) and National Aeronautics and Space Administration (NASA) Astrophysics Data System.

For COPAC, see <https://en.wikipedia.org/wiki/Copac>.

## Note

The `rbutils` library is included in a number of software packages. These include include `pandoc` and a library for Haskell. Executable programs for conversion are available for Linux distributions but seem not easily available for Windows. Executable and libraries can also be generated out-of-the-box from the `rbutils` distribution (on Windows under MSYS).

**rbibutils** adds conversions to/from R’s bibentry format and direct conversion from bibtex, which preserves non-standard fields from the bibtex source. There is also improved support for mathematical expressions in bibtex files.

### Author(s)

Georgi N. Boshnakov (R code and R port of bibutils), Chris Putnam (author of bibutils library)

### References

- Georgi N Boshnakov (2020). “Rdpack: Update and Manipulate Rd Documentation Objects.” [doi:10.5281/zenodo.3925612](https://doi.org/10.5281/zenodo.3925612), R package version 2.0.0.
- Damiano Fantini (2019). “easyPubMed: Search and Retrieve Scientific Publication Records from PubMed.” R package version 2.13, <https://CRAN.R-project.org/package=easyPubMed>.
- Romain Francois (2014). *bibtex: bibtex parser*. R package version 0.4.0.
- Mathew William McLean (2017). “RefManageR: Import and Manage BibTeX and BibLaTeX References in R.” *The Journal of Open Source Software*. [doi:10.21105/joss.00338](https://doi.org/10.21105/joss.00338).
- Chris Putnam (2020). “Library bibutils, version 6.10.” <https://sourceforge.net/projects/bibutils/>.

### See Also

[bibConvert](#) for further details and examples

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bibConvert

*Convert between bibliography formats*

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### Description

Read a bibliography file in one of the supported formats, convert it to another format, and write it to a file.

### Usage

```
bibConvert(infile, outfile, informat, outformat, ..., tex, encoding,
           options)
```

### Arguments

<code>infile</code>	input file, a character string.
<code>outfile</code>	output file, a character string.
<code>informat</code>	input format, a character string, see sections “Supported formats” and “Details”.
<code>outformat</code>	output format, a character string, see sections “Supported formats” and “Details”.
<code>...</code>	not used.

<code>tex</code>	TeX specific options, see Details, a character vector.
<code>encoding</code>	<code>character(2)</code> , a length two vector specifying input and output encodings. Default to both is <code>"utf8"</code> , see Details.
<code>options</code>	mainly for debugging: additional options for the converters, see Details.

## Details

Arguments `informat` and `outformat` can usually be omitted, since `bibConvert` infers them from the extensions of the names of the input and output files, see section "File extensions" below. However, there is ambiguity for the extension `"bib"`, since it is used for Bibtex and BibLaTeX entries. For this extension, the default for both, `informat` and `outformat`, is `"bibtex"`.

Package **rbibutils** supports format `"bibentry"`, in addition to the formats supported by the `bibutils` library. A `bibentry` object contains one or more references. Two formats are supported for `"bibentry"` for both input and output. A `bibentry` object previously saved to a file using `saveRDS` (default extension `"rds"`) or an R source file containing one or more `bibentry` commands. The `"rds"` file is just read in and should contain a `bibentry` object.

When `bibconvert` outputs to an R source file, two variants are supported: `"R"` and `"Rstyle"`. When `(outformat = "R")`, there is one `bibentry` call for each reference, just as in a Bibtex file, each reference is a single entry. `outformat = "Rstyle"` uses the format of `print(be, style = "R")`, i.e., the `bibentry` calls are output as a comma separated sequence wrapped in `c()`. For input, it is not necessary to specify which variant is used.

Note that when the input format and output formats are identical, the conversion is not necessarily a null operation (except for `xml`, and even that may change). For example, depending on the arguments the character encoding may change. Also, input BibTeX files may contain additional instructions, such as journal abbreviations, which are expanded and incorporated in the references but not exported. It should be remembered also that there may be loss of information when converting from one format to another.

For a complete list of supported bibliography formats, see section "Supported formats" below. The documentation of the original `bibutils` library (Putnam 2020) gives further details.

Argument `encoding` is a character vector containing 2 elements, specifying the encoding of the input and output files. If the encodings are the same, a length one vector can be supplied. The default encodings are UTF-8 for input and output. A large number of familiar encodings are supported, e.g. `"latin1"` and `"cp1251"` (Windows Cyrillic). Some encodings have two or more aliases and they are also accepted. If an unknown encoding is requested, a list of all supported encodings will be printed.

Argument `tex` is an unnamed character vector containing switches for bibtex input and output (mostly output). Currently, the following are available:

**uppercase** write bibtex tags/types in upper case.

**no\_latex** do not convert latex-style character combinations to letters.

**brackets** use brackets, not quotation marks surrounding data.

**dash** use one dash `"-"`, not two `--`, in page ranges.

**fc** add final comma to bibtex output.

By default latex encodings for accented characters are converted to letters. This may be a problem if the output encoding is not UTF-8, since some characters created by this process may be invalid in that encoding. For example, a BibTeX file which otherwise contains only cyrillic and latin characters may have a few entries with authors containing latin accented characters represented using the TeX convention. If those characters are not converted to Unicode letters, they can be exported to "cp1251" (Windows Cyrillic) for example. Specifying the option `no_latex` should solve the problem in such cases.

Argument `options` is mostly for debugging and mimics the command line options of the `bibutils`' binaries. The argument is a named character vector and is supplied as `c(tag1= val1, tag2 = val2, ...)`, where each tag is the name of an option and the value is the corresponding value. The value for options that do not require one is ignored and can be set to `""`. Some of the available options are:

- h** help, show all available options.
- nb** do not write Byte Order Mark in UTF8 output.
- verbose** print intermediate output.
- debug** print even more intermediate output.

## Value

The function is used for the side effect of creating a file in the requested format. It returns a list, currently containing the following components:

<code>infile</code>	name of the input file,
<code>outfile</code>	name of the output file,
<code>nref_in</code>	number of references read from the input file,
<code>nref_out</code>	number of references written to the output file.

Normally, `nref_in` and `nref_out` are the same. If some references were imported successfully but failed on export, `nref_out` may be smaller than `nref_in`. In such cases informative messages are printed during processing. (If this happens silently, it is probably a bug and please create an issue on Github.)

## Supported formats

If an input or output format is not specified by arguments, it is inferred, if possible, from the file extension.

In the table below column `Abbreviation` shows the abbreviation for arguments `informat` and `outformat`, column `FileExt` gives the default file extension for that format, column `Input (Output)` contains `TRUE` if the format is supported for input (output) and `FALSE` otherwise. Column `Description` gives basic description of the format.

<b>Abbreviation</b>	<b>FileExt</b>	<b>Input</b>	<b>Output</b>	<b>Description</b>
ads	ads	FALSE	TRUE	ADS reference format
bib	bib	TRUE	TRUE	BibTeX
bibtex	bibtex	TRUE	TRUE	BibTeX
biblatex	biblatex	TRUE	TRUE	BibLaTeX

copac	copac	TRUE	FALSE	COPAC format references
ebi	ebi	TRUE	FALSE	EBI XML
end	end	TRUE	TRUE	EndNote (Refer format)
endx	endx	TRUE	FALSE	EndNote XML
isi	isi	TRUE	TRUE	ISI web of science
med	med	TRUE	FALSE	Pubmed XML references
nbib	nbib	TRUE	TRUE	Pubmed/National Library of Medicine nbib format
ris	ris	TRUE	TRUE	RIS format
R, r, Rstyle	R	TRUE	TRUE	R source file containing bibentry commands
rds	rds	TRUE	TRUE	bibentry object in a binary file created by saveRDS()
xml	xml	TRUE	TRUE	MODS XML intermediate
wordbib	wordbib	TRUE	TRUE	Word 2007 bibliography format

The file "easyPubMedvig.xml" used in the examples for Pubmed XML ("med") was obtained using code from the vignette in package **easyPubMed** (Fantini 2019).

### Author(s)

Georgi N. Boshnakov

### References

Damiano Fantini (2019). "easyPubMed: Search and Retrieve Scientific Publication Records from PubMed." R package version 2.13, <https://CRAN.R-project.org/package=easyPubMed>.

Chris Putnam (2020). "Library bibutils, version 6.10." <https://sourceforge.net/projects/bibutils/>.

### Examples

```
fn_biblatex <- system.file("bib", "ex0.biblatex", package = "rbibutils")
fn_biblatex
## file.show(fn_biblatex)

## convert a biblatex file to xml
mod1 <- tempfile(fileext = ".xml")
bibConvert(infile = fn_biblatex, outfile = mod1, informat = "biblatex", outformat = "xml")
## file.show(mod1)

## convert a biblatex file to bibtex
bib <- tempfile(fileext = ".bib")
bib2 <- tempfile(fileext = ".bib")
bibConvert(infile = fn_biblatex, outfile = bib, informat = "biblatex", outformat = "bib")
## file.show(bib)

## convert a biblatex file to bibentry
rds <- tempfile(fileext = ".rds")
fn_biblatex
rds
be <- bibConvert(fn_biblatex, rds, "biblatex", "bibentry")
bea <- bibConvert(fn_biblatex, rds, "biblatex") # same
```

```

readRDS(rds)

## convert to R source file
r <- tempfile(fileext = ".R")
bibConvert(fn_biblatex, r, "biblatex")
## file.show(r)
cat(readLines(r), sep = "\n")

fn_cyr_utf8 <- system.file("bib", "cyr_utf8.bib", package = "rbibutils")

## Can't have files with different encodings in the package, so below
## first convert a UTF-8 file to something else.
##
## input here contains cyrillic (UTF-8) output to Windows Cyrillic,
## notice the "no_latex" option
a <- bibConvert(fn_cyr_utf8, bib, encoding = c("utf8", "cp1251"), tex = "no_latex")

## now take the bib file and convert it to UTF-8
bibConvert(bib, bib2, encoding = c("cp1251", "utf8"))

## Latin-1 example: Author and Title fields contain Latin-1 accented
## characters, not real names. As above, the file is in UTF-8
fn_latin1_utf8 <- system.file("bib", "latin1accents_utf8.bib", package = "rbibutils")
## convert to Latin-1, by default the accents are converted to TeX combinations:
b <- bibConvert(fn_latin1_utf8, bib, encoding = c("utf8", "latin1"))
cat(readLines(bib), sep = "\n")
## use "no_latex" option to keep them Latin1:
c <- bibConvert(fn_latin1_utf8, bib, encoding = c("utf8", "latin1"), tex = "no_latex")
## this will show properly in Latin-1 locale (or suitable text editor):
##cat(readLines(bib), sep = "\n")

## gb18030 example (Chinese)
##
## prepare some filenames for the examples below:
xeCJK_utf8 <- system.file("bib/xeCJK_utf8.bib", package = "rbibutils")
xeCJK_gb18030 <- system.file("bib/xeCJK_gb18030.bib", package = "rbibutils")
fn_gb18030 <- tempfile(fileext = ".bib")
fn_rds <- tempfile(fileext = ".rds")

## input bib file utf8, output bib file gb18030:
bibConvert(xeCJK_utf8, fn_gb18030, encoding = c("utf8", "gb18030"))

## input bib file utf8, output file rds (and the rds object is returned)
bibConvert(xeCJK_utf8, fn_rds)
unlink(fn_gb18030)
unlink(fn_rds)

## a Pubmed file
fn_med <- system.file("bib/easyPubMedvig.xml", package = "rbibutils")
## convert a Pubmed file to bibtex:
bibConvert(fn_med, bib, informat = "med")
## convert a Pubmed file to rds and import:

```



```
#bibConvert(fn_med, rds, informat = "med")  
  
unlink(c(modl, bib, bib2, r, rds))
```

---

rbibutils_formats	<i>Supported bibliography formats</i>
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---

## Description

Supported bibliography formats in package rbibutils.

## Usage

```
rbibutils_formats
```

## Format

A data frame with 16 observations on the following 5 variables.

Abbreviation a character vector.

FileExt a character vector.

Input a logical vector.

Output a logical vector.

Description a character vector.

## Details

Each row in `rbibutils_formats` gives information about a supported bibliography formats in package **rbibutils**.

Abbreviation is the name to use in arguments `informat` and `outformat` in [bibConvert](#).

FileExt is the default extension used to infer the input/output format if the corresponding argument is missing.

Input (Output) is TRUE if the format is supported for input (output).

Description gives a brief description of the format.

## Examples

```
rbibutils_formats
```

---

readBib *Read and write bibtex files*

---

### Description

Read and write bibtex files.

### Usage

```
readBib(file, encoding = NULL, ..., direct = FALSE,
        texChars = c("keep", "convert", "export", "Rdpack"),
        macros = NULL, extra = FALSE, key, fbibentry = NULL)
```

```
writeBib(object, con = stdout(), append = FALSE)
```

```
charToBib(text, informat, ...)
```

### Arguments

file	name or path to the file, a character string.
encoding	the encoding of file, a character string.
direct	If TRUE parse 'file' directly to bibentry, otherwise convert first to intermediate XML, then to bibentry.
texChars	What to do with characters represented by TeX commands (for example, accented Latin charaters? If "export", export as TeX escapes when possible. If "convert", convert to the target encoding. If "keep", output the characters as they were in the input file, like "export", but don't convert normal characters to TeX escapes. "Rdpack" is mainly for internal use and its actions may be changed. It is equivalent to "keep" plus some additional processing, see <a href="https://github.com/GeoBosh/rbibutils/issues/7#issue-1020385889">https://github.com/GeoBosh/rbibutils/issues/7#issue-1020385889</a> .
macros	additional bib files, usually containing bibtex macros, such as journal abbreviations.
object	a bibentry object.
con	filename (a character string) or a text connection
append	if TRUE append to the file.
text	a character vector.
informat	the input format, defaults to "bibtex".
key	a character vectors of key(s) to use for entries without cite keys. Should have the same number of elements as the number of such entries.
...	for charTobib, arguments to be passed on to readBib or bibConvert, see Details. Not used by readBib and writeBib (which throw error to avoid silently ignoring unknown arguments).
extra	if TRUE, allow non-standard bibtex types.
fbibentry	a function to use for generating bib objects instead of bibentry(), see Details.

## Details

readBib is wrapper around bibConvert for import of bibtex files into bibentry objects.

If `direct = FALSE`, the bibtex file is converted first to XML intermediate, then the XML file is converted to bibentry. The advantage of this is that it gives a standardised representation of the bibtex input. Fields that cannot be mapped to the intermediate format are generally omitted.

If `direct = TRUE` the input file is converted directly to bibentry, without the XML intermediate step. This means that non-standard fields in the bib entries are preserved in the bibentry object.

Argument `texChars`, currently implemented only for the case `direct = TRUE`, gives some control over the processing of TeX sequences representing characters (such as accented Latin characters): If it is "keep" (the default), such sequences are kept as in the input. "convert" causes them to be converted to the characters they represent. Finally, "export" exports characters as TeX sequences, whenever possible.

The difference between "keep" and "export" is that "keep" does not convert normal characters to TeX escapes, while "export" does it if possible. For example, if the input file contains the TeX sequence `\`o` representing the letter o-umlaut, "keep" and "export" will keep it as TeX sequence, while "convert" will convert it to the character o-umlaut in the output encoding (normally UTF-8). On the othe hand, if the input file contains the character o-umlaut, then "keep" and "convert" will convert it to the output encoding of o-umlaut, while "export" will export it as `\`o`.

Currently, `texChars = "export"` does not process properly mathematical formulas.

`fbibentry`, if supplied, should be a function with arguments like `bibentry` to be used instead of `utils::bibentry` for creating bib objects in R.

`writeBib` writes a bibentry object to a bibtex file.

`charTobib` is a convenience function for reading or converting bibliography information, accepting the input from a character vector rather than a file. If `informat` is missing it calls `readBib`, otherwise `bibConvert`. In both cases the remaining arguments are passed on and should be suitable for the called function.

The files specified by argument `macros` are read in before those in `file`. Currently this is implemented by concatenating the files in the order they appear in `c(macros, file)`. It is ok for `macros` to be `character(0)`.

## Value

for `readBib`, a bibentry object. If `extra` is TRUE it can also be `bibentryExtra` (which inherits from `bibentry`). If `fbibentry` is a function the return value is whatever it returns.

for `writeBib`, the bibentry object (invisibly)

## Author(s)

Georgi N. Boshnakov

## See Also

[readBibentry](#) and [writeBibentry](#) for import/export to R code.

[bibConvert](#)

**Examples**

```

## create a bibentry object
bibs <- readBib(system.file("REFERENCES.bib", package = "rbibutils"),
                encoding = "UTF-8")
## write bibs to a file
fn <- tempfile(fileext = ".bib")
writeBib(bibs, fn)

## see the contents of the file
readLines(fn) # or: file.show(fn)

## import a bib file containing Chinese characters encoded with UTF-8:
ch_bib <- readBib(system.file("bib/xeCJK_utf8.bib", package = "rbibutils"))
ch_bib
print(ch_bib, style = "R")

## import a bib file encoded with the official Chinese encoding:
ch_bib2 <- readBib(system.file("bib/xeCJK_gb18030.bib", package = "rbibutils"),
                  encoding = "gb18030")

## a dummy reference with accented characters
## (in the file some are utf8, others are TeX escapes)
bibacc <- system.file("bib/latin1accents_utf8.bib", package = "rbibutils")

## export as UTF-8 characters
## this will print as true characters in suitable locale:
be <- readBib(bibacc, direct = TRUE, texChars = "convert")
print(be, style = "R")
print(be, style = "bibtex")
## compare to the input file:
readLines(bibacc)

be1 <- readBib(bibacc, direct = TRUE)
be1a <- readBib(bibacc, direct = TRUE, texChars = "keep") # same
be1
print(be1, style = "R")
print(be1, style = "bibtex")

## export as TeX escapes, when possible
be2 <- readBib(bibacc, direct = TRUE, texChars = "export") ## same
be2
print(be2, style = "R")
print(be2, style = "bibtex")

## in older versions (up to 2.2.4) of rbibutils, "convert" converted
## a lot of TeX commands representing symbols to characters.
## This is no longer the case:
be3 <- readBib(bibacc, direct = TRUE, texChars = "convert")
## be3
print(be3, style = "R")

```

```

## print(be3, style = "bibtex")

## charToBib
##
## get a bibtex reference for R
Rcore <- format(citation(), style = "bibtex")
## add a citation key
Rcore <- sub("@Manual{", "@Manual{Rcore", Rcore, fixed = TRUE)
cat(Rcore, sep = "\n")
beRcore <- charToBib(Rcore)
beRcore
class(beRcore)
print(beRcore, style = "R")

## bibtex entries generated by citation() don't have cite keys.
## this sets the key to 'Rcore'
beRcore <- charToBib(toBibtex(citation()), key = "Rcore")
beRcore$key == "Rcore" # TRUE

## this sets two keys
bemore <- charToBib(toBibtex( c(citation(), citation("rbibutils")),
  key = c("Rcore", "Rpackage:rbibutils")))
all.equal(names(bemore), c("Rcore", "Rpackage:rbibutils"))

## a large example with several files - needs internet access;
## it is better to clone repository https://github.com/iridia-ulb/references
## and work on local files
##
## iridia_mac <- c("abbrev.bib", "authors.bib", "journals.bib", "crossref.bib")
## iridia_biblio <- "biblio.bib"
##
## iridia_raw_url <- "https://raw.githubusercontent.com/iridia-ulb/references/master"
## iridia_mac_url <- file.path(iridia_raw_url, iridia_mac)
## iridia_biblio_url <- file.path(iridia_raw_url, iridia_biblio)
##
## bibdir <- tempdir()
## iridia_mac_loc <- file.path(bibdir, iridia_mac)
## iridia_biblio_loc <- file.path(bibdir, iridia_biblio)
##
## ## download the files to bibdir
## sapply(c(iridia_biblio_url, iridia_mac_url),
##       function(x) download.file(x, file.path(bibdir, basename(x))))
##
## iridia <- readBib(iridia_biblio_loc, direct = TRUE, macros = iridia_mac_loc)
## iridia[1]
## print(iridia[1], style = "R")
## toBibtex(iridia[1]) # or: print(iridia[1], style = "bibtex")
## length(iridia) # 2576 at the time of writing

unlink(fn)

```

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readBibentry	<i>Read and write bibentry files</i>
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**Description**

Read and write bibentry files.

**Usage**

```
readBibentry(file, extra = FALSE, fbibentry = NULL)
```

```
writeBibentry(be, file, style = c("Rstyle", "loose"))
```

**Arguments**

be	a bibentry object.
file	filename, a character string.
extra	if TRUE allow non-standard bibtex types.
style	if "Rstyle" (default), wrap in <code>c()</code> , otherwise don't wrap and don't put commas between the entries, see Details section.
fbibentry	a function to use for generating bib objects instead of <code>bibentry()</code> .

**Details**

These functions read/write bibentry objects from/to R source files. Two styles are supported. "Rstyle" is the format used by `print(be, style = "R")`, which writes the bibentry calls as a comma separated sequence wrapped in `c()`. Style "loose" writes the entries without separators and no wrapping.

`writeBibentry` writes the object to the specified file in the requested style (default is "Rstyle").

`readBibentry` reads the file and creates a bibentry object. It doesn't have argument for style, since that is inferred from the contents of the file.

`bibentry()` calls that throw errors are not included in the returned object. The errors are intercepted and converted to warnings, identifying the corresponding `bibentry()` calls by their keys, if present (otherwise the text of the whole bibentry is shown).

**Value**

for `writeBibentry`, NULL (invisibly)

for `readBibentry`, a bibentry object with the keys as names

**Author(s)**

Georgi n. Boshnakov

**See Also**

[readBib](#) and [writeBib](#) for reading/writing bib files,  
[bibConvert](#)

**Examples**

```
bibs <- readBib(system.file("REFERENCES.bib", package = "rbibutils"),
               encoding = "UTF-8")
fn <- tempfile(fileext = ".bib")

writeBibentry(bibs, file = fn) # style = "Rstyle" (default)
cat(readLines(fn), sep = "\n")

writeBibentry(bibs, file = fn, style = "loose")
cat(readLines(fn), sep = "\n")

unlink(fn)
```

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register_JSSextra	<i>Create and register bibstyle JSSextra</i>
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**Description**

Create and register bibstyle JSSextra.

**Usage**

```
register_JSSextra(make_default = FALSE, reset = FALSE, parent_style = "JSS")
```

**Arguments**

make_default	if TRUE make "JSSextra" default.
reset	recreate bibstyle "JSSextra".
parent_style	the style from which to derive "JSSextra".

**Details**

`register_JSSextra` creates "JSSextra" and registers it for use in the current R session. This means that it can be specified for functions which accept a bibstyle argument, most notably printing objects from class "bibentry" and "bibentryExtra". In normal use `register_JSSextra` is called once in a session.

Functions accepting a bibstyle argument use a default style if such an argument is not provided. In most cases it is "JSS".

The default style can be changed at any time to any of the styles currently registered in the session using `tools::bibstyle()`. A list of these styles can be obtained with `tools::getBibstyle(TRUE)`. The currently default style can be seen with `tools::getBibstyle()`. As a convenience `register_JSSextra(TRUE)` makes and registers "JSSextra" as the default style.

The remaining arguments should rarely be needed in normal circumstances.

register\_JSSextra stores the bibstyle object it creates and just uses it when called again. reset = TRUE can be used to force a fresh copy of "JSSextra" to be created.

By default "JSSextra" is derived from "JSS". To base it on a different style, use argument parent\_style.

### Value

register\_JSSextra is used mainly for the side effect of registering and setting the style as default. It returns the created style (an environment) but it can be discarded.

### Author(s)

Georgi N. Boshnakov

### Examples

```
## current default style
tools::getBibstyle()
tools::getBibstyle(TRUE) # all styles, currently "JSS" only

register_JSSextra()      # register "JSSextra"
tools::getBibstyle(TRUE) # now it is available
tools::getBibstyle()    # ... but not default

register_JSSextra(TRUE) # this makes it default
tools::getBibstyle()

## setting default style with bibstyle():
tools::bibstyle("JSS", .default = TRUE)
tools::getBibstyle()
```



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