

# Package ‘startupmsg’

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**Title** Utilities for Start-Up Messages

**Description** Provides utilities to create or suppress start-up messages.

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myStartupUtilities      *Example functions to utilities for start-up messages*

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## Description

Illustration of package ‘startupmsg’

**Usage**

```
mySMHandler(c)
mystartupMessage(..., domain = NULL, pkg = "", type="version",
                 SMHandler=mySMHandler, newline = FALSE)

buildStartupMessage(..., pkg, library=NULL, domain=NULL,
                   packageHelp=FALSE, MANUAL = NULL, VIGNETTE = NULL,
                   SMHandler=mySMHandler)
```

**Arguments**

c	an object of class StartupMessage
pkg	a character string with the name of a single package
library	a character vector with path names of R libraries, or NULL. The default value of NULL corresponds to all libraries currently known. If the default is used, the loaded packages are searched before the libraries
domain	see gettext. If NA, messages will not be translated.
type	character – the type part of an S3-object of class StartupMessage; currently, type should be in c("version", "notabene", "information").
SMHandler	function to handle the output of an object of class StartupMessage, defaults to mySMHandler; btw: SMHandler stands for /S/tartup/M/essage/Handler/
newline	logical: shall there be an empty line (TRUE) or a line with linestarter in the end?
packageHelp	logical: is there help available as ?<pkg-name> ?
MANUAL	character or NULL if !is.null(MANUAL) the name of a manual distributed together with the package (with relative path within the library) or an URL
VIGNETTE	character or NULL if !is.null(VIGNETTE) an indication of one or more vignettes available to this package
...	character vectors (which are pasted together with no separator)

**Details**

mystartupMessage redirects the output of startupMessage to have a particular output function SMHandler issue the message; to see how such a function may be defined, have a look at code of the default function mySMHandler:

```
mySMHandler <- function(c) {
  pkg <- startupPackage(c) # get the package slot of c
  #prefix a starter for each new line of the message:
  linestarterN <- paste(":",pkg,"> ", sep = "")
  linestarterN <- paste("\n",linestarter, sep = "")
  linestarterE <- paste(linestarterN,"$",sep="")
  writeLines(paste(linestarter, sub(linestarterE,"\n",
                                gsub("\n",linestarterN,conditionMessage(c))),
                sep=""),stderr())}
```

Just like for `startupMessage`, for `mystartupMessage`, too, restarts `muffleMessage()`, `onlytypeMessage(c0, atypes)`, `custom(c, f)` are available (confer [startupmsg](#)).

To generate a complete start-up message, we provide `buildStartupMessage`: this function automatically generates

- a start-up message of condition `StartupMessage` with type "version" as to the version information.
- additional messages of class `StartupMessage` and of type "notabene" according to the ... argument
- a message of class `StartupMessage` and of type "information" mentioning
  - `?<pkg-name>\code{` – according to argument `packageHelp`,
  - `NEWS(<pkg-name>\code{`), if there is a 'NEWS' file,
  - URL, if there is a URL mentioned in the 'DESCRIPTION' file,
  - if there is a `MANUAL` argument, the file / the URL to this manual
  - if there is a `VIGNETTE` argument, `VIGNETTE` is printed out indicating a vignette location

The user may suppress the start-up messages produced by `buildStartupMessages` in two ways: Either by `suppressStartupMessages(expr)` and `onlyversionStartupMessages(expr, atypes="version")` as for `startupmessage` (confer [startupmsg](#)), or – as proposed by Brian Ripley – by options; let us describe the latter possibility here:

- `options("StartupBanner"="off")` switches off all start-up messages
- if option "StartupBanner" is not defined (default) or setting `options("StartupBanner"=NULL)` or `options("StartupBanner"="complete")` the complete start-up banner is displayed
- for any other value of option "StartupBanner" (i.e., not in `c(NULL, "off", "complete")`) only the version information is displayed

### Author(s)

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### See Also

Mail "[Rd] Wishlist: 'quietly' argument for `.onAttach()` / `.First.lib()` " on r-devel by Brian Ripley, <https://stat.ethz.ch/pipermail/r-devel/2006-April/037281.html>

### Examples

```
## a set of test messages

msg <- "Note that you may set global options by options() --- cf. ?\"options\"."

## issuing of messages controlled by options()
buildStartupMessage(pkg="stats", msg)
suppressStartupMessages(buildStartupMessage(pkg="stats", msg) )
suppressMessages(buildStartupMessage(pkg="stats", msg))
onlytypeStartupMessages(buildStartupMessage(pkg="stats", msg),
                          atypes="version")
```

```

getOption("StartupBanner")
buildStartupMessage(pkg="stats", msg)

options("StartupBanner"="off");getOption("StartupBanner")
buildStartupMessage(pkg="stats", msg)

options("StartupBanner"="complete");getOption("StartupBanner")
buildStartupMessage(pkg="stats", msg)

options("StartupBanner"="something else");getOption("StartupBanner")
buildStartupMessage(pkg="stats", msg)

options("StartupBanner"=NULL);getOption("StartupBanner")
buildStartupMessage(pkg="stats", msg)

MNH <- "https://www.r-project.org/"
buildStartupMessage(pkg="stats", msg, packageHelp=TRUE, MANUAL=MNH)
## not quite a manual, but to illustrate the principle:
## "demo/nlm.R" as a "manual": to be system-independent the
## first call is to be preferred
buildStartupMessage(pkg="stats", msg, packageHelp=TRUE, MANUAL=c("demo", "nlm.R"))
### works, too, (i.e. is equivalent) under Linux and Windows (at least):
buildStartupMessage(pkg="stats", msg, packageHelp=TRUE, MANUAL="demo/nlm.R")

```

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StartupUtilities

*Utilities for start-up messages*


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## Description

several utilities to produce start-up messages

## Usage

```

readVersionInformation(pkg, library=NULL)
readURLInformation(pkg, library=NULL)
pointertoNEWS(pkg, library=NULL)

infoShow(pkg, filename, library=NULL)
NEWS(pkg, library=NULL)
TOBEDONE(pkg, library=NULL)

StartupMessage(message, call = NULL, pkg="",
               type="version", newline = FALSE)
startupPackage(startupmessage)
startupType(startupmessage)
startupEndline(startupmessage)

```

```
startupMessage(..., domain = NULL, pkg = "",
               type="version", newline = FALSE)
```

```
suppressStartupMessages(expr)
onlytypeStartupMessages(expr, atypes="version")
```

### Arguments

pkg	a character string with the name of a single package
library	a character vector with path names of R libraries, or NULL. The default value of NULL corresponds to all libraries currently known. If the default is used, the loaded packages are searched before the libraries
filename	name of the file which is to be displayed by infoShow (with relative path within the package main folder)
message	a character string – the message part of an S3-object of class StartupMessage
call	a call expression – the call part of an S3-object of class StartupMessage
type	character – the type part of an S3-object of class StartupMessage; currently, type should be in c("version", "notabene", "information").
newline	a logical – the decision on the ending of an S3-object of class StartupMessage
startupmessage	the StartupMessage object whose slot package is to be inspected
domain	see getText. If NA, messages will not be translated.
atypes	a vector of characters – the types of StartupMessage-objects which onlytypeStartupMessages lets pass through
expr	expression to evaluate.
...	character vectors (which are pasted together with no separator)

### Details

readVersionInformation and readURLInformation read the 'DESCRIPTION' file of the package. readVersionInformation returns a list with elements ver and title for the version and title to be found in the 'DESCRIPTION' file; if there is a URL entry it is returned by readURLInformation else readURLInformation returns NULL.

If there is a 'NEWS' in the package main folder, pointerToNEWS returns a string with an expression how to retrieve this file from within R, else pointerToNEWS returns NULL.

infoShow displays the file filename in the package main folder using file.show – if it exists; NEWS in particular displays the 'NEWS' file, and analogously, TOBEDONE in particular displays the 'TOBEDONE' file; takes up an idea by Andy Liaw.

A new sub-condition StartupMessage to message is introduced, with a constructor with the same name.

In addition to the slots of message, it also has slots package (for the package they are for), type (currently in c("version", "notabene", "information")), and newline (a logical). These slots may be accessed by startupPackage, startupType, and startupNewline, respectively.

startupMessage issues a start-up message which also is represented as a condition. While the start-up message is being processed, the following restarts are available:

- `muffleMessage()` to suppress the `StartupMessage`,
- `onlytypeMessage(c0, atypes)` to filter out types not mentioned in `atypes` of `StartupMessages`-argument `c0`,
- `custom(c, f)` to apply the user-defined function `f` to `StartupMessages`-argument `c0` instead of the usual procedure

The user may suppress the start-up messages produced by these utilities as follows:

- `suppressStartupMessages(expr)` suppresses all messages issued by `startupMessage` in the expression `expr` within the parentheses
- `suppressPackageStartupMessages(expr)`: from package version 0.5 on, is the same as `suppressStartupMessages` for our start-up banners, but more generally suppresses all messages of S3-class `packageStartupMessage` (from **base** package)
- `onlyversionStartupMessages(expr, atypes="version")` only shows messages issued by `startupMessage` in the expression `expr` within the parentheses, if there slot `type` is contained in the `atypes` argument
- by the custom restart (see example by Seth Falcon)

### Acknowledgement

Thanks to Seth Falcon for his helpful comments.

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### See Also

`buildStartupMessage` for some illustration; for the ideas taken up in this package, see mails "[Rd] Wishlist: 'quietly' argument for `.onAttach()` / `.First.lib()`" on `r-devel` by Brian Ripley, <https://stat.ethz.ch/pipermail/r-devel/2006-April/037281.html>, by Andy Liaw, <https://stat.ethz.ch/pipermail/r-devel/2006-April/037286.html>, by Seth Falcon, <https://stat.ethz.ch/pipermail/r-devel/2006-April/037317.html>, and again by Seth Falcon, <https://stat.ethz.ch/pipermail/r-devel/2006-April/037367.html>, and by the author, <https://stat.ethz.ch/pipermail/r-devel/2006-April/037382.html>

### Examples

```
## a set of test messages
several.messages<-function() {
  startupMessage("this is a type 'version' startup message", pkg="PKG")
  startupMessage("this is a type 'information' startup message",
                 pkg="PKG", type="information")
  message("this is an ordinary message")}

## issuing of messages with different wrappers
several.messages()
suppressStartupMessages(several.messages())
suppressMessages(several.messages())
```

```
onlytypeStartupMessages(several.messages(),atypes=c("version","notabene"))

##Example by Seth Falcon:
## Here is a test function
doit <- function() {
  several.messages()
  return(123)
}

## Here is an example message handler. Here, you could write messages
## to a file, send them as email to your friends or enemies, etc.
## For the example, we'll just prepend 'MSG:'
msgLogger <- function(m) {
  types<-paste("(", startupType(m),"): ", sep="")
  cat(paste("MSG: ",types, conditionMessage(m)), "\n")
}

## Finally, call the doit function and customize how messages are
## handled.
withCallingHandlers(doit(),
  StartupMessage=function(m) {
    invokeRestart("custom", m, msgLogger)
  })
### reading information file utilities
readVersionInformation("stats")
readURLInformation("stats")
## for packages with URL file see e.g. dse1
pointertoNEWS("stats") ## no NEWS file;
NEWS("stats") ## no NEWS file;
## for packages with NEWS file see e.g. randomForest, distr
```

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