Package ‘zoom’

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Description zm(), called with any active plot allow to enter an
interactive session to zoom/navigate any plot. The development
version, as well as binary releases can be found at
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The zoom Package

Description
A spatial data visualization tool.

Details

- Package: zoom
- Type: Package
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- Depends: R (>= 2.10.0)
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- LazyLoad: yes
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zm(), called with any active plot allow to enter an interactive session to zoom/navigate any plot. The development version, as well as binary releases can be found at https://github.com/cbarbu/R-package-zoom

Author(s)
Corentin M Barbu <corentin.barbu@gmail.com>, with contributions from Sebastian Gibb <mail@sebastiangibb.de>

in.zoom Direct access to zoom functionalities.

Description
Direct selection of a zoom method of the "session" type. Possibly of use in scripts?
allow interactive in/out zoom in "session" mode

Usage

  in.zoom(...)

  move.to.click.zoom(...)

  inout.zoom(...)
session.zoom

out.zoom(...)
set.zoom(...)
sq.zoom(...)

Arguments
... Extra arguments to zoomplot.zoom.

Value
NULL

Note
Each function starts a different interactive sequence

- inout.zoom(): left click within bounds zooms in, outside bounds zoom out
- move.to.click.zoom(): center plot arround left click
- in.zoom(): each left click zooms in
- out.zoom(): each left click zooms out
- set.zoom(): ask for a magnification factor
- sq.zoom(): allow to click on the two corners of the desired region to zoom on

Author(s)
Corentin M. Barbu

See Also
zm(), session.zoom().

Opening of an interactive zoom/navigate session.

Description
To launch an interactive session you should use zm() but if you are sure of your device you can launch directly one of these functions.

Usage
session.zoom(...) navigation.zoom(...)
Arguments

Everything that can be accepted by sq.zoom.

Details

session.zoom launch an interactive console menu to navigate a plot.
navigation.zoom allows to interactively navigate a plot with the mouse.

Value

Returns the final plot, as saved by recordPlot().

Author(s)

Corentin M. Barbu, Sebastian Gibb

See Also

zm().

Examples

```r
## not run:
plot(rnorm(100), rnorm(100))
session.zoom()

## end(not run)
```

Description

Allow to zoom/navigate in any open plot. The controls should be intuitive:

- zoom in: scroll up, or right click if no scrolling wheel.
- zoom out: scroll down, or Hold left + right click if no working wheel.
- move: left click and move

Usage

```
zm(type = "navigation", rp = NULL)
```
zm

Arguments

type the type of interaction with the plot. Possible types are:
  • session for console menu
  • navigation for mouse interaction
Or any short names for these. By default will try to launch a "navigation" session.

rp plot to navigate, saved using rp<recordPlot(). By default (NULL) will use
the current device.

Details

By default, zm() try to open a mouse interactive session. If the current device is not interactive, will
try to replot the current plot in a X11(type="Xlib") device. If it fails it will open a console menu
based interactive session.

Zoom handle multiple plots on a device together. You need to navigate the last one plotted and all
the other plots will be navigated according to the last one: that can be pretty amazing too if you
want to explore multiple layers at the same time.

Value

The recording of the final plot. Can be reploted using replayPlot(). The most useful may be to get
the xlim and ylim of the final plot. That can be simply got using: par("usr") after zm() ends.

Note

This function relies on pretty low level functions in R that change quite often with new versions.
New version of R can break this package but I got used to it and fix it quickly.

In case you close the device before striking q, just hit Ctrl-C on the command line.

Author(s)

Corentin M. Barbu

Examples

## Not run:
# basic example
plot(rnorm(1000),rnorm(1000)) # could be any plot
zm() # navigate the plot

# use the same xlim/ylim as ended up in the zoom session
xlim<par("usr") # xmin,xmax,ymin,ymax of the final version of the plot
dev.off()
plot(rnorm(1000),rnorm(1000),xlim=xlim[1:2],ylim=xlim[3:4])

# navigate two layers of data at the same time
par(mfrow=c(1,2))
plot(1,type="n",xlim=c(-3,3),ylim=c(-3,3),main="First Track")
```r
polygon(c(-1,1,-1)*2,c(-1,-1,1)*2,col="blue")
lines(rnorm(100),rnorm(100))
plot(1,type="n",xlim=c(-3,3),ylim=c(-3,3),main="Second Track")
polygon(c(-1,1,-1)*2,c(-1,-1,1)*2,col="green")
lines(rnorm(100),rnorm(100))
zm() # it flickers quite a bit as it needs to replot everything every time...

# one might want to use the older interface
# if attached to cairo under linux or MacOS
# it is also sometimes helpful to just define a square you want to zoom on
zm(type="s")

## end(not run)
```

---

**zoomplot.zoom**  
Central low level function of the `zoom` package.

**Description**

This function allow to replot the current or a saved plot with specific boundaries, magnification factor and possibly around a user defined x/y.

**Usage**

```r
zoomplot.zoom(xlim = NULL, ylim = NULL, fact = NULL,
               rp = NULL, x = NULL, y = NULL, xlimfn = NULL,
               ylimfn = NULL, ...)```

**Arguments**

- `xlim`: A vector with min and max x
- `ylim`: A vector with min and max y
- `fact`: A scalar giving the magnification factor (>1 brings you closer)
- `rp`: A previously recorded plot with `recordPlot()`. With all the corresponding warnings in `?recordPlot`.
- `x`: x of a fix point when rescaling, by default the center.
- `y`: y of a fix point when rescaling, by default the center.
- `xlimfn`: a function using x, y and/or fact to generate new x lim if NULL and xlim/ylim not given will use `multipancPoint`
- `ylimfn`: a function using x, y and/or fact to generate new y lim, if NULL will use `xlimfn`
- `...`: Additional parameters not implemented, just in case.

**Details**

This function is not necessarily easy to use by hand. It is designed to work well when called from higher level functions. End user should always use `zm()`.
Value

Not guaranteed for now.

Note

This function is the heart of the zoom package and the one that can be affected by R version changes. It is inspired by the zoomplot function in TeachingDemos package.

Author(s)

Corentin M. Barbu

See Also

zm, in.zoom

Examples

plot(rnorm(1000), rnorm(1000))
zoomplot.zoom(fact=2, x=0, y=0)
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