# Package ‘interactiveDisplay’

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**Type** Package

**Title** Package for enabling powerful shiny web displays of Bioconductor objects

**Version** 1.12.0

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**Author** Shawn Balcome, Marc Carlson

**Maintainer** Shawn Balcome <balc0022@umn.edu>

**Imports** interactiveDisplayBase (>= 1.7.3), shiny, RColorBrewer, ggplot2, reshape2, plyr, gridSVG, XML, Category, AnnotationDbi

**Depends** R (>= 2.10), methods, BiocGenerics, grid

**Suggests** RUnit, hgu95av2.db, knitr, GenomicRanges, SummarizedExperiment, GOstats, ggbio, GO.db, Gviz, rtracklayer, metagenomeSeq, gplots, vegan, Biobase

**Enhances** rstudio

**Description** The interactiveDisplay package contains the methods needed to generate interactive Shiny based display methods for Bioconductor objects.

**License** Artistic-2.0

**Collate** 'interactiveDisplay.R' 'ExpressionSet.R' 'GRanges.R'

  'GRangesList.R' 'SummarizedExperiment.R' 'gridsvgjs.R'

  'bicgo.R' 'gridtweak.R' 'simplenet.R' 'MRexperiment.R'

  'altgr.R' 'zzz.R'

**VignetteBuilder** knitr

**biocViews** GO, GeneExpression, Microarray, Sequencing, Classification, Network, QualityControl, Visualization, Visualization, Genetics, DataRepresentation, GUI, AnnotationData

**NeedsCompilation** no

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altgr

Description
This opens a shiny visualization application in the browser based on ...

Usage
altgr(object, ...)

Arguments

object data object to display
...
additional arguments passed to methods; currently unused.

Value
Any ...

See Also

Examples

if(interactive()) {
  ## Open an browser application for the purpose of manually biclustering an
  ## ExpressionSet object and obtaining a GO summary for a specific bicluster.
  data(mmgr)
  altgr(mmgr)
}

bicgo

bicgo: Open a Shiny Application for manual/interactive biclustering and GO exploration

Description

This opens a shiny visualization application in the browser based on the submitted ExpressionSet object.

Usage

bicgo(object, ...)

Arguments

object

data object to display

... additional arguments passed to methods; currently unused.

Value

Any ExpressionSet object.

See Also


Examples

if(interactive()) {

## Open an browser application for the purpose of manually biclustering an
## ExpressionSet object and obtaining a GO summary for a specific bicluster.

data(expr)
bicgo(expr)

}

display
display: Open a Shiny application for a Bioconductor object

Description

This opens a shiny visualization application in the browser based on the submitted object.

Usage

display(object, ...)

Arguments

- object: data object to display
- ...: additional arguments passed to methods; currently unused.

Value

Usually some variation of the initial input object, but it may be altered by the display widget (subset for example).

Author(s)

Shawn Balcome and Marc Carlson

See Also


Examples

```r
if(interactive()) {

## draw a RangedSummarizedExperiment object
data(se)
display(se)

## draw a GRanges object
data(mmgr)
display(mmgr)

## some display methods allow subsetting.
## To take advantage, just use an assignment operator like this:
mmgr2 <- display(mmgr)

## draw a GRangesList object
data(mmgrl)
display(mmgrl)

## draw an ExpressionSet object
data(expr)
display(expr)

## draw an MRexperiment object (placeholder!!!)
data(mr)
display(mr)
}
```
**expr**

An Example ExpressionSet object

**Description**

The expression data are real but anonymized. The data are from an experiment that used Affymetrix U95v2 chips. The data were processed by dChip and then exported to R for analysis. The data illustrate ExpressionSet-class, with assayData containing the required matrix element exprs and an additional matrix se.exprs. se.exprs has the same dimensions as exprs. The phenoData and standard error estimates (se.exprs) are made up. The information in the "description" slot is fake.

**Details**

The data for 26 cases, labeled A to Z and 500 genes. Each case has three covariates: sex (male/female); type (case/control); and score (testing score).

**Examples**

data(expr)

**gridsvgjs**

gridsvgjs: Open a Shiny Application for a Grid Plot

**Description**

This opens a shiny visualization application in the browser based on the submitted plot.

**Usage**

gridsvgjs(object, ...)

**Arguments**

object
data object to display

...additional arguments passed to methods; currently unused.

**Value**

Any grid based plot. For example: a plot produced with lattice, ggplot2 or biobase libraries.

**See Also**

Examples

if(interactive()) {
    ## Send a grid based plot to a browser as a Javascript interactive SVG
    library(ggplot2)
data(mtcars)
    qp <- qplot(mpg, data=mtcars, geom="density", fill=factor(cyl), alpha=I(.4))
    gridsvgjs(qp)
}

gridtweak
gridtweak: Open a Shiny Application for the purpose of tweaking grid plots

Description
This opens a shiny visualization application in the browser.

Usage
gridtweak(...)

Arguments
...  additional arguments passed to methods; currently unused.

Value
Any grid based plot. For example: a plot produced with lattice, ggplot2 or biobase libraries.

See Also

Examples

if(interactive()) {
    ## Send a grid based plot to a browser as a Javascript interactive SVG
    gridtweak()
}

**mmgr**

An Example GRanges Object

**Description**

A toy GRanges object for demonstration purposes.

**Examples**

data(mmgr)

---

**mngrl**

An Example GRangesList Object

**Description**

A toy GRangesList dataset derived from the GRanges dataset in this package for purposes of demonstration.

**Details**

The GRanges dataset was submitted to display(), subsetted and several iterations of the results were fused into a GRangesList object. This is fake data.

**Examples**

data(mngrl)

---

**se**

An Example RangedSummarizedExperiment Object

**Description**

A toy RangedSummarizedExperiment object for demonstration purposes.

**Examples**

data(se)
simplenet: Open a Shiny Application for ...

Description
This opens a shiny visualization application in the browser based on ...

Usage
simplenet(object, ...)

Arguments
- object: data object to display
- ...: additional arguments passed to methods; currently unused.

Value
Any ...

See Also

Examples

if(interactive()) {
  ## Open a browser application for the purpose of manually biclustering an
  ## ExpressionSet object and obtaining a GO summary for a specific bicluster.

  simplenet(mtcars)
}

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