Package 'venneuler'

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Title Venn and Euler Diagrams

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Depends rJava

Description Calculates and displays Venn and Euler Diagrams.

SystemRequirements Java 1.5 or higher

License MPL-1.1

URL https://www.rforge.net/venneuler/,
https://www.cs.uic.edu/~wilkinson/

NeedsCompilation no

Repository CRAN

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Contents

`plot.VennDiagram` `plot` *method for Venn diagrams*

Description

Plots the Venn diagram returned by `venneuler`.

Usage

```
## S3 method for class 'VennDiagram'
plot(x, col, col.fn = function(col) hcl(col * 360, 130, 60),
   alpha = 0.3, main = NULL, edges = 200, border = NA, col.txt = 1,
   cex = 1, lwd = 1, lty = 1, font = NULL, family = "", ...)
```

Arguments

x	object of the class VennDiagram as returned from the venneuler() function.
col	optional, vector of colors (as accepted by the graphics system) to use. The colors are recycled if necessary (so passing a scalar will result in all circles having the same color). If not specified, colors are obtained by calling col.fn on the colors component of the x object.
col.fn	function taking one argument (numeric vector of values between 0 and 1), returning a vector of colors of the same length. It is not used if the col argument is specified.
alpha	numeric, value of the alpha channel(s) for the colors (hence their opacity). It will override any alpha channel information in the color specification, recycling as neeed. If set to NA then no aplha adjustment to the colors is performed.
main	passed to title()
edges	integer scalar, specifies the number of edges to use when drawing circles
border	color of the border for each circle (recycled) or NULL if no border is to be drawn
lwd	line width used to draw borders of the circles
lty	line type used to draw borders of the circles
col.txt	passed as col to text() for text labels in the circle centers
cex	passed to text() for text labels in the circle centers
font	passed to text() for text labels in the circle centers
family	passed to text() for text labels in the circle centers
...	any further arguments passed to title()

Value

Returns NULL invisibly.

Author(s)

Simon Urbanek

See Also

venneuler

Examples

```
vd <- venneuler(c(A=0.3, B=0.3, C=1.1, "A&B"=0.1, "A&C"=0.2, "B&C"=0.1 ,"A&B&C"=0.1))
plot(vd, border=1, lwd = c(1,1,3), cex=2)
```

venneuler *Calculates Venn and Euler Diagram*

Description

venneuler calculates a Venn diagram from a set specification.

Usage

```
venneuler(combinations, weights, ...)
```

Arguments

combinations	This can be one of: • a character vector (specifies disjoint class combinations as class names separated by the ampersand & character – e.g. c("A","B","A&B")) • a named numeric vector (names specify class combinations and values specify weights – e.g. c(A=1, B=2, `A&B`=0.5)) • a character matrix of two columns (specifies mapping of elements to sets – elements in the first column and set names in the second column, weights argument is ignored) • a logical or numeric matrix whose columns represent sets and co-occurrence is defined by non-zero (rep. TRUE) values in rows (weight for a row being 1 for logical matrices or the row sum for numeric matrices). For convenience data frames can be passed instead of matrices and they will be coerced using as.matrix().
weights	If combinations is a character vector then this argument specifies the associated weights. It is ignored in all other cases.
...	Additional arguments (currently unused).

Value

An object of the class VennDiagram with following components:

centers	centers of the circles (columns are x and y coordinates)
diameters	diameters of the circles
colors	colors of the circles as values between 0 and 1
labels	labels of the circles
residuals	residuals (percentage difference between input intersection area and fitted intersection area)
stress	stress value for solution
stress01	.01 critical value for stress based on random data
stress05	.05 critical value for stress based on random data

Author(s)

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See Also

plot.VennDiagram

Examples

```
vd <- venneuler(c(A=0.3, B=0.3, C=1.1, "A&B"=0.1, "A&C"=0.2, "B&C"=0.1 ,"A&B&C"=0.1))
plot(vd)
# same as c(A=1, `A&B&C`=1, C=1)
m <- data.frame(elements=c("1","2","2","2","3"), sets=c("A","A","B","C","C"))
v <- venneuler(m)
plot(v)
m <- as.matrix(data.frame(A=c(1.5, 0.2, 0.4, 0, 0),
                          B=c(0  , 0.2, 0  , 1, 0),
                          C=c(0  , 0  , 0.3, 0, 1)))
# without weights
v <- venneuler(m > 0)
plot(v)
# with weights
v <- venneuler(m)
plot(v)
```

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