Package ‘venneuler’

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Title Venn and Euler Diagrams
Author Lee Wilkinson <leland.wilkinson@gmail.com>
Maintainer Simon Urbanek <simon.urbanek@r-project.org>
Depends rJava
Description Calculates and displays Venn and Euler Diagrams
SystemRequirement Java 1.5 or higher
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venneuler

Calculates Venn and Euler Diagram

Description

venneuler calculates a Venn diagram from a set specification.

Usage

venneuler(combinations, weights, ...)

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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)

Lee Wilkinson <leland.wilkinson@gmail.com>, R package: Simon Urbanek <simon.urbanek@r-project.org>

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),
venneuler

B=c(0, 0.2, 0, 1, 0),
C=c(0, 0.3, 0, 1))

# without weights
v <- venneuler(m > 0)
plot(v)

# with weights
v <- venneuler(m)
plot(v)
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