0.1 `ternaryplot`: Ternary diagram

Description

Visualizes compositional, 3-dimensional data in an equilateral triangle (from the vcd library, Version 0.1-3.3, Date 2004-04-21), using plot graphics. Differs from implementation in vcd (0.9-7), which uses grid graphics.

Usage

```
ternaryplot(x, scale = 1, dimnames = NULL, dimnames.position = c("corner","edge","non
            dimnames.color = "black", id = NULL, id.color = "black", coordinates = FA
            grid = TRUE, grid.color = "gray", labels = c("inside", "outside", "none")
            labels.color = "darkgray", border = "black", bg = "white", pch = 19, cex
            prop.size = FALSE, col = "red", main = "ternary plot", ...)
```

Arguments

x	a matrix with three columns.
scale	row sums scale to be used.
dimnames	dimension labels (defaults to the column names of x).
dimnames.position, dimnames.color	
	position and color of dimension labels.
id	optional labels to be plotted below the plot symbols. `coordinates` and `id` are mutual exclusive.
id.color	color of these labels.
coordinates	if `TRUE`, the coordinates of the points are plotted below them. `coordinates` and `id` are mutual exclusive.
grid	if `TRUE`, a grid is plotted. May optionally be a string indicating the line type (default: `"dotted"`).
grid.color	grid color.
labels, labels.color	
	position and color of the grid labels.
border	color of the triangle border.
bg	triangle background.
pch	plotting character. Defaults to filled dots.
cex	a numerical value giving the amount by which plotting text and symbols should be scaled relative to the default. Ignored for the symbol size if `prop.size` is not `FALSE`.

`prop.size`	if `TRUE`, the symbol size is plotted proportional to the row sum of the three variables, i.e. represents the weight of the observation.
`col`	plotting color.
`main`	main title.
`...`	additional graphics parameters (see `par`)

Details

A points' coordinates are found by computing the gravity center of mass points using the data entries as weights. Thus, the coordinates of a point P(a,b,c), $a + b + c = 1$, are: P(b + c/2, c * sqrt(3)/2).

Author(s)

David Meyer
⟨david.meyer@ci.tuwien.ac.at⟩

References

M. Friendly (2000), *Visualizing Categorical Data.* SAS Institute, Cary, NC.

See Also

`ternarypoints`

Examples

```
data(mexico)
if (require(VGAM)) {
z.out <- zelig(as.factor(vote88) ~ pristr + othcok + othsocok,
               model = "mlogit", data = mexico)
x.out <- setx(z.out)
s.out <- sim(z.out, x = x.out)

ternaryplot(s.out$qi$ev, pch = ".", col = "blue",
            main = "1988 Mexican Presidential Election")
}
```