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")
}
```