visNet

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`visNet` *Function to visualise a graph object of class "igraph" or "graphNEL"*

Description

`visNet` is supposed to visualise a graph object of class "igraph" or "graphNEL". It also allows the color-coding of vertices by providing the input pattern.

Usage

```
visNet(g, pattern = NULL, colormap = c("bwr", "jet", "gbr", "wyr",
"br",
"yr", "rainbow", "wb"), ncolors = 40, zlim = NULL, colorbar = T,
newpage = T, glayout = layout.fruchterman.reingold,
vertex.frame.color = NA, vertex.size = NULL, vertex.color = NULL,
vertex.shape = NULL, vertex.label = NULL, vertex.label.cex = NULL,
vertex.label.dist = NULL, vertex.label.color = "black",
vertex.label.family = "sans", ...)
```

Arguments

`g`	an object of class "igraph" or "graphNEL"
`pattern`	a numeric vector used to color-code vertices/nodes. Notably, if the input vector contains names, then these names should include all node names of input graph, i.e. V(g)$name, since there is a mapping operation. After mapping, the length of the patern vector should be the same as the number of nodes of input graph; otherwise, this input pattern will be ignored. The way of how to color-code is to map values in the pattern onto the whole colormap (see the next arguments: colormap, ncolors, zlim and colorbar)
`colormap`	short name for the colormap. It can be one of "jet" (jet colormap), "bwr" (blue-white-red colormap), "gbr" (green-black-red colormap), "wyr" (white-yellow-red colormap), "br" (black-red colormap), "yr" (yellow-red colormap), "wb" (white-black colormap), and "rainbow" (rainbow colormap, that is, red-yellow-green-cyan-blue-magenta). Alternatively, any hyphen-separated HTML color names, e.g. "blue-black-yellow", "royalblue-white-sandybrown", "darkgreen-white-darkviolet". A list of standard color names can be found in http://html-color-codes.info/color-names
`ncolors`	the number of colors specified over the colormap

zlim	the minimum and maximum z/patttern values for which colors should be plotted, defaulting to the range of the finite values of z. Each of the given colors will be used to color an equispaced interval of this range. The midpoints of the intervals cover the range, so that values just outside the range will be plotted
colorbar	logical to indicate whether to append a colorbar. If pattern is null, it always sets to false
newpage	logical to indicate whether to open a new page. By default, it sets to true for opening a new page
glayout	either a function or a numeric matrix configuring how the vertices will be placed on the plot. If layout is a function, this function will be called with the graph as the single parameter to determine the actual coordinates. This function can be one of "layout.auto", "layout.random", "layout.circle", "layout.sphere", "layout.fruchterman.reingold", "layout.kamada.kawai", "layout.spring", "layout.reingold.tilford", "layout.fruchterman.reingold.grid", "layout.lgl", "layout.graphopt", "layout.svd" and "layout.norm". A full explanation of these layouts can be found in http://igraph.org/r/doc/layout_nicely.html
vertex.frame.color	the color of the frame of the vertices. If it is NA, then there is no frame
vertex.size	the size of each vertex. If it is a vector, each vertex may differ in size
vertex.color	the fill color of the vertices. If it is NA, then there is no fill color. If the pattern is given, this setup will be ignored
vertex.shape	the shape of each vertex. It can be one of "circle", "square", "csquare", "rectangle", "crectangle", "vrectangle", "pie" (http://igraph.org/r/doc/vertex.shape.pie.html), "sphere", and "none". If it sets to NULL, these vertices with negative will be "csquare" and the rest "circle".
vertex.label	the label of the vertices. If it is NA, then there is no label. The default vertex labels are the name attribute of the nodes
vertex.label.cex	the font size of vertex labels.
vertex.label.dist	the distance of the label from the center of the vertex. If it is 0 then the label is centered on the vertex. If it is 1 then the label is displayed beside the vertex.
vertex.label.color	the color of vertex labels.
vertex.label.family	the font family of vertex labels
...	additional graphic parameters. See http://igraph.org/r/doc/plot.common.html for the complete list.

Value

invisible

Note

none

See Also

dNetFind

Examples

```
# 1) generate a random graph according to the ER model
g <- erdos.renyi.game(100, 1/100)

# 2) produce the induced subgraph only based on the nodes in query
subg <- dNetInduce(g, V(g), knn=0)

# 3) visualise the subg with vertices being color-coded by the pattern
pattern <- runif(vcount(subg))
names(pattern) <- V(subg)$name
visNet(g=subg, pattern=pattern, colormap="bwr", vertex.shape="sphere")
```