

# visNetMul

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visNetMul

*Function to visualise the same graph but with multiple graph node colorings according to input data matrix*

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## Description

visNetMul is supposed to visualise the same graph but with multiple colorings according to input data matrix

## Usage

```
visNetMul(g, data, height = 7, margin = rep(0.1, 4),
border.color = "#EEEEEE", colormap = c("bwr", "jet", "gbr", "wyr",
"br",
"yr", "rainbow", "wb"), ncolors = 40, zlim = NULL, colorbar = T,
colorbar.fraction = 0.25, newpage = T,
layout = layout.fruchterman.reingold, mtext.side = 3, mtext.adj = 0,
mtext.cex = 1, mtext.font = 2, mtext.col = "black", ...)
```

## Arguments

g	an object of class "igraph" or "graphNEL"
data	an input data matrix used to color-code vertices/nodes. One column corresponds to one graph node coloring. The input matrix must have row names, and 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 pattern vector should be the same as the number of nodes of input graph. 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)$
height	a numeric value specifying the height of device
margin	margins as units of length 4 or 1
border.color	the border color of each figure
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 <a href="http://html-color-codes.info/color-names">http://html-color-codes.info/color-names</a>
<code>ncolors</code>	the number of colors specified over the colormap
<code>zlim</code>	the minimum and maximum <code>z/patttern</code> values for which colors should be plotted, defaulting to the range of the finite values of <code>z</code> . 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
<code>colorbar</code>	logical to indicate whether to append a colorbar. If <code>pattern</code> is null, it always sets to false
<code>colorbar.fraction</code>	the relative fraction of colorbar block against the figure block
<code>newpage</code>	logical to indicate whether to open a new page. By default, it sets to true for opening a new page
<code>layout</code>	either a function or a numeric matrix configuring how the vertices will be placed on the plot. If <code>layout</code> 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 <a href="http://igraph.org/r/doc/layout_nicely.html">http://igraph.org/r/doc/layout_nicely.html</a>
<code>mtext.side</code>	on which side of the mtext plot (1=bottom, 2=left, 3=top, 4=right)
<code>mtext.adj</code>	the adjustment for mtext alignment (0 for left or bottom alignment, 1 for right or top alignment)
<code>mtext.cex</code>	the font size of mtext labels
<code>mtext.font</code>	the font weight of mtext labels
<code>mtext.col</code>	the color of mtext labels
<code>...</code>	additional graphic parameters. See <a href="http://igraph.org/r/doc/plot.common.html">http://igraph.org/r/doc/plot.common.html</a> for the complete list.

**Value**

invisible

**Note**

none

**See Also**[visNet](#), [visNetAnimate](#)**Examples**

```
# 1) generate a random graph according to the ER model
g <- erdos.renyi.game(100, 1/80)

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

```
# 3) visualise the module with vertices being color-coded by scores
nnodes <- vcount(subg)
nsamples <- 10
data <- matrix(runif(nnodes*nsamples), nrow=nnodes, ncol=nsamples)
rownames(data) <- V(subg)$name
visNetMul(g=subg, colormap="bwr", data=data,
glayout=layout.fruchterman.reingold)
```