

Package: gridGraphviz (via r-universe)

August 31, 2024

Version 0.3-1

Depends R (>= 2.15.0), grid, graph, Rgraphviz

Imports methods

Suggests gridSVG

SystemRequirements graphviz

Title Drawing Graphs with 'grid'

Description Functions for drawing node-and-edge graphs that have been laid out by 'graphviz'. This provides an alternative rendering to that provided by the 'Rgraphviz' package, with two main advantages: the rendering provided by 'gridGraphviz' should be more similar to what 'graphviz' itself would draw; and rendering with 'grid' allows for post-hoc customisations using the named viewports and grobs that 'gridGraphviz' produces.

License GPL (>= 2)

URL <https://r-forge.r-project.org/projects/gridgraph/>

Repository <https://r-forge.r-universe.dev>

RemoteUrl <https://github.com/r-forge/gridgraph>

RemoteRef HEAD

RemoteSha 7483ce3dc28738c64de8b8763f7d6c45137878b9

Contents

agopenTrue	2
graphWidth	3
grid.graph	4

Index	6
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agopenTrue *A function to obtain a layout Ragraph object*

Description

This function is a wrapper for the **Rgraphviz** function `agopen` and will produce a layout Ragraph object with layout more true to the result produced by `graphviz`.

Usage

```
agopenTrue(graph, name, nodes, edges, kind = NULL, layoutType = "dot",
           attrs = list(), nodeAttrs = list(), edgeAttrs = list(),
           subGList = list(), edgeMode = edgemode(graph),
           recipEdges = c("combined", "distinct"))
```

Arguments

<code>graph</code>	An object of class <code>graphNEL</code>
<code>nodes</code>	A list of <code>pNode</code> objects
<code>edges</code>	A list of <code>pEdge</code> objects
<code>name</code>	The name of the graph
<code>kind</code>	The type of graph
<code>layoutType</code>	Defines the layout engine. Defaults to <code>dot</code> , and see <code>graphvizCapabilities()\$layoutTypes</code> for possible values.
<code>attrs</code>	A list of <code>graphviz</code> attributes
<code>nodeAttrs</code>	A list of specific node attributes
<code>edgeAttrs</code>	A list of specific edge attributes
<code>subGList</code>	A list describing subgraphs for the <code>graph</code> parameter
<code>edgeMode</code>	Whether the graph is directed or undirected
<code>recipEdges</code>	How to handle reciprocated edges, defaults to <code>combined</code>

Details

As of `Rgraphviz` version 2.2.1 (2013-01-31) `agopen`:

- Produces graphs of the same size as the current device, or at a default size of 7x7 inches.
- Forces nodes to fixed default height and width.
- Does not pass through edge weight information.

This function returns an Ragraph object with `graph` and node sizes set by `graphviz` or by the user. It also ensures edge weight information is passed through.

Value

An object of class Ragraph

Author(s)

Ashley Noel Hinton

References

graphviz

See Also

[agopen](#)

Examples

```
gnel <- new("graphNEL",
           nodes=letters[1:3],
           edgeL=list(a=list(edges=c("b", "c")),
                    b=list(),
                    c=list()),
           edgemode="directed")
rag <- agopenTrue(gnel, "")
grid.graph(rag)
```

graphWidth

Get width/height of an Rgraph object

Description

These functions will return the width or height of an **Rgraphviz** Rgraph object in inches.

Usage

```
graphWidth(graph)
graphHeight(graph)
```

Arguments

graph a layout Rgraph object

Value

A numeric vector of length 1.

Author(s)

Ashley Noel Hinton

References

graphviz

See Also[Ragraph](#)**Examples**

```
gnel <- new("graphNEL",
           nodes=letters[1:3],
           edgel=list(a=list(edges=c("b", "c")),
                    b=list(),
                    c=list()),
           edgemode="directed")
rag <- agopenTrue(gnel, "")
graphWidth(rag)
graphHeight(rag)
```

`grid.graph`*Draw a Node-and-Edge Graph*

Description

Take a description of the layout of a graph, as produced by the **Rgraphviz** package, and draw it.

Usage

```
grid.graph(rag, newpage = FALSE, nodesOnTop = TRUE)
```

Arguments

<code>rag</code>	An Ragraph object (must be laid out).
<code>newpage</code>	Logical value indicating whether to draw the graph on a new page.
<code>nodesOnTop</code>	Logical value indicating whether nodes should be drawn after edges (or vice versa).

Author(s)

Paul Murrell

References[graphviz](#)

Examples

```
gnel <- new("graphNEL",
           nodes=letters[1:3],
           edgeL=list(a=list(edges=c("b", "c")),
                     b=list(),
                     c=list()),
           edgemode="directed")
rag <- agopen(gnel, "")
grid.graph(rag)
```

Index

* **dplot**

- agopenTrue, [2](#)
- graphWidth, [3](#)
- grid.graph, [4](#)

agopen, [3](#)

agopenTrue, [2](#)

graphHeight (graphWidth), [3](#)

graphWidth, [3](#)

grid.graph, [4](#)

Ragraph, [4](#)