Package ‘gridGraphviz’

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Version 0.3
Depends R (>= 2.15.0), grid, graph, Rgraphviz
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 http://r-forge.r-project.org/projects/gridgraph/
NeedsCompilation no
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Repository CRAN
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Description
This function is a wrapper for the \texttt{Rgraphviz} function \texttt{agopen} and will produce a laidout \texttt{Ragraph} object with layout more true to the result produced by \texttt{graphviz}.

Usage
\begin{verbatim}
agopenTrue(graph, name, nodes, edges, kind = NULL, layoutType = "dot",
attr = list(), nodeAttr = list(), edgeAttr = list(),
subGList = list(), edgeMode = edgemode(graph),
recipEdges = c("combined", "distinct"))
\end{verbatim}

Arguments
\begin{itemize}
  \item \texttt{graph} \hspace{1cm} An object of class \texttt{graphNEL}
  \item \texttt{nodes} \hspace{1cm} A list of \texttt{pNode} objects
  \item \texttt{edges} \hspace{1cm} A list of \texttt{pEdge} objects
  \item \texttt{name} \hspace{1cm} The name of the graph
  \item \texttt{kind} \hspace{1cm} The type of graph
  \item \texttt{layoutType} \hspace{1cm} Defines the layout engine. Defaults to dot, and see \texttt{graphvizCapabilities()}$layoutTypes for possible values.
  \item \texttt{attr} \hspace{1cm} A list of graphviz attributes
  \item \texttt{nodeAttr} \hspace{1cm} A list of specific node attributes
  \item \texttt{edgeAttr} \hspace{1cm} A list of specific edge attributes
  \item \texttt{subGList} \hspace{1cm} A list describing subgraphs for the graph parameter
  \item \texttt{edgeMode} \hspace{1cm} Whether the graph is directed or undirected
  \item \texttt{recipEdges} \hspace{1cm} How to handle reciprocated edges, defaults to combined
\end{itemize}

Details
As of \texttt{Rgraphviz} version 2.2.1 (2013-01-31) \texttt{agopen}:
\begin{itemize}
  \item Produces graphs of the same size as the current device, or at a default size of 7x7 inches.
  \item Forces nodes to fixed default height and width.
  \item Does not pass through edge weight information.
\end{itemize}

This function returns a \texttt{Ragraph} object with graph and node sizes set by \texttt{graphviz} or by the user. It also ensures edge weight information is passed through.

Value
An object of class \texttt{Ragraph}
**graphWidth**

**Author(s)**
Ashley Noel Hinton

**References**
graphviz

**See Also**
agopen

**Examples**
```r
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)
```

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**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**
```r
graphWidth(graph)
graphHeight(graph)
```

**Arguments**
- `graph` a laidout Rgraph object

**Value**
A numeric vector of length 1.

**Author(s)**
Ashley Noel Hinton

**References**
graphviz
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

rag
An Ragraph object (must be laid out).

newpage
Logical value indicating whether to draw the graph on a new page.

nodesOnTop
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],
    edge=list(a=list(edges=c("b", "c")),
        b=list(),
        c=list()),
    edgemode="directed")
rag <- agopen(gnel, "")
grid.graph(rag)
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