# sprof reference

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Title Profiling, timing and optimization utilitites

Type Package

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	odesprofile
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## **Description**

Profiling, timing and optimisation utilities

# Details

Package: sprof Type: Package Version: 0.0-6

License: GPL-2 | GPL-3

readRprof() reads a profile file from Rprof() or other profilers and returns a composite structure of class sprof. The basic components of sprof are (conceptually) four data frames

info general information and summaries

nodes node specific information

stacks node specific information. Stacks are random snapshots from

the program execution, possibly including side information such as traces

of the memory management.

profiles collected records of a profile, encoded as references to stacks

To create a profile on the fly, use sampleRprof.

To import profile information written by Rprof or other profilers, use readRprof.

For sprof, the usual access functions are supported.

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#### Note

Version 0.0-6 is a clean-up version. Recommendations/requests for the interface definition are requested at this point.

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

# **Examples**

```
## Not run:
data(sprof01lm)
str(sprof01lm)
plot(sprof01lm)
## End(Not run)
```

adjacency

sprof to adjacency matix

## **Description**

convert node information from a sprof structure to adjacancy matrix.

## Usage

```
adjacency(sprof,\,keep.names = TRUE,\,rmzero = TRUE,\,\,no.name = "<nn>")
```

## **Arguments**

sprof a sprof structure.

keep.names boolean. Copy node names as row- and column names.

rmzero boolean. Remove nodes with no edges.

no.name If not null: replacement for empy strings as name.

## Value

a correspondency matrix

# Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

# References

See the vignette of package sprof.

```
\frac{\mathrm{data}(\mathrm{sprof}01\mathrm{lm})}{\mathrm{adjacency}(\mathrm{sprof}01\mathrm{lm})}
```

4 barplot\_s

barplot_s Sorted Bar Plots
----------------------------

## **Description**

Creates a sorted bar plot with vertical or horizontal bars.

#### Usage

```
barplot_s(height,
horiz = FALSE,
sort_by,
decreasing = TRUE,
lowtrim, hightrim, trimlegend = TRUE,
col, coli, colfun,
main, ...)
```

## Arguments

height	either a vector or matrix of values describing the bars which make up the plot.
	C 11-t

See barplot.

horiz boolean. Arrange bars horizontally.

sort\_by a variable to sort by. Defaults to height.

decreasing boolean. Sorting direction.

lowtrim A optional lower trim value. Observations with sort\_by values up to lowtrim

are discarded.

hightrim A optional upper trim value. Observations with sort by values from lowtrim

are discarded.

trimlegend Boolean. Show a legend about trimmed values.

col a vector of colors for the bars or bar components. By default, grey is used if

height is a vector, and a gamma-corrected grey palette if height is a matrix.

coli An index into the col table, based on original sorting.

colfun A function to generate a col palette. grey is rescaled to 1..n.

main overall title for the plot
... Passed to barplot

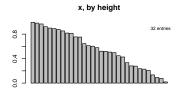
#### **Details**

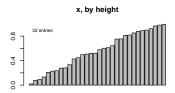
If no names are supplied, they are generated in the form x...

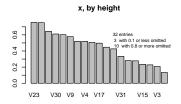
You man want to adjust the scale of the bar labels by using an additional argument such as cex.names =0.5.

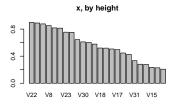
More to come. Plots are from this collection:

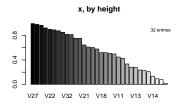
barplot\_s 5

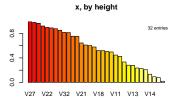












# Value

Invisible: A data frame with components

x height

perm the permutation applied coli the colour index applied

col optional: the colours selected

# Note

Part of this could go to the R base function barplot.

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

# See Also

barplot

# **Examples**

 $x < \text{-} \, \operatorname{runif}(100)$ 

 $barplot_s(x)$ 

x <- rnorm(100)

6 edgedf

```
barplot\_s(x, colfun=heat.colors, lowtrim=-1) \\ rm(x)
```

edgedf

Expand adjacency information to an edge table

# Description

Expand adjacency information from an adjacency matrix or a sprof data structure to an edge table

## Usage

```
edgedf(data, counts = TRUE, na.rm = TRUE, no.name="<nn>")
```

## **Arguments**

data an adjacency matrix or a sprof data structure.

counts include a column of counts

na.rm remove lines with a count NA.

no.name If not null: replacement for empty strings as name.

#### **Details**

The adjacency matrix is flattened. Lines with a count zero are eliminated.

#### Value

A data frame.

from Name of from node. to Name of to node.

count optional. Frequencies of edges.

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

```
\frac{\mathrm{data}(\mathrm{sprof}01\mathrm{lm})}{\mathrm{edgedf}(\mathrm{sprof}01\mathrm{lm})}
```

list.as.matrix 7

list.as.matrix

Convert list to matrix

# Description

Convert list to matrix. List entries go to matrix columns, filled for equal length.

# Usage

```
list.as.matrix(x, byrow=FALSE, filler = NA)
```

# **Arguments**

x a list of numeric vectors.

byrow boolean. Arrange list entries as rows. Default is to use columns.

filler a value to be used as a filler

#### Value

A matrix with the values from x, filled to matrix shape.

## To do

Arguments should be as as.matrix.

A corresponding list.as.data.frame should be added for mixed types.

Name synchronisation/preservations should be added.

## Note

This could go to as.matrix().

### Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

## See Also

as. matrix.

```
\begin{array}{l} x<-\operatorname{list}(x1{=}c(1{,}2{,}3){,}x2{=}3,\;x3{=}4{:}8)\\ \operatorname{list.as.matrix}(x)\\ \operatorname{list.as.matrix}(x,\operatorname{filler}{=}0) \end{array}
```

8 nodepackage

nodepackage

Find a package that may contain a node

# **Description**

getAnywhere() is used to look up x, and the package or namespace information is used to give a source package.

## Usage

```
nodepackage(x)
```

# **Arguments**

х

a character string or name, or a vector.

#### **Details**

There is no indication whether the information is from a namespace or from a package information.

No indication is given if multiple hits are encountered.

The information is based on the run time environment of this function. This may be different from the environment the object is taken from.

See the help information for getAnywhere() for more warnings.

## Value

a character string or a vector of strings with the package names.

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

## See Also

```
getAnywhere()
```

```
nodepackage("getAnywhere")
```

nodescloud 9

	nodescloud	Nodescloud of nodes from profile data	
--	------------	---------------------------------------	--

## **Description**

Show the nodes from a profile, with class encoded as colour and frequency encoded as size.

## Usage

```
nodescloud(sprof, min.freq = 3, icol, col)
```

## **Arguments**

sprof A data structure as returned by readRprof.
min.freq Minimum frequency of a node to be included.

icol An index vector to colour palette, encoding node class. Defaults to sprof\$nodes\$icol.

col A colour palette.

## **Details**

Note: these figures may be outdated. Please run the examples.

Plots are from this collection:



## Value

Used for the side effect of showing the plots.

10 nodesprofile

#### Note

See the vignette of package sprof.

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

# **Examples**

```
## Not run:
data(sprof01lm)
nodescloud(sprof01lm)
## End(Not run)
```

nodesprofile

Run length matrix

# Description

Extracts run length information from a sprof data structure with profiling information.

## Usage

```
nodesprofile(sprof)
```

## **Arguments**

sprof

a sprof data structure with profiling information.

## **Details**

Run length counts by node, level and run length.

#### Value

```
counts [node, level, run length].
```

#### Note

This expands a sparse matrix to full. Avoid to use it.

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

```
\begin{array}{l} {\rm data(sprof01lm)} \\ {\rm str(nodesprofile(sprof01lm)\ )} \end{array}
```

nodesrunlength 11

nodesrunlength

Marginal information for run length from profile

# **Description**

Run length count, by node and run length, from profile.

# Usage

```
nodesrunlength(sprof, clean=TRUE)
```

# **Arguments**

sprof a sprof data structure with profiling information.

clean boolean.

## **Details**

If clean=TRUE, zero results are removed and the nodes are sorted by average time.

If clean=TRUE, zero results and sorting are preserved. Trailing nodes with zero count may have been lost in the process, and are added.

## Value

A matrix  $\operatorname{count}[\operatorname{node}, \operatorname{run} \operatorname{length}]$  with a column giving the number of runs by run length and three additional columns

```
nr_runs sum of counts over all run lengths.
```

total\_time sum of count\*run length
avg time total time / count

# Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

```
data(sprof01lm)
nodesrunlength(sprof01lm)
```

plot.sprof

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D.	LO U	.si	м	O.	L

plot for profiles

# Description

plot a plot for the output of class scode.

## Usage

```
## S3 method for class 'sprof' plot(x, ...)
```

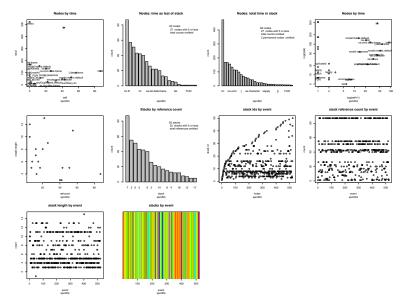
# Arguments

x A data structure as returned by readRprof.

... further arguments passed to or from other methods.

## **Details**

These displays may be outdated. Please run the examples. Plots are from this collection:



# Value

subject to change

# Note

See the vignette for in-context explanations.

Displays of the graph structure are given in the vignette.

The plot.sprof method for sprof objects concatenates three plot functions. Using the plot functions one by one allows better control and will be preferred. shownodes may be a sufficient summary.

plot\_nodes 13

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

#### References

```
http://sintro.r-forge.r-project.org/\\
```

## See Also

```
shownodes summaryRprof plot nodes plot stacks plot profiles
```

## **Examples**

```
\begin{aligned} & data(sprof01lm) \\ & oldpar <- par(mfrow=c(3,4)) \\ & plot.sprof(sprof01lm) \\ & par(oldpar) \end{aligned}
```

plot nodes

Plot profiling information on node level.

## **Description**

Various plots of a profile.

# Usage

```
\begin{array}{l} plot\_nodes(x,\,which=c(1L,\,2L,\,3L,\,4L),\,col=NULL,\\ ask=prod(par("mfcol"))< length(which)\,\&\&\,\,dev.interactive(),\\ src=NULL,\,mincount=5,\,horiz=FALSE,\,\ldots) \end{array}
```

## **Arguments**

X	preferably a sprof object. Other data structures may be extended	

which Selector of plots to show.

col Colour table

ask boolean. Ask for a new page?

src String to be used as source identifier.

minimum total frequency count for node to be shown in barcharts.

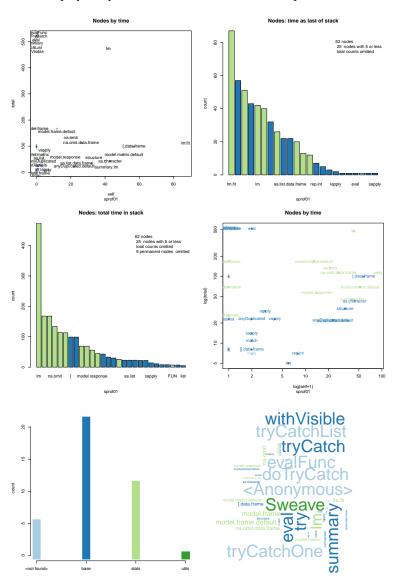
horiz draw horizontal bar plots.

... passed.

plot\_nodes

# **Details**

These displays may be outdated. Please run the examples. Plots are from this collection:



# Value

To come.

# Note

See the vignette of package sprof.

# Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

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#### References

See the vignette of package sprof.

# See Also

```
plot.sprof
```

# **Examples**

```
data(sprof01lm)
oldpar <- par(mfrow=c(2,2))
plot_nodes(sprof01lm)
par(oldpar)
```

 $plot\_profiles$ 

Plot profiling information on profile level.

# Description

Various plots of a profile.

# Usage

```
\begin{array}{l} plot\_profiles(x,\,which=c(1L,\,2L,\,3L,\,4L),\,col,\\ ask=prod(par("mfcol"))< length(which)\,\,\&\&\,\,dev.interactive(),\\ src=NULL,\,...) \end{array}
```

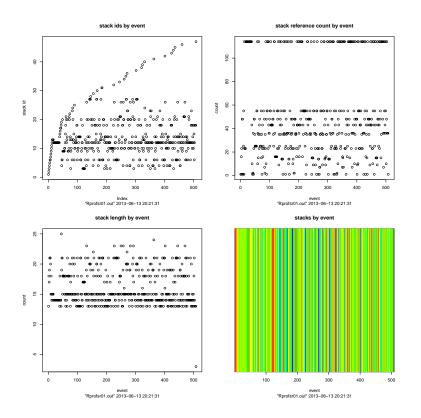
# **Arguments**

X	preferably a sprof object. Other data structures may be extended
which	Selector of plots to show.
col	Colour table
ask	boolean. Ask for a new page?
src	String to be used as source identifier.
	nassed.

## **Details**

Plots are from this collection:

plot\_profiles



## Note

See the vignette of package sprof.

# Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

# References

See the vignette of package sprof.

## See Also

plot.sprof.

```
\begin{array}{l} data(sprof01lm) \\ oldpar <- par(mfrow=c(2,2)) \\ plot\_profiles(sprof01lm) \\ par(oldpar) \end{array}
```

plot\_stacks 17

plot	stacks
prot	Stacks

Plot profiling information on stack level.

# Description

Various plots of a profile.

# Usage

```
\begin{array}{l} plot\_stacks(x,\,which=c(1L,\,2L),\\ ask=prod(par("mfcol")) < length(which) \,\&\&\,\,dev.interactive(),\\ src=NULL,\,mincount=5,\,horiz=FALSE,\,\ldots) \end{array}
```

# Arguments

X	preferably a sprof object. Other data structures may be extended
which	Selector of plots to show.
ask	boolean. Ask for a new page?
$\operatorname{src}$	String to be used as source identifier.
mincount	minimum total frequency count for stack to be shown in barcharts.
horiz	draw horizontal bar plots.

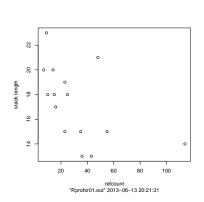
# **Details**

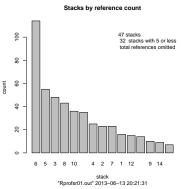
...

Note: these figures may be outdated. Please run the examples.

passed.

Plots are from this collection:





# Value

To come.

## Note

See the vignette of package sprof.

print.sprof

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

## References

See the vignette of package sprof.

## See Also

```
plot.sprof.
```

# **Examples**

```
\begin{array}{l} data(sprof01lm) \\ oldpar <- \ par(mfrow=c(2,2)) \\ plot\_stacks(sprof01lm) \\ par(oldpar) \end{array}
```

print.sprof

print for profiles

# Description

Print a print for the output of class scode.

# Usage

```
## S3 method for class 'sprof' print(x, ...)
```

# **Arguments**

x A data structure as returned by readRprof.

... further arguments passed to or from other methods.

#### Value

None.

# Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

## References

```
http://sintro.r-forge.r-project.org/\\
```

## See Also

```
summaryRprof plot.sprof
```

print\_profiles 19

## **Examples**

```
\frac{\mathrm{data}(\mathrm{sprof}01\mathrm{lm})}{\mathrm{print}(\mathrm{sprof}01\mathrm{lm})}
```

print\_profiles

Print profile information

# **Description**

Print profile information.

# Usage

```
print_profiles(x)
```

# Arguments

х

a sprof data structure.

## Value

none

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

# **Examples**

```
\frac{\mathrm{data}(\mathrm{sprof01lm})}{\mathrm{print\_profiles}(\mathrm{sprof01lm})}
```

 $profiles_matrix$ 

Extract a node incidence matrix from profile information.

## **Description**

Extract a node incidence matrix from profile information.

# Usage

```
profiles_matrix(x)
```

# Arguments

X

an sprof data structure.

# Value

```
an incidence matrix, NA filled.
```

20 readRprof

#### Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

#### **Examples**

```
data(sprof01lm)
smat <-profiles_matrix(sprof01lm)
image(smat)
```

readRprof

Read Rprof Output files and Stack Logs

#### **Description**

Read a log of stack entries, such as the output of the Rprof function, and generate a more accessible representation.

## Usage

```
\label{eq:readRprof} \begin{split} & \operatorname{readRprof}(\operatorname{filename} = "Rprof.out", \, \operatorname{chunksize} = 5000, \\ & \operatorname{interval} = 0.02, \\ & \operatorname{head} = \operatorname{c}("\operatorname{auto"}, \, "\operatorname{none"}, \, "Rprof.eem"), \\ & \operatorname{id} = \operatorname{NULL}) \end{split}
```

## **Arguments**

filename Name of a file produced by Rprof(). chunksize Number of lines to read at a time.

interval Real number: time interval between samples, in s. Defaults to 0.02s for consis-

tency with Rprof, but shorter times should be used.

head c("auto", "none", "Rprofmem") to interpret control information as provided

by Rprof or Rprofmem. See details.

id An optional identification string. Defaults to filename and date.

# **Details**

This function reads a log file of stacks, one stack snapshot per line, stack entries separated by space.

As profiling output file could be very large, it is read in blocks of chunksize lines. Increasing chunksize will make the function run faster if sufficient memory is available.

(This data structure is subject to change.)

The input format is controlled by the head argument. Format "auto" tries to detect control lines as interspersed by Rprof. These lines are not included in the output.

<sup>&</sup>quot;none" ignores all control information and includes these lines as strange stacks.

<sup>&</sup>quot;Rprofmem" isolates headers as provided by Rprofmem. "Rprofmem" new page entries are encoded as malloc requests with length 0.

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#### Value

This data structure is subject to change.

Temporarily: A list with components

info Summary information.

nodes A vector of node names. This may include stray entries from interspersed lines.

stacks Stacks, represented as reference list to nodes, and stack frequencies.

profiles Recorded data, as reference to stacks, and possibly additional data per reference.

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>, based on the code of summaryRprof

#### References

```
http://sintro.r-forge.r-project.org/
```

#### See Also

```
summaryRprof
summaryRprof
flatProfile in library(proftools).
parse_rprof in library(profr).
```

The chapter on "Tidying and profiling R code" in "Writing R Extensions" (see the 'doc/manual' subdirectory of the R source tree).

Rprof is a sampling profiler.

tracemem traces copying of an object via the C function duplicate.

Rprofmem is a non-sampling memory-use profiler.

http://developer.r-project.org/memory-profiling.html

```
## Not run:
## Rprof() is not available on all platforms
profinterval <- 0.001
simruns <- 100

n <- 10000
x <- runif(n)
y0 <- 2+ 3 * x

sinknull <- textConnection(NULL, "w"); sink(sinknull)
Rprof(tmp <- tempfile(), interval = profinterval)
for (i in 1:simruns) {y <- y0 + rnorm(n); xxx<- summary(lm(y^x))}
Rprof()

Rprof_out <- readRprof(tmp)

unlink(tmp)
sink(); close(sinknull)
```

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```
str(Rprof_out)
## End(Not run)
```

rkindex

Index, based on rank.

# **Description**

Convert x to an index in 1... maxindex

# Usage

```
rkindex(x, maxindex = length(x), pwr = 1, ties.method = "random")
```

# Arguments

x A vector of data to covert.

maxindex Maximum for result

pwr See details.

ties.method passed to rank.

#### **Details**

x is transformed to a rank scale, using ties.method. It is then rescaled to [0,1], and (optionally) a power transformation is applied. In visualisation terms, this is a gamma correction. The result is rescaled to  $1 \dots$  maxindex.

#### Value

A vector of rescaled values.

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

 $roots\_sprof$ 

 $Root\ nodes\ list\ for\ {
m sprof}$ 

# Description

Return a list of root nodes of all stacks.

## Usage

```
roots_sprof(sprof, stacks)
```

rrle 23

## **Arguments**

sprof a sprof data structure, if available

stacks an optional list of stacks as references to nodes

## Value

A vector of unique entries as root of stacks. If sprof is provided, nmaes are imported from the node name table of sprof

#### To do

stacks should support any reasonable representation of the stacks, and preserve format.

#### Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

# **Examples**

```
data(sprof01lm)
roots_sprof(sprof01lm)
trimmed <- trimstacks(sprof01lm, trimnode= "summary")
roots sprof(sprof01lm, stacks=trimmed)</pre>
```

rrle

Recursive run length encoding.

## **Description**

Encode a matrix as run-length, top down. Encoding respects previous runs, e.g line 2 encodes runs in each run of line 1.

#### Usage

```
rrle(x, collapseNA = FALSE)
```

## **Arguments**

x a matrix.

collapseNA boolean. Collapse runs of NA.

#### **Details**

By default, different NA data are not considered equal. collapseNA collapses runs of NA in the result. For recursion however they are treated as singular data, not as runs. This may need discussion.

#### Value

list of run length encoded lines

24 rrleb

#### Note

This could go to rle in package base.

The date structure used for rle would be better represented as a data.frame.

Run length and other compressions might be implemented in data.frames by default.

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

#### See Also

rrleb

# **Examples**

```
x <- matrix(c(
1,1,1,2,2,
3,3,4,4,4,
5,5,6,6,7,
8,9,9,0,0
),nrow=4, ncol =5, byrow=TRUE)
xrrle <- rrle(x)
xrrle
t(sapply(xrrle, inverse.rle))</pre>
```

 ${\rm rrleb}$ 

Recursive run length encoding bottom up.

# Description

Encode a matrix as run-length, bottom up. Encoding respects previous runs, e.g line n-1 encodes rns in each run of line n.

May be removed.

## Usage

```
rrleb(x)
```

## **Arguments**

X

a matrix.

## Value

list of run length encoded lines

# Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

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#### See Also

rle,

#### **Examples**

```
 \begin{array}{l} x <- \ matrix(c(\\ 3,3,4,4,4,\\ 5,5,6,6,7,\\ 8,9,9,0,0,\\ 1,1,1,2,2 \\ \\ ),nrow=4,\ ncol=5,\ byrow=TRUE)\\ xrrleb <- \ rrleb(x)\\ xrrleb \\ t(sapply(xrrleb,\ inverse.rle)) \end{array}
```

sampleRprof

Get a sample profile

## **Description**

Get a sample profile and return it as a sprof data structure.

#### Usage

```
sampleRprof(expr, runs = NULL, gcFirst = TRUE, interval = 0.001, ...)
```

## **Arguments**

expr an expression to be profiled.

runs nr of runs to profile.

gcFirst boolean. Bracket the total simulation with calls to GC(). If TRUE, the garbage

collection information will be reported as components gcin, codegcout.

interval Real: time interval between samples, in s. ... additional parameters, passed to Rprof

## Value

A list of type sprof

#### Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

## References

```
http://sintro.r-forge.r-project.org/
```

```
res \quad lm <- sampleRprof(for \ (i \ in \ 1:1000) \ yy <- \ lm(runif(1000) \ \~rnorm(1000)), \ runs = 100)
```

26 shownodes

sh	owi	no	des

Show node information from a profile

# Description

Plot node information from a profile in various plots.

# Usage

shownodes(sprof, col)

# Arguments

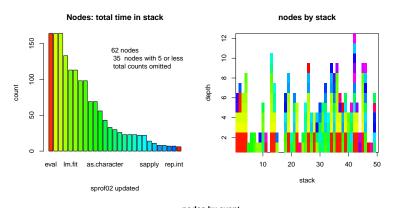
sprof A data structure as returned by readRprof.

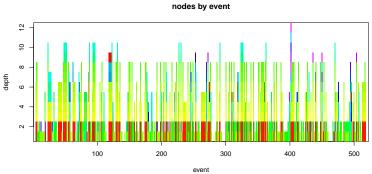
col A colour palette for the plots.

# **Details**

Note: these figures may be outdated. Please run the examples.

Plots are from this collection:





## Value

Used for the side effect of showing the plots.

sprof01lm 27

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

## **Examples**

```
## Not run:
data(sprof01lm)
shownodes(sprof01lm)
## End(Not run)
```

sprof01lm

sprof sample data

# Description

An example data set for the functions in package sprof.

# Usage

```
data(sprof01lm)
```

## Format

The format is: A List of 4 \$ info :'data.frame': 1 obs. of 8 variables: \$ nodes :'data.frame': 62 obs. of 5 variables: \$ stacks :'data.frame': 50 obs. of 7 variables: \$ profiles:List of 4

# Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

## References

See the vignette of package sprof.

```
\begin{array}{l} data(sprof01lm) \\ str(sprof01lm) \\ plot(sprof01lm) \end{array}
```

28 str\_prof

stackstoadj

Stacks to adjacency matrix

# Description

convert stack information to adjacency matrix

# Usage

```
stackstoadj(xstacks, xfreq, maxnode)
```

# **Arguments**

xstacks list of stack ids

xfreq vector of frequencies or weights

maxmode maximum of nodes (maybe higher then in stacks)

#### Value

the adjacency matrix

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

# **Examples**

#

 $str\_prof$ 

str for sprof objects

# Description

str for sprof objects

# Usage

```
str\_prof(x)
```

# Arguments

 $\mathbf{X}$ 

an sprof object

# Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

summary.sprof 29

## **Examples**

```
\frac{\mathrm{data}(\mathrm{sprof01lm})}{\mathrm{str\_prof}(\mathrm{sprof01lm})}
```

summary.sprof

Summary for profiles

## **Description**

Print a summary for the output of class scode.

## Usage

```
\#\# S3 method for class 's
prof' summary(object, ...)
```

## **Arguments**

object A data structure as returned by readRprof.
... further arguments passed to or from other methods.

#### Value

None.

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

# References

```
http://sintro.r-forge.r-project.org/
```

## See Also

```
summaryRprof
```

```
## Not run:  
## Rprof() is not available on all platforms  
profinterval <- 0.001  
simruns <- 100  

n <- 10000  
x <- runif(n)  
y0 <- 2+ 3 * x  

sinknull <- textConnection(NULL, "w"); sink(sinknull)  
Rprof(tmp <- tempfile(), interval = profinterval)  
for (i in 1:simruns) \{y <- y0 + rnorm(n); xxx <- summary(lm(y^x))\}  
Rprof()
```

30 trimstacks

```
Rprof_out <- readProf(tmp)
unlink(tmp)
sink(); close(sinknull)
summary(Rprof_out)
## End(Not run)</pre>
```

 $summary\_terminals$ 

Tabulate leaf nodes

# Description

Tabulate leaf nodes

# Usage

```
summary_terminals(x)
```

# Arguments

 $\mathbf{x}$ 

an sprof data structure.

# Value

A table of frequencies, bystack.

# Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

# **Examples**

```
\frac{\mathrm{data}(\mathrm{sprof}01\mathrm{lm})}{\mathrm{summary\_terminals}(\mathrm{sprof}01\mathrm{lm})}
```

trimstacks

Trim sprof stacks.

# Description

Trim sprof stack information by top level or by node.

# Usage

```
trimstacks(sprof, level, trimnode)
```

updateRprof 31

#### **Arguments**

sprof a sprof data structure, if available, or a stacks\$nodes information.

level Level to cut off.

trimnode A node considered end of scaffold. Entries up to and including this node are

trimmed. Nodes can be marked as index, or as node name.)

#### **Details**

The level information is evaluated first, and then the node information is evaluated.

#### Value

A data structure corresponding to stacks\$nodes, with the trimmed parts cut off. This may contain NULL entries.

## Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

## **Examples**

updateRprof

Update statistics and tables in a sprof obejct

## **Description**

Synchronize information from profiles and stack tables, and update statistics.

#### Usage

```
updateRprof(sprof, id)
```

# Arguments

sprof A data structure as returned by readRprof.
id optional. A replacement for the info\$id string.

#### Value

An updated sprof data structure.

#### Note

See the vignette of package sprof.

#### Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

32 writeRprof

writeRprof

Write profile data

## **Description**

Write a profile data file from a sprof data structure.

## Usage

```
writeRprof(sprof, filename = "Rprof.Out")
```

## **Arguments**

sprof a data structure from package sprof

filename The file to be used for exporting the profiling results.

## **Details**

writeRprof only writes the stack entries for the profile.

This can be used to export information after preprocessing with sprof to some package designed for Rprof output.

#### Value

An invisble list with the profile entries, headers removed.

# Note

See the vignette for in-context explanations.

Displays of the graph structure are given in the vignette.

# Author(s)

Günther Sawitzki <gsawitzki@users.r-forge.r-project.org>

#### References

```
http://sintro.r-forge.r-project.org/
```

```
## Not run:
data(sprof01lm)
writeRprof(sprof01lm)
## End(Not run)
```

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