

Package ‘tkrgl’

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Title TK widget tools for rgl package

Version 0.7

Author Duncan Murdoch/Ming Chen

Description TK widget tools for rgl package

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License GPL

Depends R (>= 2.0.0), tcltk, rgl (>= 0.66)

SystemRequirements rgl packages for rendering

URL <http://www.stats.uwo.ca/faculty/murdoch>

BugReports <https://r-forge.r-project.org/projects/rgl/>

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R topics documented:

tkrgl-package	2
par3dsave	2
spin3d	4
spinControl	4

Index	6
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tkrgl-package	<i>TK widget tools for rgl package</i>
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Description

This package provides a TK spin control for the rgl package.

Details

Package:	tkrgl
Version:	0.3
License:	GPL
Depends:	R (>= 1.9.0), tcltk, rgl (>= 0.66)
SystemRequirements:	rgl packages for rendering
URL:	http://www.stats.uwo.ca/faculty/murdoch

History:

0.2-2	First public release
0.3	Added possibility to control multiple windows
0.4	Compatibility with 2.0.0 tcltk package
0.5	Added continuous rotation
0.6	Added par3dsave
0.7	Added parameters to <code>spinControl</code> , fixed startup

Index:

<code>spin3d</code>	Create TCL/TK controller for rgl window(s)
<code>spinControl</code>	Create a spin control in a TCL/TK window
<code>par3dsave</code>	Save viewpoints for playback

Author(s)

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par3dsave	<i>Modal dialog for saving par3d settings</i>
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Description

This function opens a modal dialog to allow particular views of an rgl scene to be saved.

Usage

```
par3dsave(params = c("userMatrix", "scale", "zoom", "FOV"), times = FALSE, dev = rgl.cur())
```

Arguments

params	Which parameters to save
times	Should times be saved as well?
dev	Which rgl device to work with

Details

This opens a modal dialog box with Record and Quit buttons. Each time Record is clicked, a snapshot is taken of current [par3d](#) settings. When Quit is clicked, the dialog closes and the values are returned in a list.

If `times == TRUE`, then the times at which the views are recorded will also be saved, so that the [play3d](#) function will play back with the same timing.

Value

A list of the requested components. Each one will consist of a list of values that were current when the Record button was clicked. These are suitable to be passed directly to the [par3dinterp](#) function.

Author(s)

Duncan Murdoch

See Also

[par3d](#), [par3dinterp](#)

Examples

```
## Not run:  
  
# Record a series of positions, and then play them back immediately  
# at evenly spaced times, in an oscillating loop  
  
play3d( par3dinterp( par3dsave() ) )  
  
# As above, but preserve the click timings  
  
play3d( par3dinterp( par3dsave(times=TRUE) ) )  
  
## End(Not run)
```

spin3d	<i>Create TCL/TK controller for rgl window</i>
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Description

This function creates a TCL/TK window containing buttons to spin and resize one or more rgl windows.

Usage

```
spin3d(dev = rgl.cur(), ...)
```

Arguments

dev	A vector of one or more rgl device numbers to control
...	Arguments to pass to spinControl

Author(s)

Ming Chen and Duncan Murdoch

See Also

[spinControl](#)

Examples

```
if (interactive()) {  
  open3d()  
  rgl.bringtotop(TRUE)  
  points3d(rnorm(100), rnorm(100), rnorm(100), size=3)  
  axes3d()  
  box3d()  
  spin3d()  
}
```

spinControl	<i>Create a spin control in a TCL/TK window</i>
-------------	---

Description

This function may be used to embed a spin control in a TCL/TK window.

Usage

```
spinControl(base, dev = rgl.cur(),  
continue=FALSE, speed=30, scale=100 )
```

Arguments

<code>base</code>	The TCL/TK frame in which to insert this control.
<code>dev</code>	A vector of one or more rgl device numbers to control.
<code>continue</code>	Initial setting for continuous rotation checkbox.
<code>speed</code>	Initial setting for speed slider.
<code>scale</code>	Initial setting for scale slider.

Author(s)

Ming Chen and Duncan Murdoch

See Also

[spin3d](#)

Examples

```
if (interactive()) {
  open3d()
  win1 <- rgl.cur()
  rgl.bringtotop(TRUE)
  plot3d(rexp(100), rexp(100), rexp(100), size=3, col='green')

  open3d()
  win2 <- rgl.cur()
  rgl.bringtotop(TRUE)
  plot3d(rt(100,2), rt(100,2), rt(100, 2), size=3, col='yellow')

  open3d()
  win3 <- rgl.cur()
  rgl.bringtotop(TRUE)
  plot3d(rexp(100), rexp(100), rexp(100), size=3, col='red')

  open3d()
  win4 <- rgl.cur()
  rgl.bringtotop(TRUE)
  plot3d(rbinom(100,10,0.5), rbinom(100,10,0.5), rbinom(100,10,0.5), size=3, col='cyan')

  base <- tkoplevel()
  tkwm.title(base, "Spinners")
  con1 <- spinControl(base, dev=c(win1,win2))
  con2 <- spinControl(base, dev=c(win3,win4))
  tkpack(con1, con2)
}
```

Index

*Topic **dplot**

par3dsave, [2](#)

*Topic **dynamic**

spin3d, [4](#)

spinControl, [4](#)

*Topic **package**

tkrgl-package, [2](#)

par3d, [3](#)

par3dinterp, [3](#)

par3dsave, [2](#), [2](#)

play3d, [3](#)

spin3d, [2](#), [4](#), [5](#)

spinControl, [2](#), [4](#), [4](#)

tkrgl (tkrgl-package), [2](#)

tkrgl-package, [2](#)