Package ‘tkrgl’

February 20, 2015

Title TK widget tools for rgl package
Version 0.7
Author Duncan Murdoch/Ming Chen
Description TK widget tools for rgl package
Maintainer Duncan Murdoch <murdoch@stats.uwo.ca>
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/
Repository CRAN
Repository/R-Forge/Project rgl
Repository/R-Forge/Revision 831
Date/Publication 2011-11-27 09:14:21

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tkrgl-package

TK widget tools for rgl package

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 spinControl, fixed startup

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spin3d Create TCL/TK controller for rgl window(s)
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par3dsave Save viewpoints for playback

Author(s)

Duncan Murdoch/Ming Chen
Maintainer: Duncan Murdoch <dmurdoch@pair.com>

par3dsave

Modal dialog for saving par3d settings

Description

This function opens a modal dialog to allow particular views of an rgl scene to be saved.
\texttt{par3dsave}

\textbf{Usage}

\begin{verbatim}
par3dsave(params = c("userMatrix", "scale", "zoom", "FOV"), times = FALSE, dev = rgl.cur())
\end{verbatim}

\textbf{Arguments}

- \texttt{params} Which parameters to save
- \texttt{times} Should times be saved as well?
- \texttt{dev} Which rgl device to work with

\textbf{Details}

This opens a modal dialog box with Record and Quit buttons. Each time Record is clicked, a snapshot is taken of current \texttt{par3d} settings. When Quit is clicked, the dialog closes and the values are returned in a list.

If \texttt{times} == \texttt{TRUE}, then the times at which the views are recorded will also be saved, so that the \texttt{play3d} function will play back with the same timing.

\textbf{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 \texttt{par3dinterp} function.

\textbf{Author(s)}

Duncan Murdoch

\textbf{See Also}

\texttt{par3d}, \texttt{par3dinterp}

\textbf{Examples}

\begin{verbatim}
## 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)
\end{verbatim}
spinControl

Create TCL/TK controller for rgl window

Description

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

Usage

spinSd(dev = rglNcur()L NNN)

Arguments

dev  A vector of one or more rgl device numbers to control
NNN Arguments to pass to spincontrol

Author(s)

Ming Chen and Duncan Murdoch

See Also

spincontrol

Examples

if (interactive()) {
  openSd()
  rglNbringtotop(true)
  pointsSd(rnorm(Q00)L rnorm(Q00)L rnorm(Q00)L size=S)
  axesSd()
  boxSd()
  spinSd()
}

spinControl

Create a spin control in a TCL/TK window

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 )
**spinControl**

**Arguments**

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

**Author(s)**

Ming Chen and Duncan Murdoch

**See Also**

spin3d

**Examples**

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