NAME

spyview − program to do something

SYNOPSIS

spyview3d files...

DESCRIPTION

A 3d version of spyview implemented with OpenGL.

GUI SHORTCUTS

Button 1 is used for rotating the 3D surface. A rotation of a rigid body is defined by three Euler angles: Theta, the rotation of the body Z-axis away from the original Z-axis, Psi, the rotation of the body about it's Z-axis, and Phi, the azimuthal rotation of the body Z-axis about the original Z-axis.

In spyview3d, Phi is fixed so that the image is always tilted towards you. The vertical motion of the mouse will adjust theta, the angle of this tilt, and the horizontal motion of the mouse will adjust the rotation of the body about it's z axis.

Button 2 will adjust the scaling of the image. Horizontal motion will scale all three dimensions (zooming), while vertical motion will only adjust the z scaling of the surface.

Button 3 allows you to translate the image.

c Show/hide the controls window.

CONTROL WINDOW SETTINGS

Grey will draw the surface all in one color. This is useful for investigating the effects of lighting.

Colormap settings These give you some simple controls over how the colormap is applied to the image.

Save Render the opengl image to the specified format and filename using gl2ps: http://www.geuz.org/gl2ps/

LIGHTING CONTROLS

Type The light source can be set to be a point source or be directional. In the case of a directional source, the direction is set by the phi and theta angles, and the radius slider changes only the position of the light position indicator.

Ambient Adjust the intensity of the ambient lighting: this is a light source that lights the the surface uniformly from all directions.

Diffuse Adjust the intensity of the diffuse lighting: this light is radiated from a point source at the position given by the sliders below. (In directional mode, the light is instead a plane was, as if from a point source at infinity.) With ambient lighting, light that hits the surface is re-radiated in all directions.

Specular Adjust the intensity of the specular lighting. Specular lighting reflects off of the surface (instead of being re-radiated). (Haven't got it to work yet...)

For more info about OpenGL lighting, see

http://www.sjbaker.org/steve/omniv/opengl_lighting.html.

SEE ALSO

spyview(1), spybrowse(1)

AUTHOR

This manual page was written by Gary Steele <gsteele@electron.mit.edu>, for the Debian project (but may be used by others).