Subject: Adjusting Trackball Radius
Posted by Gaurav on Thu, 16 Aug 2007 07:55:55 GMT
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Adjusting Trackball Radius:

My query is: Can a mathematical formula be derived to relate the Trackball Radius of an object to the extent of the object visible through the viewplane_rectangle?

What I am basically doing is to display a spherical object within the view which can be zoomed upon by applying viewport transformations i.e. varying the values in the viewplane_rectangle property of the view. The user is then able to rotate the sphere by clicking and dragging the mouse over the sphere. This is where the trackball and its radius comes in. Right now I am manually adjusting the values of the trackball radius depending upon the values of the viewplane_rectangle. But this method is not working right as it is not possible to define trackball radii for every conceivable values of the viewplane extent. And if the radius is not adjusted properly, the view pans too much or too little with respect to the desired extent. Is there a mathematical way to relate the two(i.e. the view extent and the trackball radius), knowing the extent of the view of the object (through viewplane_rectangle keyword) and the size (in pixels) of the draw widget that contains the view?

Thanks, in advance.

Gaurav