
Subject: Re: Adjusting Trackball Radius

Posted by [Rick Towler](#) on Thu, 16 Aug 2007 18:40:03 GMT

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It may not be the answer you are looking for but take a look at the "camdemo_examine" example program for my camera object. It sounds like it does exactly what you're trying to do, and I think you would have a much easier time adjusting the rotation rate (in degrees per mouse "step") as a function of zoom than trying to adjust the radius of the trackball. I in fact do this in the program but am not too happy with the result. At high zoom levels the rotation rate is a bit low so you could take what I have done and go from there.

You have a couple of different options. You can opt for the KISS (keep it simple, stupid) approach and download my older, dlm less version here:

http://www.acoustics.washington.edu/~towler/programs/camera__define.zip

It comes with the demo programs and is functionally identical to the newer camera version but lacks some of the more advanced features that you would most likely never use.

Or you can get the latest version which requires a few dlms. More features, but at the cost of greater complexity. It is only compiled for win32 and solaris and the win32 version has not been compiled for 6.4 (yet).

<http://www.acoustics.washington.edu/~towler/RHTgrCamera.html>

-Rick

Gaurav wrote:

> 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
>

Subject: Re: Adjusting Trackball Radius
Posted by [Gaurav](#) on Sat, 18 Aug 2007 07:52:33 GMT
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Dear Rick,

This really appears to be a very interesting suggestion. I read a book on OpenGL and really wanted to give this camera effect a shot, instead of rotating the object. Now that I have your programs to guide me, I shall definitely give it a try. I hope I will someone to look up to whenever I am stuck.

Regards
Gaurav
