
Subject: Re: 3-d viewing

Posted by [davidf](#) on Tue, 21 Mar 2000 08:00:00 GMT

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Steven Chetelat (CS) (chetelat@csee.usf.edu) writes:

> Hello all. I've got another problem to ask for advice with. I could
> probably muddle through entirely on my own, but I've learned I know just
> the wrong amount of idl to try to do that...I'd end up with unmaintainable
> code for sure. So here goes. My question has to do with viewing a
> surface. It's an isosurface of a binary 3d image. Right now I generate
> it with:
>
> shade_volume, new, .5,vert,poly, /low
>
> and display it with :
>
> scale3, xrange=[0,xr], yrange=[0,yr], zrange=[0,zr],ax=xa,az=za
> tv,bytescl(polyshade(vert,poly,/t3d))
>
> The angles and everything work fine, but the problem is that my x-axis
> is about twice as long as the other 2, and I'm displaying it in an
> 800x400 draw widget. The problem I run into is that as I change the
> angles, so that one of the other axes is oriented along the long edge of
> the display window, the view is scaled into the window and the result
> looks frighteningly comical. Is there a *really* simple way to fix this?
> If not, which approach should I use. There's a couple of hints I've
> gotten looking through the manuals and David's book, but I figured I'd see
> if anyone could tell me where to dig before I start digging...

I've just got a minute, so I can't write much
of a helpful response. But if I really wanted a
place to start digging, I'd be digging in the Object
Graphics manuals. :-)

I'd start with a program like Simple_Surface to help you set up
the Viewport coordinate system, add a trackball, etc. You will
want to substitute a Polygon object for the Surface object in
that program, but most of the infrastructure is already
built for you, and you can certainly see from the surface
object how to scale your polygon object into the view.

ftp://www.dfanning.com/pub/dfanning/outgoing/idl_course/simple_surface.pro

The reason you are having trouble is the very same reason
that drove RSI to develop the object graphics system in the
first place. :-)

Cheers,

David

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