Subject: Re: NVidia Quadro4 980 XGL card + IDL
Posted by Dick Jackson on Thu, 02 Feb 2006 21:40:43 GMT
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"Rick Towler" <rick.towler@nomail.noaa.gov> wrote in message
news:<drtntg$135$1@news.nems.noaa.gov>...
>
> You would be better off learning how to control the shutter glasses from
> within IDL (hack them to run off of the serial port?) and then modify
> IDL's IDLgrView/IDLgrModel parameters to render the left and right eye
> views as you run your glasses. My camera object makes rendering the left
> and right eye views easy. It also has the added bonus of allowing you to
> easily manipulate your model as you view it.
>
> http://www.acoustics.washington.edu/~towler/RHTgrCamera.html
>
> I've played around with this using multiple monitors, Saran wrap
> (http://www.sas.org/E-Bulletin/2003-06-20/labNotesAS/body.htm l) and
> polarized glasses. I have also used multiple projectors with polarizing
> lenses. It can be tricky setting up the views/monitors/viewer so you get
> a "natural" 3d effect but it can be done.
>
> Dick Jackson has worked with this as well and has been quite successful.
> He could probably give you more tips on setting up views if you decided to
> go this route.

This OpenGL site helped me to get the exact setup for the two views.

On Stereo Viewing:
http://www.opengl.org/resources/tutorials/sig99/advanced99/n otes/node24.html

Section on setting up transforms:
http://www.opengl.org/resources/tutorials/sig99/advanced99/n otes/node26.html

I think Rick's Camera object is great and can easily give you two views from
different eye positions looking at the same point in space. (if you use this
to generate the stereo views, that last link refers to this as the
"alternative, but less correct, method")

Be aware that for perfect stereo rendering, the views should be rendered
from different positions (eye positions) looking in the *same* direction
(parallel) and then offset on the viewing device so that each eye's
"straight ahead" point is directly in front of that eye. Note that this is
dependent on display resolution and distance from the user to the display.
Tricky business, but the results can be tremendous!

Cheers,
--

-Dick

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