Subject: Re: Z-Buffer
Posted by davidf on Mon, 10 Feb 1997 08:00:00 GMT
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John-David Smith <jdsmith@astrosun.tn.cornell.edu> writes:

> Dear Experts of the Buffer Z;
>
> I am trying to overlay an image created in the z-buffer with axes
> produced outside the z-buffer (to avoid pixelation and make nice-looking
> output) in a postscript image. The problem is, if the entire postscript
> region isn't used (e.g. to have multiple plots on a page), then the 3-d axes
> do not overlay the z-buffer images correctly. I could not find a way to
> map the 3-d position coordinates to the 2-d postscript coordinates for
> sub-regions of the postscript page.
>
> Any suggestions?

Here is a bit of IDL code that illustrates the problem John-David is having. You will notice that the axes don't line up, even though the same code is used to display the surface both in the Z-buffer and on the display.

```
TVLCT, [255, 0], [255, 255], [0,0], 1
data = DIST(40,40)
thisDevice = !D.NAME
SET_PLOT, 'Z'
DEVICE, Set_Resolution=[300,300]
SURFACE, data, Color=1
picture = TVRD()
SET_PLOT, thisDevice
WINDOW, XSize=300, YSize=300
TV, picture
SURFACE, data, /NoErase, /NoData, Color=2
```

I've sent John-David a solution to this problem via private e-mail and have sworn him to secrecy so we can have a little diversion on this newsgroup.

This problem illustrates one of the deepest mysteries about IDL that I know. I don't think there are many IDL programmers who can solve this problem. If you can, you get an automatic invite to the IDL Expert Programmers Convention. So here is the contest.

I have a brand new copy of the Michael Dorris' novel A Yellow Raft in Blue Water (a must-read book if you haven't read it yet). I'll give it to the first person who posts an IDL program

that draws a surface in the Z-buffer and labels the axes in the proper locations on the display. Put the time you post the result in your post, so I don't have to worry about how long the news machines take to get it to me.

If we don't have any winners, I'll post my answer next week. (It will probably be wrong!)

All right. On your marks, get set, go! (And no cheating!) :-)

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