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Subject: Re: IDLgrClipboard and IDLgrPrinter: wrong vector output order ?

Posted by [Mark Hadfield](#) on Wed, 24 May 2000 07:00:00 GMT

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"Nicolas Decoster" <Nicolas.Decoster@Noveltis.fr> wrote in message  
news:392AA2DF.521D1AEE@Noveltis.fr...

> Hi.

>

> First of all:

> IDL> print, !version

> { sparc sunos unix 5.3 Nov 11 1999}

>

> I am trying to build home tools to draw some kind of personal graphics.

> Once I have my pretty drawing on a IDLgrView displaying on a

> IDLgrWindow, I want to print it or include it in document. I decided to

> use IDLgrClipboard with the vector keywords of the Draw method for

> various reasons.

>

> The problem is that the IDLgrWindow::Draw method and the IDLgrClipboard

> one don't seem to use the same atomic object order to render the view.

>

> Here is a little code to illustrate my words:

>

> --- begin of the little code ---

> ...

> --- end of the little code ---

>

> You see what I mean?

Well, no. On my system (x86 Win32 Windows 5.3.1 Feb 23 2000) the IDL window  
& the Postscript file both look the same (red in front of green). At least  
they do when the IDLgrWindow uses the hardware renderer (RENDERER=0), but if  
I tell it to use the software renderer (RENDERER=1), the overlap is reversed  
(green in front of red). I presume the latter is what you saw.

In my experience the only way to get reliable Z-ordering with Object  
Graphics is to actually position atoms in the Z dimension, not to rely on  
drawing order. The minimum offset required to ensure reliable overlap  
control is approximately 1/65536 times the distance between the front and  
rear clipping planes, e.g. see the following fragment from the IDLgrLegend  
code:

```
oView->IDLgrView::GetProperty, ZCLIP = zClip  
depthOffset = (double(zClip[0]) - double(zClip[1]))/65536.d
```

(I guess this means that OpenGL uses 16-bit integers internally?)

Actually I suggest increasing the depth offset for overlap control to twice

the above value, because this seems to be required with some combinations of atoms on some output devices.

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