Subject: Re: strange behaviour with z-buffer
Posted by davidf on Mon, 08 Jun 1998 07:00:00 GMT
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Mark Rivers (rivers@cars3.uchicago.edu) adds good advice
to this thread when he writes:

> Different devices can also have different default font
> sizes, so one needs to be careful of this.

The reality is even more sinister than this. I haven't
checked this out in IDL 5.1, but in earlier versions
I have had great difficulty getting 3D axes aligned
properly as I go back and forth in the Z-buffer.

I notice this particularly when I am trying to add axes
to something I need to render in the Z-buffer. (I don't
like to add axes in the Z-buffer because the resolution
in PostScript will be screen resolution and not PostScript
resolution.)

I have solved this problem (I don't know why, exactly)
by making sure I set !P.Charsize = 1 before I enter the
Z-buffer. This seems to make sure that the default
plot margins are set the same way as they are outside
the Z-buffer.

Just one of those weird things you spend about 3 days
learning on your own. Since I screwed up so badly
offering advice today, I thought I would share
something that I normally only offer to the people
who come to my IDL programming classes. :-)

Cheers,

David

David Fanning, Ph.D.
Fanning Software Consulting
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Phone: 970-221-0438
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: strange behaviour with z-buffer
Posted by davidf on Mon, 08 Jun 1998 07:00:00 GMT
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Damiano Zilio (damiano.zilio@jrc.it) writes:

> am I creazy or... the plots produced on the momitor by this stupid program
> are different????
> Why????

The problem here is when I say "go left" I mean "go right",
sometimes. :-)

To make the Z-buffer exactly like the window, you have to
set the resolution and colors *outside* the Z device. Otherwise,
you just set the resolution and colors to the defaults of
the Z device! You need something like this:

```
  ncolors = !D.N_Colors - 1
  xsize = !D.X_Size
  ysize = !D.Y_Size

  Set_Plot, 'Z'
  Device, Set_Resolution=[xsize, ysize], Set_Colors=ncolors
  Help, /Device
```

Cheers,

David

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Subject: Re: strange behaviour with z-buffer
Posted by DAMIANO ZILIO on Mon, 08 Jun 1998 07:00:00 GMT
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Dear ALL

David Fanning wrote:

> Damiano Zilio (damiano.zilio@jrc.it) writes:
>
>> I produce gif files with these 2 different ways:
>>

```
>>  1)
>>  set_plot,'x'
>>  window,0,reatin=2,xsixe=700,ysize=500
>>  plot.....
>>  img=tv()
>>  write_gif,'filename',img
>>
>>  2)
>>  set_plot,'z'
>>  device,set_resolution=[700,500]
>>  plot
>>  img=tv()
>>  write_gif,'filename',img
>>
>>  But the gif files obtained are different!!!
>>  The relative position of the colorbar, using the z-buffer are wrong!,
>>  there are some
>>  strange overplottings!!
>>  Can I avoid this problem?
>
>  You must configure the Z-graphics buffer to be exactly like
>  your window. This means you need to make the resolution
>  and number of colors the same. (The Z-buffer has 256 colors
>  by default, which can be a very nice feature when making
>  GIF files. In fact, is one reason why I almost always use
>  the Z-buffer to make GIF files.) To make the Z-buffer
>  exactly like your current graphics window, try this:
>
>    ncolors = !D.N_Colors - 1
>    Set_Plot, 'Z'
>    Device, Set_Resolution=[!D.X_Size, !D.Y_Size], $
>       Set_Colors=ncolors
>
>  Cheers,
>
>  David

am I creazy or... the plots produced on the momitor by this stupid program
are different????
Why????
>>>> >>>>>>>>>>>>
pro test1
loadct,16
set_plot,'x'
plot,findgen(5),/nodata,position=[0,0,1,1]
img=tvrd()
write_gif,'x.gif',img
set_plot,'z'
```

```
ncolors=!D.N_Colors-1
 device,set_Resolution=[!D.X_Size,!D.Y_Size],set_colors=ncolo rs
plot,findgen(5),/nodata,position=[0,0,1,1]
img=tvrd()
write_gif,'z.gif',img
device,/close
set_plot,'x'
read_gif,'x.gif',imgx
read_gif,'z.gif',imgz
window,1,retain=2,title='xgif'
tv,imgx
window,2,retain=2,title='zgif'
tv,imgz
end
>>>> >>>>>>>>>>>>>.
```

On my monitor the position af the axis in the tv of the image
plotted in the z-buffer is different from the same axes plotter in the x
device
WHY?
WHY?
WHY?

--

 Damiano Zilio

 Joint Research Centre of the Commission of
 the European Communities
 I-21020 Ispra (VA)

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```

Cheers,

David

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Subject: Re: strange behaviour with z-buffer
Posted by rivers on Tue, 09 Jun 1998 07:00:00 GMT
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```
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> ncolors = !D.N_Colors - 1
> Set_Plot, 'Z'
> Device, Set_Resolution=[!D.X_Size, !D.Y_Size], $
>    Set_Colors=ncolors
```

Different devices can also have different default font sizes, so one needs to
be careful of this.

_____

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