Subject: IDLgrWindow (?) bug
Posted by Pavel Romashkin on Mon, 28 Feb 2000 08:00:00 GMT
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Hello everyone,
I think there is a bug in the way IDL creates an independent object graphics window. Once you change things in it, the viewport (or something else) changes, messing the displayed axes up. Try the code at the bottom of this message. I use PPC IDL 5.2 and tried it in PPC IDL 5.3.

```
IDL> test, All_objects=All_objects, window=window, scene=scene, $
IDL>  x_axis=x_axis, x_top=x_axis_top
IDL> mod_axis, window=window, x_axis=x_axis, scene=scene, x_top=x_axis_top
```

Use obj_destroy, objects toclean up after you saw the results.
After mod_axis is executed, the all axes lengthen and reach the edges of the window. However, if you try using the widget_draw in object graphics mode, it does not happen:

```
IDL> test, All_objects=All_objects, window=window, scene=scene, $
IDL>  x_axis=x_axis, x_top=x_axis_top, /wid
IDL> mod_axis, window=window, x_axis=x_axis, scene=scene, x_top=x_axis_top
```

Everything looks normal, scaling changes; of course, the labels are messed up because size recalculation is left out in the sample code.
Use obj_destroy, objects toclean up after you saw the results.
Does anyone know if this is a feature or a bug? It took me half-day yesterday to figure out why my axes act up, until I tried to put my development object window into a widget.

Cheers,
Pavel

```
pro test, All_objects=All_objects, window=window, scene=scene, $
 x_axis=x_axis, x_top=x_axis_top, wid=wid

if keyword_set(wid) then begin
 base = widget_base()
 draw = widget_draw(base, xsize=400, ysize=300, graphics=2)
 widget_control, base, /realize
 widget_control, draw, get_value=Window
endif else Window = obj_new('IDLgrWindow')

 All_objects = obj_new('IDL_Container')
 Scene = obj_new('IDLgrScene')

  ; Fill the entire window with the default view.
 View = obj_new('IDLgrView', viewplane_rect=[-0.1, -0.1, 1.12, 1.16],
```

```
location=[0.0, 0.0])
 Model = obj_new('IDLgrModel')

  ; Initialize axes.
 x_axis_top = obj_new('IDLgrAxis', 0, ticklen=0.03, tickdir=1,
loc=[1000, 1, 0], /notext, /exact)
 y_axis_top = obj_new('IDLgrAxis', 1, ticklen=0.03, tickdir=1, loc=[1,
1000, 0], /notext, /exact)
 x_axis = obj_new('IDLgrAxis', 0, ticklen=0.03, name='X_AXIS',
location=[1000, 0, 0], /exact)
 y_axis = obj_new('IDLgrAxis', 1, ticklen=0.03, name='Y_AXIS',
location=[0, 1000, 0], /exact)

 Model -> add, x_axis
 Model -> add, y_axis
 Model -> add, x_axis_top
 Model -> add, y_axis_top

 View -> add, Model
 Scene -> add, View

  ; Put all objects in container, for easy destruction.
 All_objects -> add, Scene
 All_objects -> add, Window

 window -> draw, Scene

end

pro mod_axis, window=window, x_axis=x_axis, scene=scene, x_top=x_axis_top

x_nr = normalize([20.,120.])
x_axis -> setProperty, range=[20.,120.], xcoord_conv=x_nr
x_axis_top -> setProperty, range=[20.,120.], xcoord_conv=x_nr
window -> draw, scene

end
```

Subject: Re: IDLgrWindow (?) bug
Posted by junkbuster on Mon, 28 Feb 2000 08:00:00 GMT
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> to the next IEPA meeting. (I can't say where this is going to
> be, but I can tell you it is in a VERY desirable location).
^^^^^^^^^^^^^^^^^^^^^^^^^^

So it will not take place on the back side of the moon, right ?
--

Dr. Udo Grabowski email:
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Subject: Re: IDLgrWindow (?) bug
Posted by davidf on Mon, 28 Feb 2000 08:00:00 GMT
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junkbuster (junkbuster@aa.bb.com) writes:

> So it will not take place on the back side of the moon, right ?

Please. We are updating the bylaws so there will be
no mention of moon, mooning, mooner, etc. :-(

Cheers,

David

--
David Fanning, Ph.D.
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Subject: Re: IDLgrWindow (?) bug
Posted by davidf on Mon, 28 Feb 2000 08:00:00 GMT
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Udo Grabowski (udo.grabowski@imk.fzk.de) writes:

> I myself experimented a couple of times with objects in direct graphics,
> and I immediately got rid of all problems when I realized that the
> viewplane_rect setting determines that data range of the plot which is projected
> INTO the viewport. The viewport itself is by default determined from the
> underlying
> graphics window and may further be specified INSIDE the window by the 'location'
> and 'dimensions' keywords in units given by the 'units' keyword (which has
> nothing

> to do with the viewplane_rect entries). Keeping this in mind, all my plots since
> then have an predictable and identical behaviour under direct as well as under
> object graphics (except that color trouble...).

Here is a man who is *rapidly* gaining himself an invitation
to the next IEPA meeting. (I can't say where this is going to
be, but I can tell you it is in a VERY desirable location).
You are passing this information along to others, aren't you? :-)

You are right. The viewport is mapped into the graphics
window. It can be positioned in the window with the LOCATION
and DIMENSIONS keywords. The viewport rectangle (and the
associated Z clipping planes, which together create the
viewport volume) is described in whatever arbitrary
coordinate system you like to make up! The only "trick"
to object graphics is learning how to put objects, which
are created in their "own" coordinate space, into the
arbitrary coordinate space of the viewport. Once you
understand this, everything else is just detail. :-)

Congratulations!

Cheers,

David

--
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Subject: Re: IDLgrWindow (?) bug
Posted by Pavel Romashkin on Mon, 28 Feb 2000 08:00:00 GMT
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David Fanning wrote:
>
> On some X windows machines the redraw used the *size* of the
> old window even when drawing into the new window. I wonder if
> this problem is related to the one you are seeing?

Maybe; however, I did not change the window size, it stays the same
default size that IDL made it, to start with. I might try to run it on a
Unix, to see if it will be there.

> I eventually just recreated the draw widget as a work-around,
> but I thought it was a lousy solution. I've never been able
> to report the problem because I've never been able to
> replicate it on my Windows machine.

A one-platform bug is still a bug, right?

Cheers,
Pavel

Subject: Re: IDLgrWindow (?) bug
Posted by Pavel Romashkin on Mon, 28 Feb 2000 08:00:00 GMT
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If it is a bug, then its not a cross-platform one. Keep the shares and
your PC, David, and don't buy those gigaflops arguments around Macs :-).
What is the use of gigaflops if you still have no dynamic memory
allocation in the OS?

I'll run it by RSI to see what they say, since they target Mac market
just as much as my boss :-(.

Cheers,
Pavel

David Fanning wrote:
>
> P.S. Let's just say I'm glad Martin didn't talk me into
> selling those Microsoft shares! (Although God knows after
> looking at the markets this morning I wish I had sold
> *everything* yesterday. :-(
> n

Subject: Re: IDLgrWindow (?) bug
Posted by Udo Grabowski on Mon, 28 Feb 2000 08:00:00 GMT
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Hello !

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and I immediately got rid of all problems when I realized that the
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INTO the viewport. The viewport itself is by default determined from the
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to do with the viewplane_rect entries). Keeping this in mind, all my plots since then have an predictable and identical behaviour under direct as well as under object graphics (except that color trouble...).
--
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Subject: Re: IDLgrWindow (?) bug
Posted by davidf on Mon, 28 Feb 2000 08:00:00 GMT
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Pavel Romashkin (pavel@netsrv1.cmdl.noaa.gov) writes:

> Sorry for not being explicit. "Messing up" means that the axes become
> longer than they were, and extend beyond the window edges.

You know, I'm vaguely remembering a problem I had when I first released my new PS_FORM program, FSC_PSConfig. I was changing the size of the draw widget and then redisplaying the graphic. On some X windows machines the redraw used the *size* of the old window even when drawing into the new window. I wonder if this problem is related to the one you are seeing?

I eventually just recreated the draw widget as a work-around, but I thought it was a lousy solution. I've never been able to report the problem because I've never been able to replicate it on my Windows machine.

Cheers,

David
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