
Subject: Persistent Object Graphics Not Persistent in Resizeable Windows

Posted by [davidf](#) on Fri, 06 Jun 1997 07:00:00 GMT

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Folks,

I've run into a problem in which I lose all my axes labeling if I resize my draw widget object window before evoking the Draw method of the window. Here is a bug report and some sample code to see the problem. (Those of you who want to see how to add axes to a surface plot, take note. :-))

Cheers,

David

Name: David Fanning

E-mail Address: davidf@dfanning.com

IDL version: { x86 Win32 Windows 5.0 Apr 28 1997 }

Platform and OS: WindowsNT 4.0, Service Pack 1

Description of Problem: -----

"Persistent" object graphics are not very persistent if you resize the object window before you evoke the Draw method. Here I am losing the axes labeling when the window is resized.

Example Code: -----

Pro XSurface_Cleanup, tlb

 ; Come here when program dies. Free all created objects.

Widget_Control, tlb, Get_UValue=info

Obj_Destroy, info.thisContainer

END

;------

PRO XSurface_Resize, event

 ; The only events generated by this simple program are resize
 ; events, which are handled here.

 ; Get the info structure.

Widget_Control, event.top, Get_UValue=info, /No_Copy

```
; Resize the draw widget.
```

[illegible]

```
; Here is the problem. Comment this line out and uncomment the
; two below it to see that the problem comes from resizing the
; window.
```

info.thisWindow->SetProperty, Dimension=

```
;info.thisWindow->erase, Color=
```

```
;Wait, 1
```

[illegible]

```
; Redisplay the graphic.
```

info.thisWindow->Draw, info.thisView

```

;Put the info structure back.

```

Widget Control, event.top, Set UValue=info, /No Copy

END

PRO XSurface, data

; Need some data.

Catch, error

IF error NE 0 THEN BEGIN ; Can't find LoadData.

```
data = DIST(40)
```

GOTO, CreateView

ENDIF

```
IF N_Params() EQ 0 THEN  data = LoadData(2)
```

CreateView:

Catch, /Cancel

```
; Create a view. Use RGB color. Charcoal background.
```

; The viewplane rectangle extends from -1 to 1 in XY directions.

```
thisView = OBJ_NEW('IDLgrView', Color=, Viewplane Rect=)
```

```
; Create a model and add it to the view.
```

```
thisModel = OBJ_NEW('IDLgrModel')
thisView->Add, thisModel
```

; Create a wire mesh surface. Make it yellow.

```
thisSurface = OBJ_NEW('IDLgrSurface', data, Color=)
```

; Create axes for the surface. Color them green.

```
xAxis = Obj_New("IDLgrAxis", 0, color=, Ticklen=0.1)
yAxis = Obj_New("IDLgrAxis", 1, color=, Ticklen=0.1)
zAxis = Obj_New("IDLgrAxis", 2, color=, Ticklen=0.1)
```

; Add the surface and axes to the model.

```
thisModel->Add, thisSurface
thisModel->Add, xAxis
thisModel->Add, yAxis
thisModel->Add, zAxis
```

; Get the data ranges for the surface.

```
thisSurface->GetProperty, XRange=xrange, YRange=yrange, ZRange=zrange
```

; Set the range and location of the axes. In this case,
; we are scaling the data into -0.5 to 0.5, so that even
; when the surface is rotated, it stays inside the -1 to 1
; viewing rectangle. Note that not all values in the Location
; keyword are used. (I've put really large values into the
; positions that are not being used to demonstrate this.) For
; example, with the X axis only the Y and Z locations are used.

```
xAxis->SetProperty, Range=xrange, Location=
yAxis->SetProperty, Range=yrange, Location=
zAxis->SetProperty, Range=zrange, Location=
```

; Scale the surface and axes into the range -0.5 to 0.5.

```
xs = [-0.5, 1/(xrange-xrange)]
ys = [-0.5, 1/(yrange-yrange)]
zs = [-0.5, 1/(zrange-zrange)]
thisSurface->SetProperty, XCoord_Conv=xs, YCoord_Conv=ys, ZCoord_Conv=zs
xAxis->SetProperty, XCoord_Conv=xs
yAxis->SetProperty, YCoord_Conv=ys
zAxis->SetProperty, ZCoord_Conv=zs
```

; Rotate model to the standard view.

```
thisModel->Rotate,, -90 ; To get the Z-axis vertical.
thisModel->Rotate,, 30 ; Rotate it slightly to the right.
thisModel->Rotate,[1,0,0], 30 ; Rotate it down slightly.
```

```
;Create the widgets to view the surface.
```

```
tlb = Widget_Base(Title='Surface Example', Column=1, TLB_Size_Events=1)
drawID = Widget_Draw(tlb, XSize=300, YSize=300, Graphics_Level=2,
Retain=2)
Widget_Control, tlb, /Realize
```

```
; Get the window destination object.
```

```
Widget_Control, drawID, Get_Value=thisWindow
```

```
; Draw the view in the window.
```

```
thisWindow->Draw, thisView
```

```
; Create a container object to hold all the other
; objects. This will make it easy to free all the
; objects when we are finished with the program.
```

```
thisContainer = Obj_New('IDLgrContainer')
```

```
; Add the view to the container.
```

```
thisContainer->Add, thisView
```

```
; Create an INFO structure to hold needed program information.
```

```
info = { thisContainer:thisContainer, $ ; The object container.
        thisWindow:thisWindow, $ ; The destination window
object.
        thisView:thisView } ; The view object.
```

```
; Store the info structure in the UValue of the TLB.
```

```
Widget_Control, tlb, Set_UValue=info, /No_Copy
```

```
; Call XManager. Set a cleanup routine so the objects
; can be freed upon exit from this program.
```

```
XManager, 'xsurface', tlb, Cleanup='XSurface_Cleanup', /No_Block, $
Event_Handler='XSurface_Resize'
END
;-----
```

Known Workarounds or Fixes: -----

Don't resize windows or store all object components in the info structure so the object can be re-built each time.

[RSI Technical Support Response: -----

Pending.

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David Fanning, Ph.D.

Fanning Software Consulting

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Phone: 970-221-0438 E-Mail: davidf@dfanning.com

Coyote's Guide to IDL Programming: <http://www.dfanning.com>

IDL 5 Reports: <http://www.dfanning.com/documents/anomaly5.html>
