Subject: Object graphic and direct graphics
Posted by Thomas Launey on Tue, 21 Nov 2000 07:55:03 GMT
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Hello,
I am using object graphics in a Direct graphic program because I need the alpha channel for some fancy image manupulation. Basically, I grab (TVRD(true=3)) the image from a direct graphic window, put it in an IDLgrImage, do some processing, draw it in a IDLgrBuffer, grab it from the buffer and TV it to the Direct graphic (Widget_draw). It work fine for most images but I recently discovered that some particular image dimensions induce a shift of the image (vertical and/or horizontal).
For me, image dimensions that are roughly multiples of 15 produce the problem.I wonder if there is a rational explanation for this behavior and if this can be reproduced on different system, with different IDL version.
I am using 5.2 on Win95.
Any comment greatly appreciated, I learn more from this newsgroup than from any documentation. At least until I buy DF's new book ;-)

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Below is a simple program that show this strange behavior

```
; NAME: Test_bug
;
; PURPOSE: Test display problem when moving RGB data between
; Object graphic (OG) and Direct graphics (DG)
; RGB image is grabbed from a DG window, Drawn in IDLgrBuffer
; Then grabbed from buffer and TV-ed back in the DG window.
; Both the original and the grabbed image are displayed.
;
; KEYWORDS: Xsize, Ysize: as it says
;  Verbose: display information about objects and RGB images
;   OBSERVATIONS:
; For SOME image size, the image is shifted after each grab-paste.
; This shift is observed for values Xsize and/or Ysize of
; [13:15],30,60,[119:126],[238:241],480
;
; IDL Version 5.2 (Win32 x86). Research Systems, Inc.
```

```
Pro Test_bug, Xsize=Xsize, ysize=ysize, verbose=verbose

Device, Get_Screen_Size=screenSize
If keyword_set(Xsize) then ImageXsize=Xsize>2 Else
ImageXsize=ScreenSize[0]/10
If keyword_set(Ysize) then ImageYsize=Ysize>2 Else ImageYsize=ImageXsize

obuffer = OBJ_NEW('IDLgrBuffer', DIMENSIONS=[ImageXsize,ImageYsize],
quality=2)
oview = OBJ_NEW('IDLgrView', viewplane_rect=[0,0,ImageXsize,ImageYsize],$
 dimensions=[ImageXsize,ImageYsize])
omodel = OBJ_NEW('IDLgrModel')
oimage = OBJ_NEW('IDLgrImage', INTERLEAVE=2)
omodel -> Add, oimage
oview -> Add, omodel
oContainer = Obj_New('IDL_Container')
oContainer->Add, oBuffer
oContainer->Add, oView
oContainer->Add, oModel
oContainer->Add, oimage

loadct,5, /silent ; give some color to the image
savewin=!D.window
Window, /free, xsize=ImageXsize, ysize=ImageYsize, title="original image"
image= BESELJ(SHIFT(DIST(ImageXsize), ImageXsize/2, $
  ImageYsize/2)/2, 0)*256
TV, image
Window, /free, xsize=ImageXsize, ysize=ImageYsize, title="test window"
testwin=!d.window
TV, image
Direct_grabbed = TVRD(true=3)
;*** load the grayscale LUT, otherwise strange things happen when TV-ing
; the RGB image.
loadct,0, /silent
For i=0,30 do Begin
 ;*** set grabbed image as the data in oimage
 oimage   -> SetProperty,  data=Direct_grabbed
 oBuffer -> Draw, oview ;*** Draw image into oBuffer
 ;*** grab image from the graphic buffer object
 oBuffer -> GetProperty, image_data=Object_grabbed
 ;*** true=1 since Object_grabbed is [3,Xsize,Ysize]
 tv, Object_grabbed, true=1
 ;*** grab image from the direct grahic window
 Direct_grabbed = TVRD(true=3)
EndFor

If keyword_set(verbose) then begin
 Help, Direct_grabbed
```

```
 Help, Object_grabbed
 oview -> GetProperty, All=all
  Print, string(10B), "IDLgrView properties"
  print, "dimensions: " ,all.dimensions
  print, "location: " ,all.location
  print, "view_rect: ",all.VIEWPLANE_RECT,string(10B)
 obuffer -> GetProperty, All=all
  Print, "IDLgrbuffer properties"
  print, "dimensions: " ,all.dimensions
  print, "screen dim: " ,all.SCREEN_DIMENSIONS
  print, "resolution: ",all.resolution
EndIf
obj_destroy, oContainer
wset, savewin
End
```