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Subject: clipboard objects and postscript (unix)  
Posted by [seanosea](#) on Mon, 02 Nov 1998 08:00:00 GMT  
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Howdy, folks. I'm having difficulties with the Clipboard object in IDL on unix. This is pretty much my first time posting anywhere; I was so impressed by the helpfulness here that I decided to try it out.

First, IDL saves to the PostScript "native format" file with a bitmap rather than a "true" PostScript objecty-sort of "do this, do that" structure. That is, in a normal PS file, you'll see at some point all the words of text actually spelt out as "{X} goright {Axis}" or whatever, whereas IDL's PS just has 1's and 0's.

Is there a way to output a graphics tree in normal non-bitmap PS form? This, of course, allows for much greater resolution scalability.

Second, supposing there isn't, the simplest X Window clipboard utility, xclipboard, can't seem to latch on to my attempts to increase the resolution and dimensions of the clipboard object. Drawing to the clipboard at the default res of 72dpi and default dim of 640x480 works fine: xclipboard "converts" it nicely to a PS image with bounding box 640x480, but it's too low of res for my purposes.

When I increase the res from 72dpi, leaving the dim at the default 640x480, IDL adjusts the dim to keep res\*dim constant. So if I double the res, IDL halves the dim, leaving the effective resolution (amount of information) constant. Finally, if I increase both the res and the dim, IDL hangs, and xclipboard complains "failure to convert clipboard data". When I kill xclipboard, IDL wakes up.

Is there a way to increase the res, making the file much bigger but the image more detailed?

I'm working on a SunOS system.

I really appreciate any thoughts.  
Thanks,  
Sean O'Sea

-----== Posted via Deja News, The Discussion Network ==-----  
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Subject: Re: clipboard objects and postscript (unix)  
Posted by [mgs](#) on Wed, 04 Nov 1998 08:00:00 GMT  
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In article <MPG.10aa1302732fdc32989701@news.frii.com>, davidf@dfanning.com (David Fanning) wrote:

> Stein Vidar Hagfors Haugan (steinhh@ulrik.uio.no) writes:  
>  
>> BTW, the trackball object is just as handy when dealing with  
>> direct graphics as well as object graphics!  
>  
> Duh, of course it is. How come I didn't realize that!?  
> I'm getting old. I'm going to leave the programming to  
> the young turks and get into a new line of business. :-(  
>  
> Any ideas?

Politics. You can blame the people that catch your mistakes.  
Mike Schienle Interactive Visuals, LLC  
mgs@ivsoftware.com <http://www.ivsoftware.com/>

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Subject: Re: clipboard objects and postscript (unix)  
Posted by [davidf](#) on Wed, 04 Nov 1998 08:00:00 GMT  
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Stein Vidar Hagfors Haugan (steinhh@ulrik.uio.no) writes:

> BTW, the trackball object is just as handy when dealing with  
> direct graphics as well as object graphics!

Duh, of course it is. How come I didn't realize that!?  
I'm getting old. I'm going to leave the programming to  
the young turks and get into a new line of business. :-(

Any ideas?

Cheers,

David

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David Fanning, Ph.D.  
Fanning Software Consulting  
E-Mail: [davidf@dfanning.com](mailto:davidf@dfanning.com)  
Phone: 970-221-0438, Toll-Free Book Orders: 1-888-461-0155  
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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Subject: Re: clipboard objects and postscript (unix)

Posted by [steinhh](#) on Wed, 04 Nov 1998 08:00:00 GMT

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In article <MPG.10a92a5f99bbf1609896fd@news.frii.com> davidf@dfanning.com (David Fanning) writes:

> Sean O'Sea (seanosea@my-dejanews.com) writes:

>

>> I'm afraid the problem seems to be an unhappy xclipboard. RSI recommended

>> using the buffer object, instead, to avoid an intervening clipboard utility

>> entirely:

>>

>>> The best alternative for creating a PostScript file from Object Graphics

>>> output is to render the graphics to an IDLgrBuffer object, which will,

>>> of course contain raster data. Then, using the IMAGE\_DATA keyword to the

>>> GetProperty method of the IDLgrBuffer object, you can retrieve the

>>> graphics data into an image array. Finally, you can switch to the

>>> PostScript device (SET\_PLOT, 'PS') and use the TV procedure to render

>>> the extracted image array to a PostScript file.

>

> Sigh...It's come to this, has it? Well, with True-type fonts

> it just might work.

But this would mean that all lines etc are rastered, no?

And if you yank up the resolution, you get \*huge\* files, right?

This means (IMHO) that Object Graphics is still a nice toy, but in practice it's useless as a tool for producing publication quality figures on paper.

I've just decided \*not\* to use object graphics for some 3D visualization I need for my thesis, since what I want is to plot lines etc. in a 3D geometry. Now, this is fully possible to do in direct graphics with "T3D et al", and it comes out crisp and clear in PS files.

And I cannot really see why it should be any problem for RSI to create an Object Graphics -> Direct Graphics "translator".

I'm having a hard time figuring out exactly \*which\* parts of the OG implementation that's impossible to recreate in direct graphics. Sure, shaded surfaces, polyfilled stuff, etc. has to be pixelized, but those are already pixelized in todays direct graphics implementation - but without pixelizing the axes/labels/lines etc.

BTW, the trackball object is just as handy when dealing with direct graphics as well as object graphics!

Stein Vidar

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Subject: Re: Clipboard

Posted by [Phillip & Suzanne](#) on Wed, 24 Mar 1999 08:00:00 GMT

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Kelly Dean wrote:

- >
- > We just purchased 50 IDL licenses from RSI which allowed us to upgrade
- > many of are IDL users from IDL 3.6 to IDL 5.2. These people stuck in the
- > darkages are missing two features of IDL 3.6 for Windows:
- >
- > 1. Copy a selected window to the clipboard
- > 2. Print a selected window to the printer.
- >
- > I have Dave Fanning's PrintIt.pro that solves #2, but I was wondering if
- > anyone has worked on a creating a simple routine to use the clipboard,
- > much like PrintIt.pro.

IDL 5.0 got rid of direct copying to the clipboard, but this was restored on Windoze and Mac after much user complaining. However, it is no longer linked to the Ctrl-G (Command-G on the Mac). Instead, it is now available using "Standard" copy keys -- Ctrl-C on Windows, Command-C on Mac.

Check this out as well, because you might not even need David F's new routine...

Phillip

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Subject: Re: Clipboard

Posted by [davidf](#) on Wed, 24 Mar 1999 08:00:00 GMT

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Kelly Dean ([krdean@lamar.colostate.edu](mailto:krdean@lamar.colostate.edu)) writes:

- > We just purchased 50 IDL licenses

50! Wow. Need a class? :-)

- > from RSI which allowed us to upgrade
- > many of are IDL users from IDL 3.6 to IDL 5.2. These people stuck in the
- > darkages are missing two features of IDL 3.6 for Windows:
- >
- > 1. Copy a selected window to the clipboard
- > 2. Print a selected window to the printer.
- >
- > I have Dave Fanning's PrintIt.pro that solves #2, but I was wondering if
- > anyone has worked on a creating a simple routine to use the clipboard,
- > much like PrintIt.pro.

Alright, here you go. Quick and dirty. Very little testing.  
Just to serve (if my other program offerings are any indication)  
as "inspiration" for something a whole lot better. :-)

I use the IDL graphics "clipboard" object to  
write a screen dump of the window (you tell me which one  
to use or I'll use the current window) to the clipboard  
of the device. It took me 10 minutes to build and I've  
tested it a little bit on my Windows machine. \*Very\* nice,  
if I don't say so myself. I can copy the contents of any  
IDL graphics window to the clipboard and paste the results  
into, say, Paint.

```
IDL> Window, 5
IDL> !P.Multi = [0, 2, 1]
IDL> LoadCT, 5
IDL> TVImage, image, /Multi
IDL> Plot, Findgen(11), Color=200
IDL> Clipboard, 5
```

Cheers,

David

--

David Fanning, Ph.D.  
Fanning Software Consulting  
Phone: 970-221-0438 E-Mail: davidf@dfanning.com  
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>  
Toll-Free IDL Book Orders: 1-888-461-0155

[Note: This follow-up was e-mailed to the cited author.]

\*\*\*\*\* \*

PRO Clipboard, windowIndex

```
; This procedure copies the window identified by the
; window index number (or the current window if an index
; number is not provided) to the clipboard.
```

```
IF N_Elements(windowIndex) EQ 0 THEN windowIndex = !D.Window
```

```
; Is this a valid window?
```

```
IF windowIndex LT 0 THEN BEGIN
    ok = Dialog_Message('No current window to copy. Returning...')
    RETURN
ENDIF
```

; Catch window setting errors.

Catch, error

IF error NE 0 THEN BEGIN

  Catch, /Cancel

  ok = Dialog\_Message('Specified window is unavailable: ' + \$  
    StrTrim(windowIndex, 2) + '. Returning...')

  WSet, thisWindow

  RETURN

ENDIF

; Set active window.

thisWindow = !D.Window

WSet, windowIndex

Catch, /Cancel

; Take a snapshot of window. Pay attention to visual depth.

Device, Get\_Visual\_Depth=thisDepth

IF thisDepth GT 8 THEN BEGIN

  snapshot = TVRD(True=1)

  snapshot = Color\_Quan(snapshot, 1, r, g, b)

ENDIF ELSE BEGIN

  snapshot = TVRD()

  TVLCT, r, g, b, /Get

ENDELSE

s = Size(snapshot, /Dimensions)

; Create an object graphics image and hierarchy.

palette = Obj\_New('IDLgrPalette', r, g, b)

image = Obj\_New('IDLgrImage', snapshot, Palette=palette)

model = Obj\_New('IDLgrModel')

model->Add, image

thisView = Obj\_New('IDLgrView', ViewPlane\_Rect=[0,0,s[0],s[1]])

thisView->Add, model

; Create a clipboard

theClipboard = Obj\_New('IDLgrClipboard', Color\_Model=1, \$

  Dimensions=[s[0], s[1]], N\_Colors=!D.Table\_Size, \$

  Resolution=[1.0!/D.X\_PX\_CM, 1.0!/D.Y\_PX\_CM], \$

  Palette=palette)

; Copy the snapshot to the clipboard.

theClipboard->Draw, thisView

; Destroy the objects.

Obj\_Destroy, palette

Obj\_Destroy, model

Obj\_Destroy, thisView

Obj\_Destroy, theClipboard

; Restore the current window.

WSet, thisWindow

END

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Subject: Re: Clipboard

Posted by [davidf](#) on Thu, 25 Mar 1999 08:00:00 GMT

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Phillip David (pdavid@earthling.net) writes:

- > IDL 5.0 got rid of direct copying to the clipboard, but this was restored on
- > Windoze and Mac after much user complaining. However, it is no longer linked
- > to the Ctrl-G (Command-G on the Mac). Instead, it is now available using
- > "Standard" copy keys -- Ctrl-C on Windows, Command-C on Mac.
- >
- > Check this out as well, because you might not even need David F's new routine...

I would hardly call this a "solution". It doesn't require  
any programming at all! No pain, no gain, is my motto. :-(

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting

Phone: 970-221-0438 E-Mail: [davidf@dfanning.com](mailto:davidf@dfanning.com)

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