Subject: Re: annotated text without using graphics device in IDL?
Posted by David Fanning on Wed, 07 May 2003 17:53:04 GMT
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Howard Taylor (howard.taylor@jhuapl.edu) writes:

> I'd like to annotate an image without having to first draw the text on the
> active graphics display and then read the image back. This undesirable
> method might look like:
>
> a=indgen(256,256)
> tv,a
> xyouts,100,100,'this text',/device
> b=tvrd()
>
>
> Instead, I'd like an approach that doesnt rely on the graphics device at
> all. It might be called in this way:
>
> a=findgen(256,256)
> b = imgtext(a, 100,100,'this text')
>
> As a result, b is an image whose contents have been altered to include the
> text.
>
> Anybody seen this sort of thing for IDL?

Here is the two minute version, written as I am leaving
the office to play tennis:

```
FUNCTION ImgText, image, xloc, yloc, text
s = Image_Dimensions(image, XSize=xs, YSize=ys)
oldWindow = !D.Window
Window, /Free, /Pixmap, XSize=xs, YSize=ys
TVImage, image, /TV
XYOutS, xloc, yloc, text, /Device
textImage = TVRead()
WDelete, !D.Window
IF oldWindow GE 0 THEN WSet, oldWindow
RETURN, textImage
END
```

You will need a couple of Coyote programs:

http://www.dfanning.com/image_dimensions.pro
http://www.dfanning.com/tvimage.pro
http://www.dfanning.com/tvread.pro

Cheers,

David
--
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Phone: 970-221-0438, E-mail: david@dfanning.com
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: annotated text without using graphics device in IDL?
Posted by Liam E. Gumley on Wed, 07 May 2003 18:11:23 GMT
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"Howard Taylor" <howard.taylor@jhuapl.edu> wrote in message
news:b9bfce$b5j$1@houston.jhuapl.edu...
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> Anybody seen this sort of thing for IDL?

I don't think you can avoid having some sort of graphics device selected.

However you can use the Z-buffer graphics device which exists only in
memory, and does not require a graphics window:

```
ncol = 256
nrow = 256
a = dist(ncol, nrow)
entry_device = !d.name
set_plot, 'Z'
```

```
device, set_resolution=[ncol, nrow], set_colors=256, z_buffering=0
tv, bytscl(a)
xyouts,100,100, 'this text', /device
b = tvrd()
set_plot, entry_device
```

Note that the image was byte scaled since the Z-buffer is an 8-bit device. Finally, you might get different character sizes in the Z-buffer compared to a normal graphics window. To make sure the character sizes match, set the character size explicitly in either case using a command like

```
device, set_character_size=[10, 12]   ; width 10 pixels, height 12 pixels
```

Cheers,
Liam.
Practical IDL Programming
http://www.gumley.com/
