
Subject: Coyote's BIG Idea

Posted by [David Fanning](#) on Mon, 24 Jan 2011 14:03:51 GMT

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Folks,

I guess in a 25 year career I have had one or two BIG ideas. They usually come to me in the shower. But, since I'm not taking showers while I'm in the final stages of getting this book out the door, this one sneaked up on me while I was bleary-eyed at my desk.

Andrew Cool asked me a question about FSC_Window last night. He wanted to programmatically get the window index number of the resizable graphics window so he could add commands to it. (He was making a movie of a time-series, of all things.) So I built a little query routine that allowed me to return information about all the FSC_Window apps on the display. It took about 5 minutes to write that, and another 5 minutes to write a selection routine so you could choose which of the FSC_Window apps you wanted to add commands to.

And then it hit me. If I can select which FSC_Window I want to add commands to, then I can treat these FSC_Window apps just like normal graphics windows. A couple of quick modifications to the Coyote Graphics routines, and I now have a system of commands that work in resizable graphics windows **exactly** like normal graphics commands work in traditional graphics windows. WOW!!! **And** automatic PostScript file generation. **And** the ability to make raster files of the window content.

This is friggin' UN-BE_LEAVE-A-BLE!

Anyway, I still have a some work to do this morning. But I was up at 5:30 AM working on this to make sure it was as good an idea this morning as it seemed last night. It may be even better than I thought!

I'll let you know when you can play with this, but...Goodness! :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Coyote's BIG Idea
Posted by [dplatten](#) on Wed, 26 Jan 2011 14:43:37 GMT
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Dear David,

I think that these new routines are great. I have them working for various data plots.

I have a question though - probably me being dim - but which command do I use to display an image in one of your new resizable windows? The equivalent of TVSCL, image?

Many thanks,

David Platten

Subject: Re: Coyote's BIG Idea
Posted by [David Fanning](#) on Wed, 26 Jan 2011 15:05:35 GMT
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dplatten writes:

> I have a question though - probably me being dim - but which command do I use to display an image in one of your new resizable windows? The equivalent of TVSCL, image?

You can use:

TVImage, image, ..., /Scale

Or,

TVScale, image, ...

TVScale is just a simple wrapper that calls TVImage with the SCALE keyword set.

This reminds me, though, that I haven't added a WINDOW keyword to TVImage to send it directly to an FSC_Window application. I'll do that now. At the moment, you will have to add this to FSC_Window like this:

FSC_Window, 'TVImage', image, /Scale, /ADDCMD

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: Coyote's BIG Idea

Posted by [David Fanning](#) on Wed, 26 Jan 2011 15:15:57 GMT

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David Fanning writes:

> This reminds me, though, that I haven't added a WINDOW
> keyword to TVImage to send it directly to an FSC_Window
> application. I'll do that now.

OK, done. You can find the update TVImage file here:

<http://www.idlcoyote.com/programs/tvimage.pro>

To add an image to an FSC_Window, just set the Window
keyword:

IDL> TVImage, image, /Keep_Aspect, /Window

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: Coyote's BIG Idea

Posted by [David Fanning](#) on Wed, 26 Jan 2011 15:27:03 GMT

dplatten writes:

- > I have a question though - probably me being dim - but which
- > command do I use to display an image in one of your new
- > resizable windows? The equivalent of TVSCL, image?

By the way, I recommend in my new book that the TVSCL command be banished from the face of the Earth. Well, maybe I didn't put it exactly that way, but that's how I feel about it.

Good for noodling around. But that's about it. One of several controversial ideas in the book, no doubt. No sense pulling your punches when you get to be my age. :-)

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: Coyote's BIG Idea

Posted by [David Fanning](#) on Wed, 26 Jan 2011 15:45:22 GMT

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David Fanning writes:

- > OK, done. You can find the update TVImage file here:
- >
- > <http://www.idlcoyote.com/programs/tvimage.pro>
- >
- > To add an image to an FSC_Window, just set the Window
- > keyword:
- >
- > IDL> TVImage, image, /Keep_Aspect, /Window

Oh, dear. Hold off on this for a few minutes longer. I've done this incorrectly for one thing. But TVImage is **much** more difficult to handle than other routines, primarily because it doesn't erase itself (it acts like

the TV command).

I'll have to think about this for a few minutes. In any case the current version doesn't work the way I expect it to work eventually. :-)

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: Coyote's BIG Idea

Posted by [dplatten](#) on Wed, 26 Jan 2011 16:02:29 GMT

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Hi David,

Thanks for the really quick response and the changes to the routine.

I agree with the TVSCL comment - I only use it to get a quick idea about an image. It's being replaced by your routines in my code.

Regards,

David

Subject: Re: Coyote's BIG Idea

Posted by [David Fanning](#) on Wed, 26 Jan 2011 16:36:58 GMT

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David Fanning writes:

> Oh, dear. Hold off on this for a few minutes longer.
> I've done this incorrectly for one thing. But TVImage
> is *much* more difficult to handle than other routines,
> primarily because it doesn't erase itself (it acts like
> the TV command).

OK, I think this is done correctly now. You can download

the update here:

<http://www.idlcoyote.com/programs/tvimage.pro>

The problem is that TVImage acts like the TV command and doesn't erase itself. This is a problem in resizable graphics windows, obviously. And yet, it is one of the very nice features of the TV command, too. It makes it possible to use images along with other graphics commands.

So, here is how this works. I want to maintain the idea of working with FSC_Windows just like you work with other IDL graphics windows. So, if you want to display an image, you can simply set the Window keyword as you normally would:

```
IDL> TVImage, image, /KEEP_ASPECT, MARGIN=0.1, /WINDOW,
```

This will automatically set the ERASEIT keyword, so that when the window is resized, only the image appears, not left-over garbage from the previous display.

Similarly, if you have a plot in the window:

```
IDL> FSC_Plot, Loaddata(1), /WINDOW
```

And you issue the TVImage command:

```
IDL> TVImage, image, /KEEP_ASPECT, MARGIN=0.1, /WINDOW
```

The image will take the place of the plot command in the window, as other commands do. The ERASEIT keyword is also set.

But, if you want to add an image to a display, you don't set the WINDOW keyword, but rather the ADDCMD keyword. This automatically sets the WINDOW keyword for you, but it also sets the ERASEIT keyword to 0 and *adds* the command to the FSC_Window, rather than replacing the commands that are already there.

```
IDL> FSC_Plot, Loaddata(1), /Window  
IDL> TVImage, image, /KEEP_ASPECT, MARGIN=0.3, /ADDCMD
```

In this case the image appears with the plot, and both resize together.

Unfortunately, if you try to add a command to an FSC_Window

when an FSC_Window doesn't exist, you throw an error. So, you have to be a bit careful about which keyword you use. I can't get out of this box without some VERY ugly code, so I'm going to think about this some more. In the meantime, just use the keywords as they are supposed to be used. ;-)

Cheers,

David

--

David Fanning, Ph.D.

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