
Subject: Re: Coyote's BIG Idea
Posted by [David Fanning](#) on Mon, 24 Jan 2011 16:31:46 GMT
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David Fanning writes:

> This is friggin' UN-BE-LEAVE-A-BLE!

OK, I have the modified programs ready for you to try out.
There are LOTS of them, so you need a new Coyote Library
download.

Here is how it works. FSC_Window can be used pretty
much like the Window command:

```
IDL> FSC_Window
```

Produces a blank window. If you want to draw something
in that window, you have to set the /WINDOW keyword on
any Coyote Graphics routine. This will cause the
FSC_Window to add or replace the command, as necessary,
in its command list and display the graphic.

```
; Display a line plot in the window.  
FSC_Plot, Loaddata(1), /Window
```

```
; Now display a filled contour plot with overlay and colorbar.  
LoadCT, 33  
data = LoadData(2)  
FSC_Contour, data, /Fill, Position=[0.1,0.1,0.9,0.75], /Window  
FSC_Contour, LoadData(2), /Overplot, COLOR='gray', /Window  
FSC_Colorbar, RANGE=[Min(data), Max(data)], /Window
```

```
; Now display a surface.  
FSC_Surf, data, /Shaded, /Elevation, /Window
```

I'm working on a configuration routine so that you can globally
configure the Coyote Graphics commands to go into normal graphics
windows or into FSC_Window graphics windows and don't have to set
the WINDOW keyword every time.

Now create several windows.

```
FSC_Window, WTitle='Window 1'  
FSC_Window, WTitle='Window 2'  
FSC_Window, WTitle='Window 3'
```

Gather information about all the FSC windows on the display.

```
winIDs = FSC_QueryWin(TITLE=titles, COUNT=count)
FOR j=0,count-1 DO Print, winIDs[j], ' ', titles[j]
```

Select the window entitled "Window 1". You can select on window index number, title, widget ID, or object reference. Your choice with different keywords.

```
FSC_WSet, 'Window 1', /TITLE
```

Put a plot in this window.

```
FSC_Plot, Loaddata(1), /Window
```

Select another window, put a contour in there.

```
FSC_WSet, 'Window 2', /TITLE
FSC_Contour, data, /Fill, Position=[0.1,0.1,0.9,0.75], /Window
FSC_Contour, LoadData(2), /Overplot, COLOR='gray', /Window
FSC_Colorbar, RANGE=[Min(data), Max(data)], /Window
```

Select another window, put a surface in there.

```
FSC_WSet, 'Window 3', /TITLE
FSC_Surf, data, /Shaded, /Elevation, /Window
```

All windows resizeable. All windows can make PostScript files.
All windows can produce fantastic looking raster image output if ImageMagick is installed.

UN-FRIGGIN-B-LEAVE-A-BLE!!!

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 [cgguido](#) on Mon, 24 Jan 2011 16:40:13 GMT

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25 years putting commas after every word you type and still excited

about it. That's what's cool!

Thanks for all you have contributed to the IDL community!

Gianguido

On Jan 24, 8:03 am, David Fanning <n...@dfanning.com> wrote:

>

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

Subject: Re: Coyote's BIG Idea

Posted by [David Fanning](#) on Mon, 24 Jan 2011 17:02:16 GMT

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Gianguido Cianci writes:

> 25 years putting commas after every word you type and still excited

> about it. That's what's cool!

Well, when you put it that way... :-)

You know what is really odd? I'm on the verge of financial bankruptcy. I haven't made a cent in four months. I've written a book that I'm not sure anyone is going to want to read. And yet, the past four months have been, without a doubt, the most satisfying four months of my professional career. I've written the best programs I have ever written in my life, and now I've felt the excitement of a Big Idea.

I don't know what is going to happen in the future, but I'm pretty sure when I'm laying on my death bed, reviewing my life, I'm not going to regret the past four months. :-)

> Thanks for all you have contributed to the IDL community!

Thanks for being the kind of community I can contribute to. This place really is the best.

Cheers,

David

--

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Subject: Re: Coyote's BIG Idea
Posted by [Gray](#) on Mon, 24 Jan 2011 17:34:32 GMT
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On Jan 24, 12:02 pm, David Fanning <n...@dfanning.com> wrote:
> Gianguido Cianci writes:
>> 25 years putting commas after every word you type and still excited
>> about it. That's what's cool!
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> Well, when you put it that way... :-)
>
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> a book that I'm not sure anyone is going to want to read.
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> I don't know what is going to happen in the future, but
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>> Thanks for all you have contributed to the IDL community!
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> Thanks for being the kind of community I can contribute to.
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> Cheers,
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> David
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> --
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Hey David, this may not be a question you can answer, but I'd like to know it: what can NG do that CG (coyote graphics) can't, and vice versa?

Subject: Re: Coyote's BIG Idea

Gray writes:

> Hey David, this may not be a question you can answer, but I'd like to
> know it: what can NG do that CG (coyote graphics) can't, and vice
> versa?

Well, that's a good question. I guess we are still trying to figure that out. :-)

I'm not extremely familiar with the new function graphics routines, because I can't keep IDL 8 running on my computer (Windows 7, 64-bit OS). But I would say one thing Coyote Graphics can't do yet (but probably because I haven't gotten around to trying) is save the graphics commands in a display window and restore them. In fact, the graphics "commands" are objects in the FSC_Window display window, so I suspect I can do this quite easily when I get around to it.

One thing I know for sure the new function graphics can't do that Coyote Graphics can is create a new type of graphics command in a widget program. My challenge to demonstrate how one would build a "window-level" program with function graphics goes unanswered to this day. I strongly suspect this is because it can't be done. At least not by mortals. Maybe someone at ITTVIS could figure it out. But, I don't think, frankly, it is possible to use function graphics in a widget program that requires any kind of user interaction with the graphics window. So no XStretch, no WindowImage, no FSC_Zplot, etc, etc.

The reason I think function graphics is limited in this area is that the graphics functions are very high level routines. Coyote Graphics routines are much lower-level. You can build things with Coyote Graphics, while you have to settle for what's already been built with function graphics.

Function graphics allows you to set graphical "properties" with property sheets. I have something similar in mind, but haven't implemented it yet. I think Coyote Graphics at the moment is closer to how people have traditionally worked in IDL, rather than introducing a whole new way of working and interacting with graphics programs. That is to say, they work as well from the command line as they do in a program. Maybe this is a wash.

I personally think function graphics commands, under the hood, are so complicated that they will never be bug free. I think there is a very good chance that every time you try to fix something,

you will break something else. Coyote Graphics are probably more complicated than I thought they would be, but mostly because I have tried to preserve as much backward compatibility with traditional graphics commands as possible. If I had decided to start from scratch, they would be very, very simple.

I don't know. Maybe other people have some ideas. I suppose it is no secret that I just consider it a challenge to build IDL 8 like programs for IDL 6 like people. Maybe no one will use the programs I write. In truth, that's not something I lose a lot of sleep thinking about. It's fun, it's challenging, and I am blown away by what is possible with old, familiar tools. Good enough for me. :-)

Cheers,

David

--

David Fanning, Ph.D.

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Subject: Re: Coyote's BIG Idea

Posted by [David Fanning](#) on Mon, 24 Jan 2011 18:43:15 GMT

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Gray writes:

> Hey David, this may not be a question you can answer, but I'd like to
> know it: what can NG do that CG (coyote graphics) can't, and vice
> versa?

You know, Andrew Cool was making animated time-series in an FSC_Window last night. This was something I hadn't anticipated wanting to do. It took about 15 minutes to modify FSC_Window to accommodate Andrew's request for a "command delay" and a LoadCMD keyword that would just load the commands in the window without executing all of the commands every time a command was added.

Can you even imagine how much time it would take to modify a function graphics command to do something different? I think this is a several orders of magnitude difference in the two systems.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Subject: Re: Coyote's BIG Idea

Posted by [Jeremy Bailin](#) on Tue, 25 Jan 2011 12:39:59 GMT

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On Jan 24, 11:31 am, David Fanning <n...@dfanning.com> wrote:

> David Fanning writes:

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>

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> There are LOTS of them, so you need a new Coyote Library

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> Your choice with different keywords.
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> All windows resizeable. All windows can make PostScript files.
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> Cheers,
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> David
>
> --

```

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

Well, I know what I'm going to spend today trying out. :-)=

-Jeremy.

Subject: Re: Coyote's BIG Idea
Posted by [kisCA](#) on Wed, 26 Jan 2011 01:23:38 GMT
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Do you know that you are going to make IDL almost as easy to use as Matlab ?!!

And for free...You are just amazing...

As far as huge research community (NASA, CNRS) are concerned by IDL, you should ask for sponsorship and/or teaching class to make. No doubt that, with your sense of teachings, will be a success.

Can't stand to have this book !

PS: Did you think about any translation in French ? :-)
