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Subject: Coyote Graphics Update 29 Jan 2011  
Posted by [David Fanning](#) on Sat, 29 Jan 2011 22:27:49 GMT  
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Folks,

There have been widespread updates to Coyote Graphics programs today. I think 14 programs changed in exciting (to me anyway!) ways that added additional functionality.

<http://www.idlcoyote.com/programs/coyoteprograms.zip>

Here are some of the highlights.

All Coyote Graphics routines for displaying traditional graphics commands now support a LAYOUT keyword that works identically to the LAYOUT keyword in the IDL 8 function graphics commands. Here, for example, is how you can display four different kinds of plots in a display window:

```
FSC_Display
CTLoad, 33, RGB_Table=palette
FSC_Plot, LoadData(1), Layout=[2,2,3], Color='red'
FSC_Contour, LoadData(2), NLevels=12, Layout=[2,2,1], Color='blue'
FSC_Surf, LoadData(2), /Elevation, Layout=[2,2,4], Palette=palette
TVImage, Loaddata(19), Multimargin=4, /Axes, Layout=[2,2,2]
```

Here is how you can display the same four plots in a resizable graphics window:

```
CTLoad, 33, RGB_Table=palette
FSC_Plot, LoadData(1), Layout=[2,2,3], Color='red', /Window
FSC_Contour, LoadData(2), NLevels=12, Layout=[2,2,1], $
    Color='blue', /AddCmd
FSC_Surf, LoadData(2), /Elevation, Layout=[2,2,4], $
    Palette=palette, /AddCmd
TVImage, Loaddata(19), Multimargin=4, /Axes, Layout=[2,2,2], /AddCmd
```

The Histoplot program also has LAYOUT, WINDOW and ADDCMD keywords added.

All Coyote Graphics routines are now defined with WINDOW and/or ADDCMD keywords so these commands can be added easily to the resizable graphics windows. A new FSC\_WControl (window control) program has been written to allow you to easily set FSC\_Window properties. (This is addition to FSC\_WSet and FSC\_WDelete.)

CTLOAD and XCOLORS have been configured so that when the WINDOW keyword is set, the colors that are loaded with these commands

are sent directly to the current FSC\_Window (or to any FSC\_Window you designate). For example, if you have displayed an image in a resizable graphics window like this:

```
TVImage, LoadData(7), /Keep_Aspect, Margin=0.1, /Window
```

Then, to change color tables and have your image immediately updated, you must only do this:

```
CTLoad, 5, /Window
```

Or,

```
XColors, /Window
```

PALETTE keywords have been added to TVIMAGE, FSC\_SURF, and FSC\_Window to allow these programs to load and maintain their own color table vectors. With this functionality, you no longer have to worry about color table contamination issues. (Other programs mucking with the color table, loading drawing colors, etc.) Color tables will be loaded immediately before image or surface display and returned to their former state immediately after. This also makes it possible to use multiple color tables in both normal and resizable graphics windows.

The easiest way to get a color palette is with CTLOAD and the RGB\_TABLE keyword. When this keyword is used, colors are not loaded, but a 256 by 3 array is created that can be used with the PALETTE keyword to these other routines.

```
CTLoad, 33, RGB_TABLE=palette  
TVImage, LoadData(7), PALETTE=palette, /KEEP, /Window
```

I'm sorry, but I can't program fast enough to keep up with all the good ideas! I told my wife it seems like a programming conspiracy. All the programs I've written in the past five years are working together to create a completely new graphics system, almost against my will. I want to get a book out the door, and these damn programs are demanding to be written! Yikes! It's the Night of the Body Snatchers. :-(

At the very least they are demanding updates throughout the book and another completely new chapter to explain their many features. What a wild week this has been. :-)

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.")

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Subject: Re: Coyote Graphics Update 29 Jan 2011  
Posted by [Jeremy Bailin](#) on Sun, 30 Jan 2011 18:41:53 GMT  
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- > PALETTE keywords have been added to TVIMAGE, FSC\_SURF, and FSC\_Window
- > to allow these programs to load and maintain their own color table
- > vectors. With this functionality, you no longer have to worry about
- > color table contamination issues. (Other programs mucking with the color
- > table, loading drawing colors, etc.) Color tables will be loaded
- > immediately before image or surface display and returned to their
- > former state immediately after. This also makes it possible to use
- > multiple color tables in both normal and resizable graphics windows.

Now THAT is one of the most useful things I've seen in a long time! But to do PS output, does it require idl8 in order to get the 24 bit ps device?

-Jeremy.

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Subject: Re: Coyote Graphics Update 29 Jan 2011  
Posted by [David Fanning](#) on Sun, 30 Jan 2011 20:02:24 GMT  
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Jeremy Bailin writes:

- > Now THAT is one of the most useful things I've seen
- > in a long time! But to do PS output, does it require
- > idl8 in order to get the 24 bit ps device?

24-bit PostScript support was added in IDL 7.1, although the `Get_Decomposed` keyword wasn't working until IDL 7.1.1. All of the Coyote Graphics routines *\*try\** to work in decomposed color whenever possible. (All of the version and machine dependencies are concentrated in `SetDecomposedState`, by the way, so you don't have to worry about these details yourself.) But the programs are designed to work in either decomposed or indexed color without difficulties.

Since I haven't worked in indexed color for at least the last 6-8 years, I sometimes forget to check to be

sure this is the case, but that's the idea, anyway.  
I always figured if the PostScript version of the  
program worked, it *\*must\** work in indexed color. And,  
too, there are enough people stuck with at least  
one foot in the 1970s that I am sure I would hear  
about it if the programs didn't work the way they  
are suppose to. :-)

Cheers,

David

--

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Subject: Re: Coyote Graphics Update 29 Jan 2011  
Posted by [Jeremy Bailin](#) on Mon, 31 Jan 2011 17:31:15 GMT  
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Ah, I'm at 7.0.4. I think it's time to bite the bullet and get our sysadmin to upgrade!

-Jeremy.

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Subject: Re: Coyote Graphics Update 29 Jan 2011  
Posted by [David Fanning](#) on Mon, 31 Jan 2011 17:50:11 GMT  
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Jeremy Bailin writes:

> Ah, I'm at 7.0.4. I think it's time to bite the bullet and get our sysadmin to upgrade!

Were you having problems with Coyote Graphics routines?

Cheers,

David

--

David Fanning, Ph.D.  
Fanning Software Consulting, Inc.

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Subject: Re: Coyote Graphics Update 29 Jan 2011  
Posted by [Jeremy Bailin](#) on Tue, 01 Feb 2011 16:05:09 GMT  
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No, they're working great! But the number of useful things that I'm missing out on has grown enough that it's worth enduring the wrath of the sysadmin. ;-)

(not that upgrading is especially difficult, but I don't like prodding him without a good reason)

-Jeremy.

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Subject: Re: Coyote Graphics Update 29 Jan 2011  
Posted by [David Fanning](#) on Tue, 01 Feb 2011 16:07:30 GMT  
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Jeremy Bailin writes:

> No, they're working great! But the number of useful  
> things that I'm missing out on has grown enough that  
> it's worth enduring the wrath of the sysadmin. ;-)

I'm going to become a sysadmin in my next life. The POWER! :-)

Cheers,

David

--

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