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 resizeable
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
resizeable 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 resizeable 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 resizeable 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 thoughout the book
and another completely new chapter to explain their many features.
What a wild week this has been. :-)

Cheers,

David
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Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")