
Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!
Posted by [SonicKenking](#) on Mon, 15 Nov 2010 12:19:23 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Nov 15, 2:47 pm, David Fanning <n...@dfanning.com> wrote:

> Folks,
>
> Long weekend. :-)
>
> But I just checked in all my changes and new programs to
> support device independent, color model independent,
> graphics programs with "traditional" IDL graphics commands.
>
> I now have replacements for the following commands: Plot,
> Oplot, PlotS, Surface, Shade_Surf, Contour, TV, and TVScl.
> You can read about the new commands and see some examples
> here:
>
> http://www.dfanning.com/graphics_tips/newoldcmds.html
>
> This was a bit harder than I anticipated. Especially the
> new FSC_Surf program, which is a wrapper for both Surface
> and Shade_Surf. I had to dig deep into the Surface chapter
> of my new book to figure out what was going on. And then, when
> I thought I had it all figured out, I tried to do a
> multi-plot and yikes! I had surfaces all over the damn
> place! Suffice it to say, my back hurts tonight. I didn't
> plan to be sitting in front of a computer for this long!
>
> In support of these programs, I made changes to TVImage,
> TVScale, FSC_Colorbar, PS_Start/PS_End and probably a
> few other programs I have forgotten about. What I'm saying
> is that this might be a good time to update your Coyote
> Library, if you are interested in giving these programs
> a try.
>
> <http://www.dfanning.com/coyoteprograms.zip>
>
> I don't expect they are completely bug free, but they
> have already saved me some time creating figures for
> my book and my web page. I like them! I expect some
> of you might, too. :-)
>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.

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

hi David, its all great except the links are broken.

Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!
Posted by [David Fanning](#) on Mon, 15 Nov 2010 14:00:18 GMT
[View Forum Message](#) <> [Reply to Message](#)

SonicKenking writes:

- > hi David, its all great except the links are broken.

Huh!? Well, that's a little embarrassing. :-(

As I say, it was a LONG weekend, and I just put the darn files in the wrong directory when I transferred them from my machine to the web page. Sorry for the confusion.

Ok, the link to the page describing the new files:

http://www.dfanning.com/graphics_tips/newoldcmds.html

The link to the Coyote Library, which everyone probably wants to update:

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

Sheesh! It's gray, cold, and snowing here in Colorado this morning. A good day to head back to bed...

Cheers,

David

--

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

Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!
Posted by [Jeremy Bailin](#) on Mon, 15 Nov 2010 15:51:16 GMT

On Nov 14, 10:47 pm, David Fanning <n...@dfanning.com> wrote:

> Folks,
>
> Long weekend. :-)
>
> But I just checked in all my changes and new programs to
> support device independent, color model independent,
> graphics programs with "traditional" IDL graphics commands.
>
> I now have replacements for the following commands: Plot,
> Oplot, PlotS, Surface, Shade_Surf, Contour, TV, and TVScl.
> You can read about the new commands and see some examples
> here:
>
> http://www.dfanning.com/graphics_tips/newoldcmds.html
>
> This was a bit harder than I anticipated. Especially the
> new FSC_Surf program, which is a wrapper for both Surface
> and Shade_Surf. I had to dig deep into the Surface chapter
> of my new book to figure out what was going on. And then, when
> I thought I had it all figured out, I tried to do a
> multi-plot and yikes! I had surfaces all over the damn
> place! Suffice it to say, my back hurts tonight. I didn't
> plan to be sitting in front of a computer for this long!
>
> In support of these programs, I made changes to TVImage,
> TVScale, FSC_Colorbar, PS_Start/PS_End and probably a
> few other programs I have forgotten about. What I'm saying
> is that this might be a good time to update your Coyote
> Library, if you are interested in giving these programs
> a try.
>
> <http://www.dfanning.com/coyoteprograms.zip>
>
> I don't expect they are completely bug free, but they
> have already saved me some time creating figures for
> my book and my web page. I like them! I expect some
> of you might, too. :-)
>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:<http://www.dfanning.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

I think this is going to be a fun week! Thanks for all your hard work!

One thing that might be nice to add to FSC_Plot and FSC_PlotS is the ability to specify an array for COLOR. I always find it a little silly to have to wrap them in histogram + for loops just to plot multiple colored points at once!

-Jeremy.

Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!

Posted by [David Fanning](#) on Mon, 15 Nov 2010 16:00:04 GMT

[View Forum Message](#) <> [Reply to Message](#)

Jeremy Bailin writes:

> One thing that might be nice to add to FSC_Plot and FSC_PlotS is the
> ability to specify an array for COLOR. I always find it a little silly
> to have to wrap them in histogram + for loops just to plot multiple
> colored points at once!

Give me 10 minutes to get through the stack of bills that have been piling up on my desk the past three weeks. :-(

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!

Posted by [ben.bighair](#) on Mon, 15 Nov 2010 16:17:54 GMT

[View Forum Message](#) <> [Reply to Message](#)

On 11/15/10 11:00 AM, David Fanning wrote:

> Jeremy Bailin writes:

>

>> One thing that might be nice to add to FSC_Plot and FSC_PlotS is the
>> ability to specify an array for COLOR. I always find it a little silly
>> to have to wrap them in histogram + for loops just to plot multiple

>> colored points at once!
>
> Give me 10 minutes to get through the stack of bills that
> have been piling up on my desk the past three weeks. :-(
>

Hi David,

This is great! Thank you!

I think the suggestion to allow vectors of colors would be great. But it will require a switch from OPLOT to PLOTS under the hood. PLOTS allows you to provide a vector for colors and not the others symbol related things. SymSize and PSym are only permitted as scalars. Bummer.

Cheers,
Ben

Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!
Posted by [David Fanning](#) on Mon, 15 Nov 2010 16:31:18 GMT
[View Forum Message](#) <> [Reply to Message](#)

Ben Tupper writes:

> I think the suggestion to allow vectors of colors would be great. But
> it will require a switch from OPLOT to PLOTS under the hood. PLOTS
> allows you to provide a vector for colors and not the others symbol
> related things. SymSize and PSym are only permitted as scalars. Bummer.

Easily accomplished. I didn't have FSC_PLOTS written when I was writing FSC_PLOT, so that will probably be an easy switch. But, I really do have to get through my mail first. :-(

Cheers,

David

--

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

Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!
Posted by [Paul\[3\]](#) on Tue, 16 Nov 2010 01:08:50 GMT
[View Forum Message](#) <> [Reply to Message](#)

David,
I was toying around w/ the examples on your page here:
http://www.dfanning.com/graphics_tips/newoldcmds.html.
Under the example for TVIMAGE, I needed to add the /OVERPLOT keyword
to the FSC_CONTOUR command to get the image as shown.

I like what I see in these wrapper procedures of yours. I passed the
link on to my fellow IDLers in the department and I'll post any
interesting feedback.
Appreciate your work,
Paul

Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!
Posted by [Paul\[3\]](#) on Tue, 16 Nov 2010 01:15:53 GMT
[View Forum Message](#) <> [Reply to Message](#)

...actually, /OVERPLOT gives me no axis, and /NOERASE requires
specifying the correct margins...

Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!
Posted by [David Fanning](#) on Tue, 16 Nov 2010 01:27:58 GMT
[View Forum Message](#) <> [Reply to Message](#)

Paul writes:

> ...actually, /OVERPLOT gives me no axis, and /NOERASE requires
> specifying the correct margins...

Yes, /OVERPLOT was missing and I've added it to the example.

I guess the *point* of that example was no axes, but
perhaps I didn't stress it enough. With TVImage you can
have axes without saving the coordinate system (like the
TV command), axes with the coordinate system (by setting
both AXES and SAVE), or no axes and the coordinate
system (as in the example, with just SAVE).

The problem with TVImage (as it always seems to be!)
is too much baggage. Originally it started out to be
like TV. In retrospect that may have been the worst
mistake I ever made in my IDL career. :-)

In any case, I need more and better examples of what you can do with these routines. But since this is **exactly** what my new book is about, its a choice between writing examples for my web page or for my book. I'll bet you can guess which option has a better chance of paying off. ;-)

Cheers,

David

P.S. By the way, I'm working on FSC_Plot tonight. I've got a new SYMCOLOR keyword, so you can plot symbols in a (different) single color from the axes and from the data. Very slick. I'm still working on making vectors of symbols and colors. By the way, you can now use any of the 46 symbols available in SymCat, including the paltry 8 or so that you could get with the PLOT command. :-)

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!

Posted by [David Fanning](#) on Tue, 16 Nov 2010 15:07:06 GMT

[View Forum Message](#) <> [Reply to Message](#)

Jeremy Bailin writes:

- > One thing that might be nice to add to FSC_Plot and FSC_PlotS is the
- > ability to specify an array for COLOR. I always find it a little silly
- > to have to wrap them in histogram + for loops just to plot multiple
- > colored points at once!

I have updated both FSC_Plot and FSC_PlotS this morning. Both have been updated to allow a different color for plot symbols (SYMCOLOR), and symbols can now be selected from the 46 symbols available in SymCat. A NoData keyword has also been added to FSC_Plot.

FSC_PlotS has been further updated to allow the COLOR, SYMCOLOR, and SYMSIZE keywords to be vectors. This makes it possible to easily create multicolored lines and/or multicolored symbols. Being able to size symbols

adds yet another dimension to your data plots.

Here is an example.

```
data = LoadData(1)
time = Scale_Vector(Findgen(101), 0, 6)
LoadCT, 33, /Silent
FSC_Plot, time, data, /NODATA, XTITLE='Time', YTITLE='Signal'
FSC_PlotS, time, data, PSYM=-16, COLOR=BytScl(data), $
    SYMCOLOR=BytScl(data), SYMSIZE=Scale_Vector(data, 1.0, 2.5)
```

Any other requests? :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!

Posted by [David Fanning](#) on Tue, 16 Nov 2010 15:15:40 GMT

[View Forum Message](#) <> [Reply to Message](#)

David Fanning writes:

> Paul writes:

>

>> ...actually, /OVERPLOT gives me no axis, and /NOERASE requires

>> specifying the correct margins...

>

> Yes, /OVERPLOT was missing and I've added it to the example.

>

> I guess the *point* of that example was no axes, but

> perhaps I didn't stress it enough. With TVImage you can

> have axes without saving the coordinate system (like the

> TV command), axes with the coordinate system (by setting

> both AXES and SAVE), or no axes and the coordinate

> system (as in the example, with just SAVE).

I realized this morning, Paul, when I looked at that page with fresh eyes, that my answer yesterday was just blowing smoke out my ... Well, anyway, sorry. :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Good-bye Plot, Surface, Contour, TV and all the rest!

Posted by [David Fanning](#) on Wed, 17 Nov 2010 03:16:41 GMT

[View Forum Message](#) <> [Reply to Message](#)

David Fanning writes:

- > I have updated both FSC_Plot and FSC_PlotS this morning.
- > Both have been updated to allow a different color for
- > plot symbols (SYMCOLOR), and symbols can now be selected
- > from the 46 symbols available in SymCat. A NoData keyword
- > has also been added to FSC_Plot.

Yikes! These programs haven't been as all-inclusive as I intended them to be. :-)

I learned tonight that people running older versions of IDL (6.4 and earlier) were having problems running the programs and creating PostScript output files. It seems that setting the color decomposition state of the current graphics device is quite device and version specific.

To get around the problem, I've written a new program called SetDecomposedState that sets the color decomposition state in a device independent way by taking these dependencies into account. FSC_Contour, FSC_Surf, and FSC_Plot have been updated to set the color decomposition state with this new program.

This should make things a great deal smoother for our friends running older versions of IDL. :-)

<http://www.dfanning.com/programs/setdecomposedstate.pro>

http://www.dfanning.com/programs/fsc_contour.pro

http://www.dfanning.com/programs/fsc_surf.pro

http://www.dfanning.com/programs/fsc_plot.pro

As always, if you have problems, don't just assume I'm an idiot. Let me know about it. ;-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")
