Subject: Compare Filled Contour Plot in Three Graphics Systems
Posted by David Fanning on Wed, 04 Jan 2012 04:55:19 GMT
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Folks,

I've just published a new article comparing the results of creating a map projected filled contour plot in the Direct, Coyote, and Function Graphics systems.

I am not particularly happy with the Function Graphics results. It is WAY over-complicated and visually disappointing, but I have worked on this for a LONG time, and haven't come up with anything better. If you have suggestions, I am happy to hear them.

I have included a data set and an example program for you to download, if you want to play with this yourself.

You will find the article here:

http://www.idlcoyote.com/cg_tips/compcont.php

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: Compare Filled Contour Plot in Three Graphics Systems
Posted by David Fanning on Fri, 06 Jan 2012 04:47:38 GMT
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TonyL writes:

> I've got the Function Graphics (FG) version running in 3.8secs (dual
> core Win7 64bit PC), including opening the data file and saving to a
> PNG file. I'll email you the code if you like separately; noting that
> I'm using the 8.2 beta. Symbol for Fort Collins plots OK.

I'd like to see it. I don't have the IDL 8.2 beta. (No one asked

me to review it!) But, I'll see if I can get ahold of it. :-)

> The anti-aliased fonts and lines in the saved PNG file are equivalent
> in quality to ones I've previously created via the Postscript route,
> using Direct Graphics and using the ImageMagick library. The FG is
> more convenient for me because I don't have to grapple with
> installation issues of the ImageMagick library. I haven't timed that
> ImageMagick approach, but suspect there is not a sufficiently large
> time difference from the FG time for it to bother me.

Well, it's about 1.3 seconds on my decidedly normal machine.

> In fact I have a greater use of the ability to replot the same data
> over several different geographic domains, for zooming purposes. By
> simply changing the map limit, the output can be modified in 0.2 secs,
> a similar time to the DG approach but without having to redraw all the
> elements.

Humm. Don't know how not having to redraw all the elements would work. Doesn't seem possible to me! But, my cgMap object will work in the same way and in the same amount of time, I imagine, since they are both using Map_Proj_Init under the hood.

> The weakness I currently see in FG relate to the lack of a decent
> Colorbar equivalent to the CGcolorbar. Support for the Brewer tables
> is also lacking.

Yes, among other weaknesses. I realize you can't really answer questions about IDL 8.2, but I would be curious if the colorbar still has to be attached to a target in IDL 8.2. That seemed to be its biggest weakness to me.

Cheers,

David

--
David Fanning, Ph.D.
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Subject: Re: Compare Filled Contour Plot in Three Graphics Systems
Posted by TonyL on Fri, 06 Jan 2012 07:45:54 GMT

On Jan 6, 3:47 pm, David Fanning <n...@dfanning.com> wrote:
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>
> 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.")

Yes in the beta, Colorbar still has a target plot that it uses. I've raised the desirability of a better Colorbar and Brewer table support with Exelis.

Subject: Re: Compare Filled Contour Plot in Three Graphics Systems
Posted by David Fanning on Fri, 06 Jan 2012 14:00:35 GMT
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TonyL writes:

> Yes in the beta, Colorbar still has a target plot that it uses. I've
> raised the desirability of a better Colorbar and Brewer table support
> with Exelis.

I wonder sometimes if anyone at Exelis realizes that people use (or at least *try* to use!) their software to do *science*. A colorbar that works would be rather high on my priority list.

Recall my prediction that the complexity of this system would inhibit anyone's ability to either fix something that is broken or (in case someone was interested and had infinite time and patience) program something better. A colorbar that can be used to compare two images might turn out to be the Waterloo for this graphics system.

Cheers,

David

--
David Fanning, Ph.D.
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