
Subject: Re: map projections webinar

Posted by [David Fanning](#) on Wed, 19 Oct 2011 07:33:34 GMT

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Mark Piper writes:

> This Thursday, October 20, I'll be giving a set of webinars on using
map
> projection routines in IDL. For information and signup, please see
>
> <http://www.ittvis.com/EventsTraining/LiveWebSeminars.aspx>
>
> If you'd like to get my example programs beforehand, please follow this link
>
> <http://bit.ly/IDL-webinar-files>
>
> and look for "Using Map Projection Routines in IDL".

Because my sleep schedule is still a mess and I have no idea what time or day it is, I decided to download these webinar files and see if I could learn something. Mark has written several programs to compare how you do various map projection tasks in both direct graphics and in function graphics.

Since Mark is making use of some Coyote Library routines (albeit retired ones!) in his direct graphics examples, I thought it might be interesting to write the same programs from a Coyote Graphics point of view. Those of you who have downloaded the Coyote Library may wish to compare and contrast these routines with the routines Mark has written.

I've put the files here.

http://www.idlcoyote.com/misc/cg_map_projections.zip

They rely on software and data files that Mark is providing for the webinar, so download his files first, then throw the Coyote Graphics files in the same src directory as his files. They are appropriately prepended with a "cg" extension so you can tell them apart from Mark's files.

Each file is written as a simple display routine, which can be displayed in a window or sent to a PostScript file, etc. An example main-level program is at the end of all the files, which will load the display routine into a resizable cgWindow, where you have access to PostScript and raster output, as usual. If ImageMagick is installed, of course,

you have access to raster file output via PostScript intermediate files and their extremely nice fonts.

Mark's files are probably not complete yet, but I noticed one map projection task conspicuously missing. I would say more than half the time when I am working with map projections I have an image that has already been projected. What I want to do is set up a map data coordinate space that is coincident with the image, so I can draw continental outlines, grid lines, station plots, etc. I am thinking, for example, of any geoTiff image that I might download.

If Mark wanted to take this on for his webinar, here is an appropriate image.

<http://www.idlcoyote.com/misc/AF03sep15b.n16-Vlg.tif.gz>

I would be particularly interested in how to set up the map data coordinate space for this image in function graphics, for example. I've been able to create such a coordinate system and display the image. But all goes to hell when I resize the window. :-)

Here is an article that describes how to do such a thing using Coyote Graphics:

http://www.idlcoyote.com/map_tips/tiffoverlay.html

If I wake up before noon, I may spend a little more time on this tomorrow. :-)

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.")
