
Subject: Viewing Shapefiles in IDL

Posted by [David Fanning](#) on Sun, 16 May 2010 13:52:13 GMT

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Folks,

I had occasion this week to want to view a shapefile of Greenland on a map. Several years ago I had written a couple of example programs to show people how this could be done with the states.shp file that is distributed with IDL:

http://www.dfanning.com/map_tips/shapefile.html

The program I wrote to do that, DrawStates, was more general than users were led to believe by my poor choice of keyword names (to say nothing of the name of the program!). It has been in the back of my mind for a long time to fix that.

Then, coincidentally, on the same day I needed this functionality, I got a request from a user to show her how DrawStates could be used with Map_Proj_Init, which oddly enough, was the same problem I was struggling with, since in the years since I wrote the program I had completely abandoned MAP_SET for MAP_PROJ_INIT (or, rather, its more useful variant, the MapCoord object).

Fate, as they say. :-)

The long and short is that I have written a new shapefile program named DrawShapes that does much the same thing as DrawStates, but in a more general way. Plus, you can pass it a MapCoord object (so it knows how to draw on *your* map) and so it can convert lat/lon coordinates to the necessary XY coordinates of the plot.

One added feature makes it a general purpose viewing tool. If you set the /AUTODRAW keyword, the shapefile will be queried for its overall "boundaries" and a data coordinate system corresponding to these boundaries will be set up (and a window opened) so that the shapefile contents can be drawn for you. This is not perfect, but it beats having to come up with the proper map coordinate parameters off the top of your head.

(And as an aid to setting the map coordinate boundaries, I have added X RANGE and Y RANGE output keywords to ShapeInfo,

so that these critical ranges for MapCoord can be set prior to passing the MapCoord object to DrawShapes.)

You can find the program here:

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

Cheers,

David

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

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