Subject: Image Map Overlays and Grids, Oh My!
Posted by David Fanning on Mon, 05 Jan 2009 02:59:34 GMT

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Folks,

I typically spend the holidays slogging down eggnog,
reading trashy novels, and working on an IDL project that
has been bugging the daylights out of me because I don't
have an extended period of time to work on it due to the
usual pressures of job, family, tennis, etc.

This year was no different. But what to do for a project?

Since I've taken a real job, I spend an awful lot of time
working with satellite images. It helps me a great deal
when I am working with these images if I can see a few
land masses in them in order to get my bearings, etc.
And since these are generally map-projected images of
some sort, I would like to be able to display map overlays
of land boundaries, grid lines, etc.

I have been absolutely chagrined at how few tools IDL
has at it's disposal to do this kind of thing. Everything
is clunky. Nothing is interactive. Probably iMap does
what I want, but I honestly can't figure those damn iTools
out and my blood pressure always rises into the danger level
when I try to use them.

I even tried to do this in ENVI, which I like for a lot
of things, and especially for its flexible map projections.
But following the recommended way to overlay a projected image
with continental boundaries in ENVI resulted in a program that
took about 3 minutes to display the image with its overlay!
Uh, that is *way* too long, folks.

So, long story short, I spent the holidays cobbling up
a map coordinate object for my Catalyst Library that
allows me to set up a map projection space in a very easy
way. Then I wrote a couple of wrapper objects for Map_Continents
(or Map_GSHHS_Shoreline, if you prefer that) and Map_Grid.
Used with the map coordinate object, I can *automatically*
get map overlays and grids on any georeferenced image.

It's pretty sweet, if I do say so myself.

You can see how I go about doing it in this article:

http://www.dfanning.com/catalyst/maponimage.html

This is the image display program I've always wanted. :-)

Cheers,

David

P.S. Every time I look into map projections I get more frustrated
with the map projection routines in IDL. Here is an area that could
really use some of our maintenance dollars applied to it. Heck, how
long could it take to move ENVI's map routines over to IDL? I am
advising all my friends to completely avoid the MAP_SET routines.
I no longer have any confidence in them. The MAP_PROJ_*** routines
are better, but they are really limiting for someone who works with
map projections on a daily basis. It wouldn't take a lot of work to
do a LOT better in this area.

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