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Subject: Re: how to initialize a projection from its specification?

Posted by [David Fanning](#) on Wed, 17 Apr 2013 16:50:52 GMT

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nata writes:

- > How can I initialize a mapping projection in IDL using the following specification?
- > [http://www.nco.ncep.noaa.gov/pmb/docs/on388/tableb.html#GRID 130](http://www.nco.ncep.noaa.gov/pmb/docs/on388/tableb.html#GRID_130)
- >
- > I want to remap (by bilinear interpolation) one image (that is projected in the specified grid) to another projection, by using MAP\_PROJ\_IMAGE.
- >
- > I do have the lat/lon values of the image but it seems that I cannot use MAP\_PATCH if my final projection is initialized using MAP\_PROJ\_INIT.
- >
- > Any ideas?

Well, you seem to be mixing a couple of things up here. :-)

If you want to take an image in one map projection and re-project it to another map projection, then MAP\_PROJ\_IMAGE is exactly what you want:

[http://www.idlcoyote.com/map\\_tips/warpimage.html](http://www.idlcoyote.com/map_tips/warpimage.html)

You simply create a map structure for the current projection and one for the desired projection, and Map\_Proj\_Image does a great job.

On the other hand, if you are considering MAP\_PATCH, that is another problem altogether. Here you have an image and a lat/lon value for each pixel in the image, and you wish to display this image on a map projection. This is more of a display solution than an analytical solution.

I have written the equivalent of Map\_Patch for the Map\_Proj\_\*\*\* method of creating the map projection. It is called cgWarpToMap. You can learn more about it here:

<http://www.idlcoyote.com/idldoc/cg/cgwarptomap.html>

Cheers,

David

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David Fanning, Ph.D.  
Fanning Software Consulting, Inc.

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Subject: Re: how to initialize a projection from its specification?

Posted by [natha](#) on Wed, 17 Apr 2013 16:58:42 GMT

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Hi David,

I will take a look to your routine `cgWarpToMap`, it could be a solution to my problem. On the other hand, I would like to be able to initialize the map structure from the information I provided in the link. Is it possible? If so, I will be able to use `MAP_PROJ_IMAGE` and get the analytical solution.

Thank you,  
Bernat

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Subject: Re: how to initialize a projection from its specification?

Posted by [David Fanning](#) on Wed, 17 Apr 2013 17:24:49 GMT

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natha writes:

>  
> Hi David,  
>  
> I will take a look to your routine `cgWarpToMap`, it could be a solution to my problem. On the other hand, I would like to be able to initialize the map structure from the information I provided in the link. Is it possible? If so, I will be able to use `MAP_PROJ_IMAGE` and get the analytical solution.

Sure it is possible. I don't know what Latin1 and Latin2 mean in that link, but possibly they are related to the standard parallels you need for the Lambert Conformal projection. To set the limits of the map projection, you are going to need to know values (either in XY projected meters or lat/lon) of the sides of the grid, and they give you the corners of the grid, so you will have to do some work there.

I'd probably project the corners of the grid to XY meters and work with those values to find the values I need. You can calculate the values from the grid spacing and the size of the image.

Cheers,

David

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David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

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