Subject: Re: Longstanding Map Overlay Problem Solved!
Posted by Wasit.Weather on Sun, 16 Mar 2008 02:37:11 GMT
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On Mar 14, 4:00 pm, David Fanning <n...@dfanning.com> wrote:
> Folks,
>
> For well over a year I have been pondering a map overlay problem.
> The problem appears when trying to overlay continental outlines
> on a GeoTIFF image. If you use the UV_BOX that is returned
> in the map projection structure from MAP_PROJ_INIT to set up
> a data coordinate space, then the outlines are just ever so
> slightly wrong. However, it you use the UV_BOX that is
> returned from MAP_PROJ_IMAGE, even if you don't warp the
> image, the results are absolutely correct. The problem
> (and solution) is described here.
>
>   http://www.dfanning.com/map_tips/tiffoverlay.html
>
> With a great deal of help from Matt Savoie, I have now
> identified the reason these two UV_BOXES are slightly
> different. The answer comes down to a limitation in
> MAP_PROJ_INIT.
>
> Specifically, the limitation is that the LIMIT keyword
> to MAP_PROJ_INIT can only accept a four-element vector
> that describes two opposite corner points on the image.
> The assumption is that the other two opposite corner
> points can also be determined by this method. Unfortunately,
> that is not a valid assumption for images that are in
> some type of map projection already.
>
> Rather, we need to use an 8-element LIMIT vector to
> describe the location of a projected image in lat/lon
> space. Something of this sort is available for MAP_SET,
> although you must specify the left, top, right, and
> bottom of the image, rather than its corners. But
> if you try to use an 8-element LIMIT vector with
> MAP_PROJ_INIT, it will accept it without argument, it
> will just *completely* ignore its values.
>
> Fortunately, MAP_PROJ_IMAGE *does* calculate the 8-element
> limit correctly, and so does return the correct UV_BOX
> to set up the data coordinate space. But, as Matt discovered,
> it is also possible to set the data coordinate space directly
> from values calculated from geotiff information in the file.
>
> So, now we have two solutions, and it is only the most

> commonly used method that is wrong. :-)
>
> Anyway, I can't tell you how happy I am to know the reason
> for this longstanding discrepancy and I look forward to
> submitting a feature request to ITTVIS to get this cleared up.
>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Hi David,
Thanks! this is very useful. I tried exactly your code. But I ended in
compiling error

TVLCT, FSC_Color('ivory', /Triple), 0
           ^
Syntax error.
  At: F:\IDLPractice\data\MapOverlay\tiffoverlay.pro, Line 74
1 Compilation error(s) in module TIFFOVERLAY.

Why? and can you also provide the countinent border data?

Thanks!

---

## Subject: Re: Longstanding Map Overlay Problem Solved!
Posted by David Fanning on Sun, 16 Mar 2008 02:42:13 GMT
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Bulrush writes:

> Thanks! this is very useful. I tried exactly your code. But I ended in
> compiling error
>
> TVLCT, FSC_Color('ivory', /Triple), 0
>            ^
> Syntax error.
>    At: F:\IDLPractice\data\MapOverlay\tiffoverlay.pro, Line 74
> 1 Compilation error(s) in module TIFFOVERLAY.
>
> Why?

I'm guessing you don't have Coyote Library programs

on your IDL path. FSC_COLOR is a coyote library
program:

   http://www.dfanning.com/documents/programs/html

>  and can you also provide the countinent border data?

I don't know what you are asking for here. Can you
be a little more specific.

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

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## Subject: Re: Longstanding Map Overlay Problem Solved!
## Posted by David Fanning on Sun, 16 Mar 2008 02:46:06 GMT
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David Fanning writes:

>    http://www.dfanning.com/documents/programs/html

Should be:

   http://www.dfanning.com/documents/programs.html

Of course.

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

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## Subject: Re: Longstanding Map Overlay Problem Solved!
## Posted by Wasit.Weather on Sun, 16 Mar 2008 04:03:58 GMT

On Mar 15, 9:46 pm, David Fanning <n...@dfanning.com> wrote:
> David Fanning writes:
>>    http://www.dfanning.com/documents/programs/html
>
> Should be:
>
>    http://www.dfanning.com/documents/programs.html
>
> Of course.
>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Hi,
I just downloaded this tiffoverlay.pro and the tiff image. put them in
the same folder and got the compiling error.
I am wondering if there is another filr like border.shp something ot
be overlayed over the TIFF
If yes, where is it  then?
Appreciate your help

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## Subject: Re: Longstanding Map Overlay Problem Solved!
Posted by Wasit.Weather on Sun, 16 Mar 2008 05:09:17 GMT

On Mar 15, 9:46 pm, David Fanning <n...@dfanning.com> wrote:
> David Fanning writes:
>>    http://www.dfanning.com/documents/programs/html
>
> Should be:
>
>    http://www.dfanning.com/documents/programs.html
>
> Of course.
>
> Cheers,
>
> David
> --

> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Hi David,
I downloaded all of the exampel codes into IDL lib folder. however,the
program can not be compiled and stating following error.
TVLCT, FSC_Color('ivory', /Triple), 0

Syntax error.
  At: F:\IDLPractice\data\MapOverlay\tiffoverlay.pro, Line 74
1 Compilation error(s) in module TIFFOVERLAY.
Thanks!

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