Subject: reading shapefiles & IDL objects
Posted by desertdryad on Tue, 20 Dec 2011 23:48:59 GMT
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I'm trying to write a function that can read GIS shapefiles in IDL.
I'm new to this and to using objects in IDL; but I seem to be stuck
right at the gate for reasons I cannot fathom. Here is the snipet of
code at hte beginning of my function:

---

function readshape, filename

; test script for reading a shapefile into idl and finding data
contained w/in

myshape = obj_new('IDLffShape', filename)
help, myshape

Now, I know for certain that the shapefile exists whose name gets
passed as 'filename' and I've specified the path at the command line.
Yet, I get this error:

ENVI> testme = readshape('C:\\etotest\pivot6.shp')

MYSHAPE   OBJREF   = <NullObject>
% Stop encountered: READSHAPE   7 C:\Cyndys\Default
\readshape.pro

What on Earth am I doing wrong, here? Please advise.

Subject: Re: reading shapefiles & IDL objects
Posted by David Fanning on Wed, 21 Dec 2011 18:10:50 GMT
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desertdryad writes:

> I am sure it's a valid file; I just checked.
>
> And nothing happens in the procedure before the bit i posted!
>
> Next question - is there any possibility my installation of IDL does
> not have IDLffShape defined?

I don't think so.

Try your program with the "states.shp" file in the IDL
distribution:

```
filename = Filepath(Subdir=['examples','data'], 'states.shp')
```

If it doesn't work with that, something is *seriously* wrong. :-)

Cheers,

David

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

Subject: Re: reading shapefiles & IDL objects
Posted by desertdryad on Wed, 21 Dec 2011 18:13:49 GMT
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> Try your program with the "states.shp" file in the IDL
> distribution:

Duh! Brilliant debug idea, David; why didn't I think of that.

And it works. (sigh) Back to the drawing board.....

Subject: Re: reading shapefiles & IDL objects
Posted by desertdryad on Wed, 21 Dec 2011 19:04:07 GMT
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Ok, I've managed to read in my shapefile (I seemed to have to put my shapefile where the 'states.shp' file was, at lest for now). But I'm not sure how to so what I want to do with it! I want to correlate the location of the entities in my shapefile with an image that covers the same geographic extent. In other words, I want to know what the coordinates of the entities are so that I can extract the date in the image that they overlay - I don't need to draw the shapefile on the image/map, but I do need to know where on the map its entities are. I'm not seeing an obvious way to do that?

Subject: Re: reading shapefiles & IDL objects
Posted by David Fanning on Wed, 21 Dec 2011 20:12:24 GMT
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desertdryad writes:

> Ok, I've managed to read in my shapefile (I seemed to have to put my
> shapefile where the 'states.shp' file was, at lest for now).

This suggests to me that your "shape" file doesn't have all
the other pieces that a shape file needs. In other words,
the *.shx and *.dbf files have to be in the same directory
as the *.shp file, or the shape file ain't a shape file!

> But I'm
> not sure how to so what I want to do with it! I want to correlate the
> location of the entities in my shapefile with an image that covers the
> same geographic extent. In other words, I want to know what the
> coordinates of the entities are so that I can extract the date in the
> image that they overlay - I don't need to draw the shapefile on the
> image/map, but I do need to know where on the map its entities are.
> I'm not seeing an obvious way to do that?

The simplest way is just to march through the entities
and keep track of the entities's bounds. This is how
cgDrawShapes works, when you set the AutoDraw keyword.

```
FOR j=0,N_Elements(*entities)-1 DO BEGIN
  thisEntity = (*entities)[j]
  entityMinX[j] =  thisEntity.bounds[0]
  entityMaxX[j] =  thisEntity.bounds[4]
  entityMiny[j] =  thisEntity.bounds[1]
  entityMaxY[j] =  thisEntity.bounds[5]
ENDFOR
xrange = [Min(entityMinX), Max(entityMaxX)]
yrange = [Min(entityMinY), Max(entityMaxY)]
cgPlot, xrange, yrange, ....
```

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
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Subject: Re: reading shapefiles & IDL objects
Posted by desertdryad on Wed, 21 Dec 2011 21:16:53 GMT
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```
>  The simplest way is just to march through the entities
>  and keep track of the entities's bounds. This is how
>  cgDrawShapes works, when you set the AutoDraw keyword.
>
>       FOR j=0,N_Elements(*entities)-1 DO BEGIN
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>       ENDFOR
>       xrange = [Min(entityMinX), Max(entityMaxX)]
>       yrange = [Min(entityMinY), Max(entityMaxY)]
>       cgPlot, xrange, yrange, ....
>
>  Cheers,
>
>  David
```

I think I get that. Thanks, David!!

Subject: Re: reading shapefiles & IDL objects
Posted by desertdryad on Wed, 21 Dec 2011 21:27:27 GMT
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On Dec 21, 2:16 pm, desertdryad <dry...@gmail.com> wrote:

```
>>  The simplest way is just to march through the entities
>>  and keep track of the entities's bounds. This is how
>>  cgDrawShapes works, when you set the AutoDraw keyword.
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>>       yrange = [Min(entityMinY), Max(entityMaxY)]
>>       cgPlot, xrange, yrange, ....
>
>>  Cheers,
```

>
>> David
>
> I think I get that. Thanks, David!!

PS - all the pieces are in the same directory.. I know GIS better than
I know IDL :)

Subject: Re: reading shapefiles & IDL objects
Posted by kristen234 on Thu, 28 Jun 2012 21:40:41 GMT
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On Wednesday, December 21, 2011 2:27:27 PM UTC-7, desertdryad wrote:
> On Dec 21, 2:16 pm, desertdryad <dry...@gmail.com> wrote:
>>> The simplest way is just to march through the entities
>>> and keep track of the entities's bounds. This is how
>>> cgDrawShapes works, when you set the AutoDraw keyword.
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>>> FOR j=0,N_Elements(*entities)-1 DO BEGIN
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>>> ENDFOR
>>> xrange = [Min(entityMinX), Max(entityMaxX)]
>>> yrange = [Min(entityMinY), Max(entityMaxY)]
>>> cgPlot, xrange, yrange, ...
>>
>>> Cheers,
>>
>>> David
>>
>> I think I get that. Thanks, David!!
>
> PS - all the pieces are in the same directory.. I know GIS better than
> I know IDL :)

Did you ever figure out why moving your shapefile to the directory with 'states.shp' was necessary? I'm having the same problem with my shapefile, but I'm not permitted to save files to the IDL distribution directories. Thanks for the help!

Subject: Re: reading shapefiles & IDL objects
Posted by David Fanning on Thu, 28 Jun 2012 22:00:15 GMT
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kristen234@gmail.com writes:

> Did you ever figure out why moving your shapefile to the directory with 'states.shp' was necessary? I'm having the same problem with my shapefile, but I'm not permitted to save files to the IDL distribution directories.

There is not a single valid reason why someone would
have to move their shapefile to an IDL-supplied
directory, unless it is part of some mystical
religious incantation that is similar to
crossing your eyes and sticking your tongue
out in the secular world.

Cheers,

David

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