Subject: Re: OBJ_NEW: Infinite or invalid (NaN) operands not allowed. IDL 7 vs 8 discrepancy?
Posted by mikrin on Mon, 11 Jun 2012 16:44:05 GMT
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On Jun 7, 4:06 pm, mikrin <marinaldi2...@gmail.com> wrote:
> Hi,
>
> I've developed some IDL object graphics code to draw the continents
> onto an orthographic projection of the earth. I'm using the file
> IDL_Default/resource/maps/continents.shp
>
> Specifically I've run into issues where the code I use (see below)
> works fine on IDL 8.0 running on a Mac OS X Lion system.
>
> On IDL 7.1 running on 32bit Linux (kernel 3.0.0-19) it produces the
> error,
>
> % OBJ_NEW: Infinite or invalid (NaN) operands not allowed.
>
> The error happens on the line (see below for code snippet)
> contPoly = obj_new('IDLgrPolyline', xy, polylines=conn[1:*],
> _extra=e)
>
> if the array xy contains 1 or more NaN values then I get the error.
> xy is calculated by map_proj_forward (which converts lat/lon to xy for
> a given map projection). In an orthographic projection parts of some
> continets are behind the visible part of the globe and thus have
> undefined xy. IDL 8.0 running on my Mac seems to NOT have a problem
> with this but IDL 7.1 on Linux chokes on it.
>
> Is this an IDL 7.1 issue that was fixed on IDL 8.0 or is this a Mac/
> Linux issue?
>
> (BTW, the code also fails on Windows XP running IDL 7.1)
>
> Mike
>
> The specific code is:
>
> pro drawContinentLines, MAP=map, oModel
>
> ; Use the low res continents data for now
> contFilenames = filepath('continents.shp', subdir=['resource','maps/
> shape'])
> ; Create a shape object to hold the continent lines
> conts = obj_new('IDLffShape', contFilenames)
>

```
>   conts->getProperty, n_entities=nEntities
>   ; Loop through all continents
>   for s=0L, nEntities-1L do begin
>     cont = conts->getEntity(s)
>     conn = [0]
>     for p=0,cont.n_parts-1L do begin
>       startInd = (*cont.parts)[p]
>       endInd = p eq cont.n_parts-1 ? cont.n_vertices : (*cont.parts)[p
>  +1]
>       conn = [conn, endInd-startInd, lindgen(endInd-startInd) +
>  startInd]
>     endfor
>     xy = map_proj_forward(*cont.vertices, map_structure=map)
>     ; Create continent boundary object
>     contPoly = obj_new('IDLgrPolyline', xy, polylines=conn[1:*],
>  _extra=e)
>     oModel->add, contPoly
>     conts->destroyEntity, cont
>   endfor
>
>   obj_destroy, conts
>
>  end
```

In case anyone is interested I did receive a reply from IDL tech support and indeed this is a bug with idl 7.1. The bug as apparently been fixed with the release of IDL 8.0.

Mike

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