Subject: OBJ_NEW: Infinite or invalid (NaN) operands not allowed. IDL 7 vs 8 discrepancy?
Posted by mikrin on Thu, 07 Jun 2012 23:06:59 GMT
View Forum Message <> Reply to Message

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
```