
Subject: Re: IDL - Extracting data from within boundary defined by shapefile
Posted by [katie](#) on Tue, 30 Nov 2010 07:01:39 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thanks for your timely advice! I've never dealt with objects in IDL, so it took me a while to figure out what you meant, and a while longer to put it all together, but I think I've got it for the most part. However, I'm still being held up with the ContainsPoints part. What I have so far is below.

```
mr_b_shapefile = 'mr_b.shp'
mr_b_shape = obj_new('IDLffShape',mr_b_shapefile)
mr_b_shape->IDLffShape::GetProperty, N_ENTITIES=num_ent,
ENTITY_TYPE=ent_type,$
ATTRIBUTE_INFO=attr_info

for i = 0L, (num_ent-1) do begin
ent = mr_b_shape -> IDLffShape::GetEntity(i)
x   = (*ent.vertices)[0,*]
y   = (*ent.vertices)[1,*]
endfor

mr_b_roi = obj_new('IDLAnROI',x,y)
mr_b_points = mr_b_roi->IDLAnROI::ContainsPoints(lon,lat)

obj_destroy,mr_b_shape
obj_destroy,mr_b_roi
```

When I run this, I get the error, "IDLAnROI::CONTAINSPOINTS: Number of LON does not match number of LAT."

The terms lon and lat are the longitudes and latitudes associated with the soil moisture for the entire globe. There are 64 lat's and 128 lon's. So yes, they do not match, but I'm not sure what else I should be using in the ContainsPoints function.

Another possible conflict I see here is that the longitudes within x are negative (for being West), but the longitudes of my soil moisture data are 0 to 360. Although, when I used MAP_SET to plot my soil moisture data, and plot the mr_b shapefile (using David Fanning's DRAWSHAPES function) on top of it, it came out fine.

Any suggestions for the lat/lon confusion here?

Many thanks,
Katie

On Nov 27, 6:41 am, Paulo Penteado <pp.pente...@gmail.com> wrote:

> If you mean to select the points that fall into the boundary, you
> could create an IDLanROI, defined by the vertices from the shapefile.
> Then use its containspoints() method to find those inside it. That is,
> assuming that Earth's curvature is not relevant. If it is, you might
> have to change the data from lat/lon to some suitable projection.

>

> On Nov 27, 10:04 am, katie <katie.l.pi...@gmail.com> wrote:

>

>> Hello all,

>

>> I am using IDL 6.1, and was wondering if it's possible to extract data
>> (defined by lat and long gridpoints) from within a boundary defined by
>> a shapefile. For example, I have a contour map of global soil
>> moisture, but would only like to look at the data within the
>> Mississippi River Basin. I have the shapefile for this basin, and have
>> overplotted it onto the contour map so I can see the basin outline and
>> note that it is properly projected on top of my data, but I do not
>> know where to go from there.

>

>> Any advice would be great!

>> Thanks,

>> Katie