Subject: user-selected ROIs
Posted by geogal34 on Wed, 04 Aug 2010 16:47:57 GMT
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I have generated an output contour map of masses projected on a map and would like to be able to allow the user to select a specific region of interest and calculate the mass for that area. Basically I just need to add up the value of all the pixels contained within the boundary.

I've tried using XROI, but haven't had any luck because the actual values (masses) of the pixels aren't what is shown in the histogram when the image is passed. I've tried several different ways of passing the data, but to no avail.

So I have chosen to draw a polygon point by point using CURSOR, then plan to use a WHERE statement to figure out all the pixels within the ROI. I use a similar procedure to determine a larger subset of the satellite data, but that only has two points. The problem I'm encountering is that, while I can print the latitudes and longitudes as the mouse is clicked, I can't seem to save them to an array because the x, y positions are constantly being overwritten. What I'm trying to do it save the initial array and then add new ones as they are created. This code adds new lines to the array, but it just fills it with the same points (lat/lon).

```
;Drawing polygon point by point
clicks=0
CURSOR, x, y, /DOWN, /DATA
PLOTS, x, y, PSYM=1, /DATA
  WHILE (!MOUSE.button NE 4) DO BEGIN
  CURSOR, x1, y1, /DOWN, /DATA
  PLOTS, [x, x1], [y, y1], /DATA
;  x=x1 & y=y1
    IF (!MOUSE.button EQ 1 OR 4) THEN BEGIN
    clicks=clicks+1
    print, 'Clicks=', clicks, '    ', 'X=',x, '    ', 'Y=', y
    cloud_array=fltarr(2, clicks)
      FOR i=0, clicks-1 DO BEGIN
      cloud_array(0,i)=[x]
      cloud_array(1,i)=[y]
      ENDFOR
      print, 'i=', i
      print, cloud_array
    ENDIF
    x=x1 & y=y1
  ENDWHILE
```

There’s probably a simple solution, but I’ve been going in circles for a while and now everything is a jumble in my head. Can anyone point in the right direction? Or has anyone been able to do what I’m trying to accomplish? I imagine there is probably a more elegant way and I'm not even sure if this way makes sense!

Thanks!
Emily

Subject: Re: user-selected ROIs
Posted by David Fanning on Thu, 05 Aug 2010 13:17:03 GMT
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geogal34 writes:

> Thanks, David. I've managed to get the mask and indices from the
> PolyFillV procedure, now I just have to figure out how to work with
> them. I'm not really clear on how to use the REVERSE_INDICES yet, but
> I'm playing with it. I always find it hard to translate what I'm doing
> on the screen to my actual data (the retrieving part). It's just not
> always intuitive to me. Thanks again!

Yes, you just have to get over the idea that you are looking at "your data". Unless you are looking at pages and pages of numbers, that's rarely ever true. At best, you are looking at a representation of your data on a computer screen. That representation can be manipulated in an infinite number of ways to give us insight into what the data means. But that is not the same as what the data is.

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.")
