
Subject: ROI's and geographical data!

Posted by [einare](#) on Thu, 05 Jun 2003 14:53:22 GMT

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Hi.

I've been using IDL now for a whole two weeks now!

My problem is that I have two data sets. One defining a ROI (in latitude-longitude) and another one evenly, but broadly spaced data set, combined of lat-lon-value.

I've defined the ROI and I want a simple, non GUI, procedure of picking all the values which are inside the ROI. And because they are broadly spaced I used the rebin function to narrow it down, making huge data sets.

The only solution I see is making a loop testing each point, something like:

```
IF roi->ContainsPoints(lon_fin[j], lat_fin[j]) GT 0 THEN BEGIN
  dat_end[i]=dat_exp[j]
  lon_end[i]=lon_fin[j]
  lat_end[i]=lat_fin[j]
  i = i+1
ENDIF
```

which is not very good inside a loop with huge data sets.

I would be very happy if someone has solved, or can solve, this problem for me!!

Subject: Re: ROI's and geographical data!

Posted by [David Fanning](#) on Thu, 05 Jun 2003 15:08:18 GMT

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Einar Einarsson (einare@hi.is) writes:

```
> The only solution I see is making a loop testing each point, something
> like:
>
> IF roi->ContainsPoints(lon_fin[j], lat_fin[j]) GT 0 THEN BEGIN
>   dat_end[i]=dat_exp[j]
>   lon_end[i]=lon_fin[j]
>   lat_end[i]=lat_fin[j]
>   i = i+1
```

```
> ENDIF
>
> wich is not very good inside a loop with huge data sets.
```

There is no reason to do this in a loop (unless you are consciously trying to slow everything down). The ContainsPoints function has already been vectorized. I would try something like this:

```
pts= roi->ContainsPoints(lon_fin, lat_fin)
inside_pts = Where(pts GT 0, count)
IF count GT 0 THEN BEGIN
lon_end = lon_fin[inside_pts]
lat_end = lat_fin[inside_pts]
ENDIF
```

Cheers,

David

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