Subject: Re: Objects in ENVI ROI files
Posted by Josh Sixsmith on Tue, 21 May 2013 05:08:47 GMT
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Considering that the original post was back in 2006, it has probably already been solved.

Anyway, here is one method that should achieve what you're after.

Rather than use region_grow to find all of the values. Use a dummy array of the same x/y dimensions as to what the ROI is based off, and label it. This will be similar (if not the same as) to the region grow method, without the iterations.

You can use the roi addresses to index the dummy array and set the value to one (all other pixels should be zero).
Then use label_region. This will give each of your roi polygons a unique identifier.
The next step would be to find all the unique labels, using a combination of uniq and sort.
Use the histogram function and reverse indices. This can then be used to index the original array and do whatever you want, such as assign a new value, or calculate some stats.

The bins of interest are defined by the unique labels, which are also sorted. We know that the background is zero so ignore it when looping over the bins.

Eg:

```
dummy = bytarr(samples,lines)
dummy[roi_addr] = 1
label_arr = label_region(dummy)
labels = label_arr[uniq(label_arr, sort(label_arr))]
hist = histogram(label_arr, min=0, max=max(labels), reverse_indices=ri)

for i=1,n_elements(labels)-1 do begin
   if hist[labels[i]] eq 0 then continue
   ;retrieve the data from the original array
   polygon = orig_data[ri[ri[labels[i]]:ri[labels[i]+1]-1]]
   ;do something
endfor
```

That should get the individual polygons within each ROI that you're after.

Cheers
Josh