Subject: Re: subset an image by roi in idl Posted by Jeff N. on Mon, 25 Sep 2006 17:36:28 GMT

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The first thing I'd suggest doing would be to clean up your code. That's the easiest way to spot mistakes, and there are a few here you should fix. First, you assign the filename for can_tmr.img to the variable 'img_file', but then in the next line you try to open 'image_file' - see the difference? Also, i'm surprised this code is even running b/c of this line:

```
roi_ids = envi_get_roi_ids(fid=r_fid)
```

The variable r_fid is undefined, as I see it. Once you get past these things I think you'll be in a much better position to figure out for yourself why your code isn't doing what you think it should. You might, for example, examine the values that are stored in ns and nl. Are they the same dimensions as your input image? If they are, then that's the reason that your 'subset' image ends up with the same dimensions as the input:)

Cheers, Jeff

```
gis_learner wrote:
> Dear All,
> I am a new comer to IDL world. Moreover I am not that good at coding.
> Thus I need your advices,
> I want to subset images via the same roi. Images are updated every 10
> minutes or so.
> I walked through the previous answers. And they worked fine, how ever
 the subseted image is as big as the first one.
> I will paste the code that I combined from web.
 Any help is appreciated
>
> Best REgards
>
> pro sbst_ia_v2
> envi, /restore_base_save_files
  envi_batch_init, log_file='batch.txt'
>
     ; define the image to be opened
>
     ; pixel size is a function of selevted file
```

```
img_file= 'C:\RSI\IDL61\products\ENVI41\data\can_tmr.img'
>
     envi open file, image file, r fid=fid
>
     ;print,'r_fid=',r_fid,'fid=',fid
>
     print,'fid=',fid
>
     name='C:\RSI\IDL61\subset_via_roi\roi1.roi'
>
     envi_restore_rois,name
>
    roi_ids = envi_get_roi_ids(fid=r_fid)
>
     roi addr=envi get roi(roi ids)
>
>
     print, 'ROI: ', name, n_elements(roi_addr)
>
     ; check the roi element number
>
     ;print,'name=',name, ' roi_ids=',roi_ids
>
>
 ;for j=0,0 Do begin
     roi_data=envi_get_roi_data(roi_ids,fid=fid,pos=[0])
>
    ; print, 'roi data'
>
     ;print, roi_data
>
     envi get roi information, roi ids, ns=ns, nl=nl
>
     print, 'ns= ',ns, '**nl=',nl
>
     roi_adresses=envi_get_roi(roi_ids)
>
> out_data = intarr(ns,nl)
> out_data [roi_adresses]=roi_data
> ;print, roi_adresses
> ; define the area to map out
> ;yz_data=out_data[195:362,88:173]
> envi write envi file,
> out data,ns=ns,nl=nl,out name='out name',map info=map info
> ;endfor
> ;envi_batch_exit
>
>
> end
```

Subject: Re: subset an image by roi in idl Posted by gis_learner on Tue, 26 Sep 2006 11:45:44 GMT View Forum Message <> Reply to Message

Dear Jeff,

Thank you very much for the quick answer.

I saw that there are three main issues in your mail

- 1) the file name issue.... it is corrected
- 2) the r_fid issue.. I hope you can verify that it is correct at below

```
name='C:\RSI\IDL61\subset via roi\bhtmref roi1.roi'
  envi_restore_rois,name
  roi ids = envi get roi ids(fid=fid)
  roi addr=envi get roi(roi ids)
   print, 'ROI: ', name, n_elements(roi_addr)
  print, 'name=', name, 'roi_ids=', roi_ids
  roi data=envi get roi data(roi ids,fid=fid,pos=[0])
   envi get roi information, roi ids, ns=ns, nl=nl
  print, 'ns= ',ns, '**nl=',nl
  roi_adresses=envi_get_roi(roi_ids)
out_data = intarr(ns,nl)
out_data [roi_adresses]=roi_data
envi write envi file,
out data,ns=ns,nl=nl,out name='out name',map info=map info
3) as you said the roi's are as big as the original image. I tried to
define ROI from the subsetted images so that I can use in the original
ones.. But the result is terrible. I may appreciate any help
Best Regards
Jeff N. yazdi:
> The first thing I'd suggest doing would be to clean up your code.
> That's the easiest way to spot mistakes, and there are a few here you
> should fix. First, you assign the filename for can tmr.img to the
> variable 'imq file', but then in the next line you try to open
> 'image_file' - see the difference? Also, i'm surprised this code is
> even running b/c of this line:
> roi_ids = envi_get_roi_ids(fid=r_fid)
>
> The variable r_fid is undefined, as I see it. Once you get past these
> things I think you'll be in a much better position to figure out for
> yourself why your code isn't doing what you think it should. You
> might, for example, examine the values that are stored in ns and nl.
> Are they the same dimensions as your input image? If they are, then
> that's the reason that your 'subset' image ends up with the same
> dimensions as the input:)
>
> Cheers.
> Jeff
```

```
> gis_learner wrote:
>> Dear All.
>>
>> I am a new comer to IDL world. Moreover I am not that good at coding.
>> Thus I need your advices,
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>> I want to subset images via the same roi. Images are updated every 10
>> minutes or so.
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>> I walked through the previous answers. And they worked fine, how ever
>> the subseted image is as big as the first one.
>> I will paste the code that I combined from web.
   Any help is appreciated
>>
>> Best REgards
>>
>> pro sbst_ia_v2
>> envi, /restore base save files
>> envi_batch_init, log_file='batch.txt'
>>
      ; define the image to be opened
>>
      ; pixel size is a function of selevted file
>>
      img_file= 'C:\RSI\IDL61\products\ENVI41\data\can_tmr.img'
>>
      envi_open_file,image_file, r_fid=fid
>>
      ;print,'r_fid=',r_fid,'fid=',fid
>>
      print, 'fid=', fid
>>
      name='C:\RSI\IDL61\subset via roi\roi1.roi'
>>
>>
      envi restore rois,name
     roi ids = envi get roi ids(fid=r fid)
>>
      roi_addr=envi_get_roi(roi_ids)
>>
>>
       print, 'ROI: ', name, n_elements(roi_addr)
>>
      ; check the roi element number
>>
      ;print,'name=',name, ' roi_ids=',roi_ids
>>
>> ;for j=0,0 Do begin
      roi_data=envi_get_roi_data(roi_ids,fid=fid,pos=[0])
     ; print, 'roi_data'
>>
      ;print, roi data
>>
      envi_get_roi_information,roi_ids,ns=ns,nl=nl
      print, 'ns= ',ns, '**nl=',nl
>>
      roi_adresses=envi_get_roi(roi_ids)
>>
>> out_data = intarr(ns,nl)
>> out data [roi adresses]=roi data
>> ;print, roi adresses
```

```
>> ; define the area to map out
>> ;yz_data=out_data[195:362,88:173]
>> envi_write_envi_file,
>> out_data,ns=ns,nl=nl,out_name='out_name',map_info=map_info
>> ;endfor
>> ;envi_batch_exit
>>
>>
>>
>>
>> end
```

Subject: Re: subset an image by roi in idl Posted by peter.eddy@shaw.ca on Tue, 26 Sep 2006 16:48:18 GMT View Forum Message <> Reply to Message

Jeff N.

If I understand correctly from your comment..

gis_learner wrote:

- > 3) as you said the roi's are as big as the original image. I tried to
- > define ROI from the subsetted images so that I can use in the original
- > ones.. But the result is terrible.....

ROI's in ENVI are referenced by pixel coordinates (not geo-coordinates) so if you try to use roi boundarys (dims=) on two images with different x y extents (nl= | ns=) it will not work.

If you like you can email me directly, and I'll give you a hand. We dont want to turn this group into >> idl-pvwave-ENVI-techsupport.;)

Pete

Subject: Re: subset an image by roi in idl Posted by gis_learner on Fri, 29 Sep 2006 06:32:44 GMT View Forum Message <> Reply to Message

Dear All,

Below is the code that was provided by Pete. It subsets the image based on a EVF vector file.

I really appreciate his help and time taking to give support. Thank you Peter.

Hoping this also helps someone.

```
Best Regards
pro SUBSET_by_EVF
envi, /restore base save files
envi_batch_init,log_file='batch.txt'
; define the image to be opened
img_file='C:\RSI\IDL61\products\ENVI41\data\bhtmref.img'
envi open file,img file,r fid=fid
print, 'fid=',fid
; guery the file and define the output file variables
envi_file_query,fid,dims=dims,ns=ns,nl=nl,nb=nb
t_fid=lonarr(nb)+fid
pos=lindgen(nb)
out_name='subset.img'
open the EVF file
evf fname='C:\RSI\IDL61\subset via roi\bhtmref.evf'
evf_id=envi_evf_open(evf_fname)
get the vector information
envi_evf_info,evf_id,num_recs=num_recs,data_type=data_type,p rojection=projection,$
layer_name=layer_name
; print information about each record
print, 'Number of records:',num_recs
for i=0,num recs-1 do begin
  record=envi evf read record(evf id,i)
  print, 'Number of nodes in Record '+strtrim(i+1,2)+':
',n elements(record[0,*])
  print, 'Record Info:'
  print, record
endfor
: Get record info (assuming one record in EVF)
record=envi_evf_read_record(evf_id,0)
xMap=record[0,*]
yMap=record[1,*]
;Convert record to xy pixel coordinates of the image to be subsetted
envi_convert_file_coordinates,fid,xf,yf,xMap,yMap
Prepare the subset dimensions
dims[0]=-1L
dims[1]=min(xf)-1
dims[2]=max(xf)-1
dims[3]=min(yf)-1
```

```
dims[4]=max(yf)-1
;Use copyfile_doit to copy input file with new dimensions
envi_doit,'cf_doit',fid=t_fid,pos=pos,dims=dims,remove=0,out _name=out_name,r_fid=r_fid
; Exit Envi
envi_batch_exit
end
Pete yazdi:
> Jeff N.
> If I understand correctly from your comment..
>
> gis_learner wrote:
>> 3) as you said the roi's are as big as the original image. I tried to
>> define ROI from the subsetted images so that I can use in the original
>> ones.. But the result is terrible.....
>
> ROI's in ENVI are referenced by pixel coordinates (not geo-coordinates)
> so if you try to use roi boundarys (dims= ) on two images with
> different x y extents (nl= | ns= ) it will not work.
>
> If you like you can email me directly, and I'll give you a hand. We
> dont want to turn this group into >> idl-pvwave-ENVI-techsupport. ;)
>
> Pete
```