
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
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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_addresses=envi_get_roi(roi_ids)
```

```
out_data = intarr(ns,nl)
out_data [roi_addresses]=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 subsetting 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
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> 'image_file' - see the difference? Also, i'm surprised this code is
> even running b/c of this line:
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> 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:
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>> 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 seleved file
>>   img_file= 'C:\RS\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:\RS\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]
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>> 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
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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
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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\ENV\41\data\bhtmref.img'
envi_open_file,img_file,r_fid=fid
print, 'fid=',fid

; query 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:

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>> define ROI from the subsetted images so that I can use in the original

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>

> Pete
