
Subject: Re: how can i use envi in batch mode to build mask from EVFs

Posted by [stin.wang](#) on Tue, 27 Feb 2007 03:39:03 GMT

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> On Feb 24, 7:59 pm, "stin.wang" <stin.w...@gmail.com> wrote:

>

>> Hello everyone

>

>> i use idl/envi to do some statistic works. first i read landsat tm

>> into envi, calculate ndvi, and so on .

>

>> my question is how can i use envi in batch mode to build mask form

>> EVFs. It's certainly well know in ENVI , open a image and EVFs, click

>> basic tool-mask-build mask. But every month i need do it again

>> according different landsat tm image. It's really boring . I lookup in

>> ENVI library routines for such routine. but i find only

>> ENVI_MASK_APPLY_DOIT , which apply mask to a image. can anybody help

>> me solve this problem?

>

> I've never tried it, but after browsing through the help files, here's

> the direction I would take:

>

> 1. Open and read the EVF file(s) using the functions ENVI_EVF_OPEN,

> ENVI_EVF_READ_RECORD, etc.

> 2. Convert the geographical coordinates to image coordinates using

> ENVI_CONVERT_FILE_COORDINATES.

> 3. Convert the EVF polygons to ROIs using ENVI_CREATE_ROI and

> ENVI_DEFINE_ROI.

> 4. Create a mask image from the ROIs, possibly using

> ENVI_ROI_TO_IMAGE_DOIT.

> 5. Mask your image using ENVI_MASK_APPLY_DOIT.

>

> Hope that helps, and good luck.

>

> -David

After my testing ,your idea is really workable.

i make a roi file in envi named baodi.roi,and found the output file is exactly what i want.

the following program is modified from envi help file

```
forward_function envi_get_roi_ids
```

```
pro example_envi_roi_to_image_doit
```

```
;
```

```

; First restore all the base save files.
;
envi, /restore_base_save_files
;
; Initialize ENVI and send all errors
; and warnings to the file batch.txt
;
envi_batch_init, log_file='f:\working\batch.txt'
;
; Open the input file associated with
; the ROIs
;
envi_open_file, 'f:\working\061228_SINGLEBAND.IMG', r_fid=fid
if (fid eq -1) then begin
    envi_batch_exit
    return
endif
;
; Restore the ROI file and get all
; the available ROI ids.
;
envi_restore_rois, 'f:\working\baodi.roi'
roi_ids = envi_get_roi_ids()
if (roi_ids[0] eq -1) then return
;
; Set the necessary variables
;
out_name = 'f:\working\baodi_mask_1'
class_values = linden(n_elements(roi_ids))+1
;
; Call the doit
;
envi_doit, 'envi_roi_to_image_doit', $
    fid=fid, roi_ids=roi_ids, out_name=out_name, $
    class_values=class_values
;
; Exit ENVI
;
envi_batch_exit
end

```

```

*****
*****

```

then i begin to solve my problem
below is my working

```

*****
forward_function envi_get_roi_ids

```

```
pro make_mask
```

```
compile_opt idl2
```

```
envi,/restore_base_save_files
```

```
  envi_batch_init,log_file='f:\working\batch.log',batch_lun=batch_lun
```

```
file=dialog_pickfile(title='choose file ..(*.img)',/read)
```

```
printf,batch_lun,'Begin Processing at' +systemtime()
```

```
envi_open_file,file,r_fid=fid
```

```
if (fid eq -1 ) then begin
```

```
  envi_batch_exit
```

```
  return
```

```
endif
```

```
envi_file_query,fid,ns=ns,nl=nl,nb=nb
```

```
dims=[-1,0,ns-1,0,nl-1]
```

```
pos=lindgen(nb)
```

```
*****
```

```
;open evfs ,the test_evf has only one layer,baodi.shp
```

```
evf_fname='F:\test_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, projection=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,*])
```

```
;fid refer to what?the origin evfs or the img file
```

```
  ENVI_CONVERT_FILE_COORDINATES,fid,record[0,*],record[1,*],xmap,ymap,/  
TO_MAP
```

```
  ;ENVI_CONVERT_FILE_COORDINATES,evf_id,record[0,*],record[1,* ],
```

```
  roi_id = ENVI_CREATE_ROI(ns=ns, nl=nl, $
```

```
  color=4, name='evfs')
```

```
  ENVI_DEFINE_ROI, roi_id, /polygon, $
```

```
  xpts=reform(XMAP), ypts=reform(YMAP)
```

```
  roi_ids = envi_get_roi_ids()
```

```
  envi_save_rois, 'f:\working\test.roi', roi_ids
```

```

if (roi_ids[0] eq -1) then return
;
; Set the necessary variables
;
out_name = 'f:\working\baodi_mask_2'
class_values = lindgen(n_elements(roi_ids))+1
;
; Call the doit
;
envi_doit, 'envi_roi_to_image_doit', $
    fid=fid, roi_ids=roi_ids, out_name=out_name, $
    class_values=class_values

endifor

;
; Close the EVF file
;
envi_evf_close, evf_id
;*****
;

envi_batch_exit

END

```

this program doesn't work. and you have mention above
 1 , i open evfs ,the output should be all right. the output record is
 a two dims array,one for x, and one for y,x,y is latitude and
 longitude
 2,i convert xy coordinate to image coordinate
 ENVI_CONVERT_FILE_COORDINATES,fid,record[0,*],record[1,*],xm ap,ymap,/TO_MAP
 the fid should be what? evfs or img?
 3,convert polygon to roi
 this step i get nothing. because i use envi open output roi, this is
 nothing at all.
 4,because wrong above ,it doesn't matter.
 5.....

can you show me what's problem with my program???
 the batch.log says
 envi error[]
 envi_roi_to_image_doit: An error has occurred during processing
 Error: "Variable is undefined:Addr." the result maybe invalid

i think it caused by the wrong roi.
