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

Posted by [David Streutker](#) on Mon, 26 Feb 2007 16:58:35 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

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

Posted by [stin.wang](#) on Tue, 27 Feb 2007 00:56:00 GMT

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On Feb 27, 12:58 am, "David Streutker" <dstreut...@gmail.com> wrote:

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

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>

> Hope that helps, and good luck.

>

> -David

I found some words about Envi_roi to image_doit , it's means that this routine is used to create a classification image from ROIs. Each input ROI represents a class in the output image. i don't know whether it can do what i what.

i'll try it ,thank you.

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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> -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 orgin evfs or the img file
    ENVI_CONVERT_FILE_COORDINATES,fid,record[0,*],record[1,*],xm ap,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

endfor

;

```

```
; 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.

Subject: Re: how can i use envi in batch mode to build mask from EVFs
 Posted by [stin.wang](#) on Tue, 27 Feb 2007 07:19:03 GMT
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```
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>
>
>
>
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```

```

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> ; 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 = 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
> ;
> ; 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' + systime()
> 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)
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> ;open evfs, the test_evf has only one layer, baodi.shp
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> data_type=data_type, projection=projection, $
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> ; Print information about each record
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> print, 'Number of Records: ', num_recs
> for i=0,num_recs-1 do begin
>     record = envi_evf_read_record(evf_id, i)
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> 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
>
> endfor
>
> ;
> ; Close the EVF file
> ;
> envi_evf_close, evf_id
> ;*****
>
> envi_batch_exit
>
> END
>

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```

i make some mistakes , haha ,finaly i solve it . thanks David for you help,WoW