
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.
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> -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_roi, '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=ba tch_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)
*****
;
;open evfs ,the test_efv has only one layer,baodi.shp
efv_fname='F:\test_.efv'
efv_id = envi_efv_open(efv_fname)
;
; Get the vector information
;
envi_efv_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_efv_read_record(efv_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,efv_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,convent 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 [st.in.wang](#) on Tue, 27 Feb 2007 07:19:03 GMT

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>
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>
> On Feb 24, 7:59 pm, "st.in.wang" <st.in.w...@gmail.com> wrote:
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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=ba tch_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]
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> ; Print information about each record
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> ENVI_DEFINE_ROI, roi_id, /polygon, $
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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
