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