Subject: Re: Converting an ENVI image into a file that can be read by IDL
Posted by Carsten Pathe on Tue, 30 Jan 2007 11:26:58 GMT
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procomp9 wrote:
> Hi group,
>
> Has anyone ever heard of conerting an ENVI image file into a file that
> can be read by IDL? The file extention that I have is *.dat and
> *.dat.hdr. Can ENVI do this? If not, is there a third-party program
> that will do this? If none of these options are available, I will
> write a program that parses the *.dat and *.dat.hdr contents and
> returns a file that can be read by IDL. To the experts of ENVI and IDL
> out there: Do you think parsing the data will be possible? What
> problems can you forsee? I am aware that the semantics of ENVI and IDL
> are slightly different but the fact that ENVI uses the IDL platform
> leads me to believe that this can be done. Thanks in advance...
>
>
> Erik
>

Hi Erik,

here is a little program we are using for reading standard ENVI image
files (somename.img + somename.hdr). The program first analyses the
image header (somename.hdr) to create a 2d array. Then the image data is
read in the 2d array (img), which you then can use within IDL.

```
pro read_envi_image, infile, img, xs, ys, type, offset, mapinfo

;
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;
;+
; NAME:
; read_envi_file
;
; PURPOSE:
; IDL program, which reads standard ENVI image files (*.img).
;
;
; CATEGORY:
; Input_Output
;
; CALLING SEQUENCE:
```

```
; read_envi_file, infile, img, xs, ys, type,offset
;
; INPUTS:
; infile - input file name
;
; OPTIONAL INPUTS:
; None
;
; KEYWORD PARAMETERS:
; None
;
; OUTPUTS:
; img    - ENVI image file, 2D array
; xs    - number of samples
; ys    - number of lines
; type   - image data type
; offset  - headeroffset
; mapinfo - information on spatial resolution (spacing) and coordinates
; of upper left corner (ulx, uly)
;
;
; OPTIONAL OUTPUTS:
; None
;
; COMMON BLOCKS:
; none
;
; SIDE EFFECTS:
;
; RESTRICTIONS:
; None
;
; PROCEDURE:
;
; EXAMPLE:
;
; REMARKS
; None
;
; MODIFICATION HISTORY:
;  Written by: Carsten Pathe, cp@ipf.tuwien.ac.at
;   Date: 25.08.2003
;
;-

image = infile

header = strsplit(infile,'.',/extract)
```

```
header = header(n_elements(header)-2)+'.hdr'

openr, unit, header, /get_lun

header_line = ''

while not eof(unit) do begin

 readf, unit, header_line
 tmp = strsplit(header_line(0), '=', /extract)
 header_keyword = strsplit(tmp(0), ' ', /extract)

 print, header_keyword

 if header_keyword(0) eq 'samples' then xs = long(tmp(1))
 if header_keyword(0) eq 'lines'   then ys = long(tmp(1))
 if header_keyword(0) eq 'header'  then offset = long(tmp(1))
 if header_keyword(0) eq 'data'    then type = long(tmp(1))

 if header_keyword(0) eq 'map' then begin

  mapinfo_tmp=strsplit(tmp(1),'{',/extract)
  mapinfo_tmp=strsplit(mapinfo_tmp(1),',',/extract)

  mapinfo={ulx:0.,uly:0.,spacing:0.}
  mapinfo.ulx=mapinfo_tmp(3)
  mapinfo.uly=mapinfo_tmp(4)
  mapinfo.spacing=mapinfo_tmp(5)

 endif

endwhile

close,unit & free_lun, unit
print, xs, ys

if type eq  1 then img=bytarr(xs, ys)
if type eq  2 then img=intarr(xs, ys)
if type eq  4 then img=fltarr(xs, ys)
if type eq 12 then img=uintarr(xs, ys)

openr, unit,image, /get_lun
point_lun, unit, offset
readu, unit, img
close, unit & free_lun, unit

end
```