Subject: Re: envi_get_data
Posted by peter.eddy@shaw.ca on Fri, 25 Jan 2008 17:18:12 GMT
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Hi,
Typical ENVI format files are "usually" band sequential:
Array=fltarr(ns, nl, nb) as its quickest to display.
You can obtain the interleave within the ENVI_FILE_QUERY with the keyword Interleave=interleave where bsq=0, bil=1 and bip=2 - or by looking at the header. Next I would check the datatype of your input file. In your code you read in the file, query the datatype create a new float array then write the file with the datatype of your input. What if your input was byte or integer? Since you're output is float you could hardcode the data_type=4 (or 5 for double).

For example you could do the following:

```
pro cal
envi, /restore_base_save_files
envi_init, /batch_mode
envi_open_file,'F:\testinput.img',r_fid=fid
if (fid eq -1) then return
envi_file_query, fid, ns=ns, nl=nl, nb=nb, data_type=data_type,  $
    interleave=interleave, dims=dims
   ;Could have an "if" statement to check and set the interleave
map_info = envi_get_map_info(fid = fid)
;dims = [-1L, 0, ns - 1, 0, nl - 1]  **you can get the dimensions from
the query above
pos=lindgen(nb)
image=fltarr(ns, nl, nb) ; storage array for multi band processing
(loop over bands)
;image2=fltarr((nb,nl,ns) ** not required
For i=0, nb-1 Do Begin
    ;read band and convert to float
    inBand = Float(envi_get_data (fid=fid,dims=dims,pos=i)) ;read the
2d array
    image[*,*,i]=inBand* 0.8 + 100   ;do processing and store in
array
Endfor
 ENVI_WRITE_ENVI_FILE,image,data_type=4,nb=nb,nl=nl,ns=ns,map _info=
map_info, $
out_name='F:\testoutput.img'
END
```

With this method you may run into memory problems, as you are reading by entire bands and storing the whole image. When the image gets larger you will have to look into ENVI's tiling routines.

Hopefully this gets you started,

Pete