Subject: Re: what is the most convenient way to read an image generated by ENVI in IDL
Posted by Peter Scarth on Wed, 23 Oct 2002 14:42:35 GMT
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Ooops, your absolutely correct.
To read in the entire file using ENVI_GET_DATA you need to create an array of the correct size & type & read it in band by band:

```
; Make an array to hold the data
imgdata=make_array(ns,nl,nb,type=data_type,/nozero)
; Read it in band by band
for pos=0,nb-1 do imgdata[*,*,pos] = ENVI_GET_DATA(fid=fid, dims=dims,
pos=pos)
```

I'll dig out the other code anyway & send it across.
Cheers,
Peter

"Julia" <julia65201@yahoo.com> wrote in message
news:ap3tie$678$1@dipsy.missouri.edu...
> Hi, Peter,
>
> I think writing an image file is not difficult. But reading a file has
some
> problem:
> If we use ENVI function: ENVI_GET_DATA, from my experience, it can only
read
> one band out each time.
> If we use:
> imgdata = ENVI_GET_DATA(fid=fid, dims=dims, pos=indgen(nb))
> Though the image has several bands, it can only read the first band into
> imgdata.
>
> So if you have some code to read the header written in IDL, could you
please
> send to my email address:
> julia65201@yahoo.com.
>
> Thanks,
>
> Julia
>
>
> "Peter Scarth" <p.scarth@xmg.net> wrote in message
> news:ap32uuvtk1@bunyip.cc.uq.edu.au...
>> Hi Julia,

>> Assuming that you have ENVI on the system, you can use something like
the
>> following (pseudocode?) to read an ENVI image, and write the processed
>> results back to an ENVI format file. Check the ENVI help for more info
on
>> the batch functions. If you don't have ENVI you will have to write some
> code
>> to read the header. I have a kludgy solution I can send if you want.
>>
>> Peter
>> --
>> (Change xmg to gmx to reply!)
>>
>>
>> PRO envi_batch_processing_demo
>> COMPILE_OPT strictarr
>>
>> ; Restore the ENVI save files and initialise
>> ENVI, /restore_base_save_files
>> ENVI_BATCH_INIT
>>
>> ; Open, query and read the entire image into an array
>> ; Change dims and/or the pos variables to read in a subset
>> ENVI_OPEN_FILE, 'test.img', r_fid=fid
>> ENVI_FILE_QUERY, fid, ns=ns, nl=nl,nb=nb,$
>> interleave=interleave,data_type=data_type,offset=offset
>> dims = [-1, 0, ns-1, 0, nl-1]
>> imgdata = ENVI_GET_DATA(fid=fid, dims=dims, pos=indgen(nb))
>>
>> ;
>> ; Processing goes here to produce processed_data
>> ;
>>
>> ; Write the output into a file...
>> ; A simpler way might be to use the
>> ; WRITE_ENVI_FILE procedure available at
>> ; http://www.rsinc.com/services/output.cfm?tip_id=2787
>> fname = 'processed.img'
>> OPENW, unit, fname, /get_lun
>> WRITEU, unit, processed_data
>> FREE_LUN, unit
>>
>> ; Create an ENVI header for convenience
>> ; Change ns, nl, nb, data_type, interleave and offset below
>> ; if your processed_data differs from the input in type or size!
>>
>> ENVI_SETUP_HEAD, fname=fname, ns=ns, nl=nl, nb=nb, $
>> interleave=interleave, data_type=data_type,$

>>   offset=offset, /write
>>
>> ENVI_BATCH_EXIT
>> END
>>
>>
>>
>>
>> "Julia" <julia65201@yahoo.com> wrote in message
>> news:ap2fi4$3oq$1@dipsy.missouri.edu...
>>> Hi, there,
>>>
>>> After some operations in ENVI, I output the resulting image using the
>> format
>>> '.img'. It's an multispectral image.
>>> The '.hdr' head file is like this:
>>> ENVI
>>> description = {
>>>   image [Fri Oct 18 11:01:10 2002]}
>>> samples = 116
>>> lines   = 261
>>> bands   = 4
>>> header offset = 0
>>> file type = ENVI Standard
>>> data type = 4
>>> interleave = bsq
>>> sensor type = Unknown
>>> byte order = 0
>>>
>>> My question is: how can I read this file using IDL functions?
>>> Now I am doing this using the following:
>>>   imgdata = READ_BINARY('test.img', DATA_TYPE = 4, DATA_DIMS = [116,
261,
>>> 4]).
>>>
>>> But I need to specify the data type and dimensions of the image. How
can
> I
>>> read it more generally that I need to specify nothing? Is there other
>>> functions in IDL?
>>>
>>> Any suggestion will be appreciated.
>>>
>>> Regards,
>>>
>>> Julia
>>>
>>>

>>>
>>
>>
>>
>>
>
>