Subject: Re: Read _ tiff with Sub_Rect Keyword
Posted by Chris[2] on Mon, 25 Jul 2005 15:32:59 GMT
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Hi Chintan,

Well, you might try reading in complete scanlines (rows) instead of just doing tiles. For many TIFF files, the tiles are actually stored using scanlines. So for example your tilesize in the file might be 14000x1. So if you are trying to read in 500x500 chunks, it is extremely inefficient because it needs to read in 500 of the 14000x1 tiles, and then throw away most of the information. Then you go on to the next tile and it *again* reads in the same 500 14000x1 tiles.

Also, even if your TIFF tilesize isn't 14000x1, it is sometimes still more efficient to read in entire scanlines because your operating system will tend to cache contiguous blocks of the file in memory.

I think ENVI reads using scanlines.

Hope this helps.

-Chris
Research Systems, Inc.

<raval.chintan@gmail.com> wrote in message
news:1122287818.648388.298350@g14g2000cwa.googlegroups.com.. .
> Hi Ben,
>
> Thank You for your answer.
>
> Over here you are right , for reading the image file which has small
> dimension, But my image dimension is 14000x14000 or more than that, and
> i want to display this image in the size of 500X500 window. Here is my
> code, try out with the image which has dimension more than 6000 X 6000.
>
> pro read_geotiff
> file = dialog_pickfile(filter=['*.tif', '*.tif'])
> if file eq '' then return
> print,systime(0)
> res = query_tiff(file,info,geotiff=geostruct)
> samples = info.dimensions[0]
> lines = info.dimensions[1]
> xper = 25
> yper = 25
> ximg = samples/xper
> yimg = lines/yper

> print,samples,lines,ximg,yimg
> image = bytarr(3,ximg,yimg)
>
> for i = 0, yimg*(yper-1), yimg do begin
>   for j = 0, ximg*(xper-1), ximg do begin
>   a = read_tiff(file,sub_rect=[j,i,ximg,yimg])
>   sx = j/xper
>   sy = i/yper
>   image[0:2,sx:sx+ximg/xper,sy:sy+yimg/yper] = a[0:2,$
> 0:ximg-1:xper,0:yimg-1:yper]
>   endfor
> endfor
>
> print,systime(0)
> window,0,xsize=ximg,ysize=yimg
> tv, image, /order, /true
>
> end
>
> If you know the other methode apart from this then please let me know.
> Over here one solution is to make our program to read tiff file, but i
> do not want to do this. Because if ENVI is using this read_tiff
> function then there should be other method as I think (Because envi is
> taking less time to display the big tiff image).
>
> Regards
> Chintan
> Ben Tupper wrote:
>> raval.chintan@gmail.com wrote:
>>> Hi...
>>>
>>> I have a geo tiff file which containing the 14000 X 14000 Pixels
>>> (Samples and Lines), I am reading it through the read_tiff function.
>>> Over here i want to show that image on to the 500 X 500 window Means
>>> by buffer for image will contain dimension [3,500,500]. For that I am
>>> reading with the help of read_tiff function with the sub_rect keyword.
>>> Where i m reading the pixels based on the ratio of 14000/500, but it is
>>> taking to much time. While the same thing in ENVI it is taking less
>>> time to read the image and display it. So is there any other method for
>>> read that image fast. for that i have to write my own code in IDL to
>>> read the tiff file?
>>>
>>> Regards,
>>> Chintan Raval
>>>
>> Hello,
>>
>> I don't think I understand what it is that you are trying to do, but I

>> would assume that IDL and ENVI are accessing the image using the same
>> procedure. Here is an example of how to use the SUB_RECT keyword (which
>> I use all the time on much smaller images with no problem.)
>>
>> file = FILE_SEARCH(!DIR, 'image.tif')
>> whole = READ_TIFF(file[0])
>> sub = READ_TIFF(file[0], sub_rect = [200, 200, 50, 100])
>> TV, whole
>> TV, sub, 100, 0
>>
>> Is this example similar to how you are using the SUB_RECT keyword?
>>
>> Ben
>
