Subject: Can i avoid the loop,help me speed up,thanks
Posted by Rongchang Chen on Mon, 04 Aug 2008 13:29:03 GMT
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I wrote a procedure to create sinograms from projections in
tomography,the main part of procedure please see below.
For large size and number projections,it's very very slow.
Can i avoid the loop(one is OK) to speed up,or another way to create
sinograms?
Thank you very much!!

****
n_sinogra:number of sinogram
n_projection:number of projection
files_projection:a string vector contain Directory and name of
projection
files_sino:a string vector contain Directory and name of sinogram

```
for jj = 0,n_sinogram-1 do begin
   print,'now creating',jj+1,'th sinogram'
   sino = fltarr(sizepro[0],n_projection)

   for ii=0, n_projection-1 do begin
      image = float(read_image(files_projection[ii]))
      some processing of image
      sino(*,ii) = image(*,jj)
   endfor

   write_tiff,files_sino(jj),sino,/short,/float
endfor
*****************
```

Subject: Re: Can i avoid the loop,help me speed up,thanks
Posted by Jean H. on Mon, 11 Aug 2008 17:20:00 GMT
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> I use PROFILER to check and show the I/O take most of time,use Chris
> suggestion,I read all the projections(in 3D array) in advance and it
> speed up a lot,but use 3D array I can just read 100 projections,if
> more it complainï¿½ % Array has too many elements.ï¿½ ??? how to avoid
> this.

You don't have enough memory available. Use "memtest.pro" from ITTVIS to
figure out the largest array you can make. So you basically have 3
options, the last one being, obviously, the easiest:

1) buy more memory. If on windows, you can't get more than 2Gb of memory
for IDL, unless you play with the /3gb option on windows AND that you
enable IDL to get access to 3gb... I don't know if it is feasible on IDL 7.

2) switch to Linux. You will be able to a) access more memory and b)
access more contiguous memory (bigger arrays, look on ITTVIS website for
an explanation)

3) don't create one big array, but an array of pointer, each pointing to
a single entity (or image). Like that, each entity use a small amount of
memory and you will be able to store much more entities.

> Iï¿½m thinking dose IDL has some type of file that I can write one row
> each time without read the file first??
> Thank you very much.

look at openW with the /append keyword.

Jean

Subject: Re: Can i avoid the loop,help me speed up,thanks
Posted by Rongchang Chen on Tue, 12 Aug 2008 12:47:19 GMT
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On Aug 11, 7:20 pm, Jean H <jghas...@DELTHIS.ucalgary.ANDTHIS.ca>
wrote:
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>
> look at openW with the /append keyword.
>
> Jean

Now working,used pointer successful avoiding 100 projections limit.

Thank you very much for helpful discussion.

Rongchang
