Subject: Re: Memory question by a newbie
Posted by David Fanning on Fri, 02 Aug 2002 22:22:25 GMT
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Pat (patt@cnr.usu.edu) writes:

> I am a newbie to IDL and am hoping for some advice on memory issues.
> My programm reads 10 files and places the information (floating point)
> into 10 different 2D arrays. The arrays are about 5000 columns by
> 6000 rows. Each array is subject to simple mathematical manipulation
> that results in a new 2D array. So, I read 10 files and create 10 2D
> arrays. These 10 arrays are intermediate arrays that are used to
> create a final 2D array. Well, you can probably figure out that I ran
> out of memory.

Well, I'm up to 5000 x 6000 x 4 x 10 = 1.2Gbyte already,
and we haven't even done anything yet or created the
output array. :-(

> I read up on memory problems with IDL and it seems
> like this is the way life is in IDL.

Uh, right. That is 1.2 GIGA bytes! Have you tried that
with, say, Microsoft Excel? I'm not going to get JD all
over my case by saying that IDL uses memory in the most
efficient manner possible, but I think everyone would
agree, we are talking about a sizeable chunk of memory
here.

What newsgroup were you reading when you read up
on this, comp.lang.matlab?

> The way I solved the memory
> problem was to break up the files into sections and work with those
> sections, then read the file again only moving the file pointer to the
> end of previous section.

Well, this sounds like a sensible solution to me.

> I used the update parameter of the read
> function to create the final array, so each section is added to the
> final array file. I am wondering if there is a better work around?

I read an interesting book lately about the National Security
Agency. I guess they are spending quite a bit of money looking
into the possibilities of quantum computers. That might be the
Cadillac of work-arounds. :-)

> I found the IDL_MAKETEMPARRAY function but I don't understand what it
> does and am not sure if that is the answer.

I don't know what it does either, but I'm *certain* it's not the
answer. :-)

Cheers,

David

--
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Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: Memory question by a newbie
Posted by R.Bauer on Sat, 03 Aug 2002 20:57:16 GMT
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David Fanning wrote:

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> agree, we are talking about a sizeable chunk of memory

> here.
>
> What newsgroup were you reading when you read up
> on this, comp.lang.matlab?

Dear David,

what should I say to this comparison of Excel and IDL.
Which scientist likes to use Excel or StarCalc ... and IDL
together.

Because of some modelation programs we are develope
our computers have now 2 GByte RAM. This 1.2 GB looks big
but if you like to have 16GB RAM this is possible.
I don't know at the moment if IDL can use this amount of memory.
In the past there was a restriction.

>
>
>> The way I solved the memory
>> problem was to break up the files into sections and work with those
>> sections, then read the file again only moving the file pointer to the
>> end of previous section.
>
> Well, this sounds like a sensible solution to me.
For me too, and you should think about if all the data is really
needed maybe there are lots of fillingvalues defined.
If so you can shrink the arrays.

Reimar

>
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>> function to create the final array, so each section is added to the
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> answer. :-)
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> Cheers,
>
> David
>