Subject: Re: Array has too many elements?
Posted by Jamie on Mon, 22 Dec 2003 18:32:30 GMT
View Forum Message <> Reply to Message

On Fri, 19 Dec 2003, Jonathan Greenberg wrote:

> So, any suggestions for the best way of getting around these limitations (I
> mean, without having to buy a 64-bit machine) -- how about chopping the
> array up into smaller blocks and performing for-next loops -- processing
> part of the array, writing the results, and then processing the next part?
> Are there better ways than this?

Nope. Frankly, once you start working with arrays that consume 1GB of memory, you are in for a whole world of trouble. IDL is a flexible, non-compiled language which means that commands are expanded into a working stack where copies are often made. Working with big arrays also means becoming proficeint in using the NOZERO keyword, the REPLICATE_INPLACE procedure, the NO_COPY keyword, and the TEMPORARY function. You haven't really told us what exactly you are trying to do...
I hope that you don't have too many zeros in your arrays ;)

As far as I know, the array size limit in IDL on *all* platforms is still 2^31-1 (2 GB). Overcoming this is more-or-less impossible even with a 64-bit machine. In short, you need to break up large arrays and be careful with your indexing. The best case would be if you can effectively reduce the volume of the data as you loop.

Keep in mind that IDL stands for "interactive data language." While, it is a capable programming environment for visualizing data, working with arrays that consume 1-2 GB is not quite mainstream yet. In another 2 years, this probably won't be such an issue...

Jamie