Subject: large array
Posted by Wolf Schweitzer on Tue, 12 Oct 2004 14:52:58 GMT
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I need to read a file that is ca. 7 GB large (the file size is defineda
s 2048 x 2048 x 900 are the dimensions, x 2 (integers) + 512 bytes header).

The format is known (.ISQ) and I have a routine that deals with the
header information efficiently; I have some similarly formatted files of
the same scan process around 800-900 MB that I can read without problems.

Generally, I had no problems reading files up to 1.4 GB in size directly
into one variable under IDL.

The data is read into an intarr (2048,2048,900) like this:

```
imagearray = assoc (.., intarr(...), headersize)
imagearray = temporary (imagearray [0])
```

Now, the reading takes a little while but it seems to work alright. The
machine - most of the time - does not crash (12 GB RAM, 64-bit AIX
version of IDL 6.1, IBM-Workstation).

However, the visualisation of slice subscripts to this array later does
not display any interesting information; instead, the images of these
large data files look different each time and they do not reflect the
content of the data.

Question:

What do I need to know in order to set up an array for very large data?
Is there a basic difference between arrays < 2 GB and arrays > GB of
size? Are the subscript variables all multiplied before the array is
really looked at, so do all of the subscript variables need to be
Long64? Such as intarr (long64(x),long64(y),long64(z))?

Thanks,
Wolf.