Subject: System Resources ???
Posted by Jim Brown on Fri, 23 Feb 1996 08:00:00 GMT
View Forum Message <> Reply to Message

Hello all,

I have been digging through the IDL Manual to find some information on Memory Allocation, but I am having trouble finding the answer to my question:

I am a bit concerned with how IDL handles the allocation of system resources. Things evidently are not being freed up properly (or I do not know how to free up memory properly).

For example, when I run the following command:

```
IDL> arr = dblarr(144,73,12,20)
```

the memory appears to be allocated as expected:

Results from 'top' command:

```
  PID USERNAME PRI NICE  SIZE   RES STATE   TIME   WCPU    CPU COMMAND
25955 jtb       34    0   27M   22M sleep   0:04  4.04%  0.00% idl
```

Results from 'help, /memory':

```
IDL> help, /memory
heap memory in use:   20303069, calls to MALLOC:     162, FREE:        45
```

Now if I try to free up this space:

```
IDL> delvar, arr
```

'top' still reports SIZE=27M and RES=22M.

Another problem, is this 'delvar' command only works from the top-level routine. If I need to do some array processing, especially in some lower-level subroutines, is there some slick way to free up the system resources that IDL appears to be holding onto that is no longer needed? The only way I see that space is freed up is by running:

```
IDL> exit
```

Not quite what I want to do in the middle of a program!

I am getting pretty frustrated in that the whole scheme of memory allocation

in IDL appears to be quite inefficient. If anybody has any tips on how to work with large arrays and then freeing up their space when finished, I would appreciate the help. I have looked into the use of the 'temporary' call, but I think that just keeps extra memory from being allocated. I am not sure that addresses the issue of freeing up space that is no longer needed.

Thanks,

Jim

==========
James T. Brown
CIRES - Cooperative Institute for Research in Environmental Sciences
University of Colorado

email: jtb@cdc.noaa.gov