Subject: Re: IDL Memory Management
Posted by Craig Markwardt on Fri, 07 Jan 2000 08:00:00 GMT
View Forum Message <> Reply to Message

davidf@dfanning.com (David Fanning) writes:

> Craig Markwardt (craigmnet@cow.physics.wisc.edu) writes:
>
>> Windows used to have a non-linear addressing model when physical
>> system memory was scarce. Memory was allocated in chunks which could
>> be moved around by the Windows as needed, thus alleviating the above
>> fragmentation problem. I think however that more recent versions of
>> Windows have accepted the linear "Unix" model of memory architecture
>> that I have described.
>
> As I understand it, the compiler used for the Windows versions
> of IDL *can* return process memory back to the OS. But it is
> the only one to do so. It is not a feature, apparently, of
> UNIX, Mac, and VMS compilers, which rely on Malloc and Free
> for dynamic memory allocation.

I suppose I am picking nits now. The fragmentation problem actually has nothing to do with the Unix compilers, malloc or free. The problem is that Unix-style processes have memory that is one dimensional without holes. [To get technical, blame it on the internal brk() function.]

Windows NT also has a single linear memory space for processes, but it may possibly have more features to deal with fragmentation efficiently.

Nit-ingly yours,
Craig

--
Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response