Subject: Re: Calling IDL from Fortran called by IDL Posted by Mark Rivers on Tue, 27 Nov 2001 16:01:10 GMT

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- > Hi,
- >
- > I have an IDL GUI which sits on top of a calculation engine which
- > is written in Fortran 90. Currently IDL accesses the calculation engine
- > by calling C wrapper functions via CALL_EXTERNAL. These C wrappers then
- > call Fortran routines. The system runs both on Solaris and Windows
- > platforms. I am currently using IDL 5.4, but will upgrade to IDL 5.5
- > soon.

>

- > Some of the calculations in the Fortran take a long time, so what I
- > would like to do is have IDL create a progress bar which can be updated
- > from the Fortran. Having waded through the IDL External Development
- > Guide, I have a few questions.

I have done something like this in the past. Here is the general method.

- IDL calls your external C wrapper routines
- The external C routines launch a new thread and pass this thread the address of an IDL variable into which some progress information can be written.
- The external C routine returns to IDL immediately, leaving the new thread running to do the time-intensive work. The new thread writes progress information to the IDL variable, which the IDL code is peridically checking and using to update a progress meter, display new results or whatever.

The last time I did this was on VMS (!) for a real-time scanning x-ray microscope display. The "real-time" thread was interupt driven FORTRAN code that communicated with IDL via the addresses of IDL variables that were passed to it when a new scan was begun.

The same general ideas should still work. You don't need IDL to be multi-threaded, you just need to be able to launch a new thread in your external code.

Mark Rivers