
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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Kevin A. Park <kpark@prism-cs.com> wrote in message
news:3c02c150\$0\$35565\$272ea4a1@news.execpc.com...

> 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 periodically 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 interrupt 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
