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Subject: Re: Calling IDL from Fortran called by IDL  
Posted by [Stein Vidar Hagfors H\[1\]](#) on Fri, 30 Nov 2001 21:12:15 GMT  
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Craig Markwardt <craigmnet@cow.physics.wisc.edu> writes:

> "Kevin A. Park" <kpark@prism-cs.com> writes:  
>> 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.  
>  
> Kevin! Good to see you alive and kicking. [ In case you don't  
> remember me I was Ben's roommate. ]  
>  
> You've gotten some good suggestions from other replies to your  
> request, and they are worth considering.  
>  
> Personally I would say that you may be asking too much, to make an  
> IDL-to-FORTRAN-to-IDL call chain. It must be possible, because  
> several routines do allow such an operation. Consider  
> CONSTRAINED\_MIN.  
>  
> You are probably looking into using the internal C functions  
> IDL\_Execute() or IDL\_ExecuteStr(), which may be exactly what you are  
> looking for. What you would do is call these functions from within  
> your FORTRAN subroutine, with the name of an IDL procedure that would  
> update the GUI. While these functions are documented under the  
> "Callable IDL" section, I do not see why these couldn't be used in  
> your case.

I seem to remember that this *is* possible, but one problem is in passing parameters in a clean way.. If you create variables inside the C/Fortran routines, you've got either \$MAIN\$ scope or the scope of the IDL routine calling the DLM (or using CALL\_EXTERNAL).. Have to be careful not to overwrite existing variable names when you're about to construct a call string like "update\_progress,n\_percent"... As far as I remember, anyway..

If you're doing your own "dirty work", however, you'll have the knowledge you need to avoid those problems.

I think also that someone (from RSI?) said one couldn't expect this to be functional, because the IDL\_Execute() and IDL\_ExecuteStr() functions are meant to be used \*only\* in callable idl scenarios, not by DLMS/call\_external code..

But I do wish they'd release the documentation to do it cleanly, like CONSTRAINED\_MIN..

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