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Subject: Re: Linking IDL with FORTRAN routines under UNIX

Posted by [thompson](#) on Tue, 24 Sep 1991 19:32:38 GMT

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In article <1991Sep19.222159.22206@riacs.edu>, lord@pioneer.arc.nasa.gov  
(Steven D. Lord SSA) writes...

> Has anyone out there successfully called user-written FORTRAN routines from  
> an IDL routine? Under UNIX? I would greatly appreciate an example (including  
> the explicit compile and load commands and the IDL call).

I use IDL on a Sun workstation, and have been successful with calling FORTRAN  
routines from IDL using CALL\_EXTERNAL. I include an example below that  
actually works on my system.

It is true that one needs to write an interface routine between the FORTRAN  
routine and the IDL routine, and this is most easily written in C. However,  
this routine is so simple that it really comes down to a "fill-in-the-blanks"  
kind of problem. Actually, I'm not all the comfortable in C myself.

I will post the following files on this newsgroup:

Makefile UNIX makefile  
INTERPOL.F FORTRAN program  
INTERPOL\_C.C C interface routine  
INTERPOL.PRO IDL procedure

The IDL procedure refers to an environment variable called SERTS\_EXTERNAL.  
This is just a device I use to allow me to copy the files between the Sun  
workstation and VAX/VMS without having to make any changes in the routines.

I can also compile and link this routine in VMS. I use the following command:

```
$ FORTRAN INTERPOL  
$ LINK/SHARE=EXTERNAL.EXE INTERPOL,EXTERNAL.OPT/OPT
```

where EXTERNAL.OPT contains the following.

```
universal = INTERPOL
```

Bill Thompson

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