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Subject: Re: IDL-Fortran String/Char Passing  
Posted by [Bill Davis](#) on Wed, 16 Jun 1993 16:41:14 GMT  
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In article <wicker-150693135755@wicker.tamu.edu> Dr. Louis J. Wicker, wicker@ariel.tamu.edu writes:

> Hi there. We are doing some idl development which is using some fortran  
> routines. Does anyone out there know how to pass character data from idl  
> to fortran and vice versa? I know how to do integer and real data, no  
> problem. Examples of working code would be VERY welcome.

I do it under VMS. Read all about CALL\_EXTERNAL in the User's Guide and Reference Manual. Passing characters into a FORTRAN routine is no problem. I must say that it was not trivial to implement returning strings even after reading the manual. I feel something like the following example should be included in the documentation:

VMS FORTRAN routine to return a string variable via IDL CALL\_EXTERNAL:

```
      INTEGER* 4 FUNCTION retstring      ! address pointer is
returned

      CHARACTER*16 local_string
      CHARACTER*1 null
      DATA null /'00'X/

      local_string = 'new stuff'//null      ! Concatenate null
terminator
      retstring = %LOC(local_string)      ! Return address of string

      RETURN
      END
```

This routine is put into a VMS shared image which is pointed to by the logical name MY\_IMAGE (also non-trivial if you have never done it). Then in IDL:

```
strvar=CALL_EXTERNAL(/S_VALUE,'MY_IMAGE','RETSTRING')
```

This is painfull if you have more than 1 string variable (I believe you will need one routine per string variable). You may wish to see if using LINKIMAGE would be easier.

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