Subject: Re: Fortran

Posted by L. Paul Mix on Mon, 12 Apr 1999 07:00:00 GMT

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Robert S. Mallozzi wrote:

```
> In article <ojXO2.50044$qt5.6315@news.rdc2.occa.home.com>,
      "H T Onishi" <htonishi@home.com> writes:
>
> <deleted>i
>
> Several years ago, I wasted countless hours trying
> to get FORTRAN and IDL to work together via CALL EXTERNAL.
> The problem, I eventually found out, that you
> can (safely) do NO I/O in the FORTRAN code. FORTRAN
> I/O through CALL_EXT will seem to work Ok on some
> platforms, but will break IDL on others.
> This warning is now added to the IDL
> documentation - do not ignore it! If your FORTRAN has
> I/O scattered throughout, you will have a
> rough time.
>
> If your GUI does not have to be extremely complex,
> you can write it directly in FORTRAN. Check out
>
  http://www.cs.ubishops.ca/ljensen/fortran/dislin/dislin.html
>
>
 Regards,
 -bob mallozzi
>
 Robert S. Mallozzi
                                       256-544-0887
                               Mail Code ES 84
> Work: http://www.batse.msfc.nasa.gov/ Marshall Space Flight Center
> Play: http://cspar.uah.edu/~mallozzir/ Huntsville, AL 35812
```

I have been using an IDL / Fortran interface for over 10 years and had no problem with file I/O.

I agree that using terminal I/O is to be avoided. If you have a big Fortran library for file I/O, use it with no problems. For terminal input, I have no suggestions other than returning to IDL. For terminal output the IDL routine IDL_Message can be easily linked to your Fortran. A sample program which has been used with Sun, HP, SGI, DEC, MAC and WIN is below.

Paul Mix, Ipmix@sandia.gov

```
*deck idl write
   subroutine idl_write(INPUT, FLAG)
cDEC$ ALIAS IDL_Message, '_IDL_Message'
cDEC$ ATTRIBUTES C :: IDL_Message
С
   This routine writes a string to an IDL display
С
С
   If flag is zero, no leading characters will be printed.
С
    If flag is not zero, then the value of the IDL system variable
С
      !MSG PREFIX will be printed. (Default value = '% ')
С
С
   CHARACTER *(*) INPUT
   CHARACTER *1 CHAR
   INTEGER FLAG
   INTEGER I, LEN, DONE
   INTEGER MAXLEN
   PARAMETER (MAXLEN=512)
   CHARACTER*(MAXLEN) TEMP
C Some Fortran compilers require external definitions for IDL routines
   EXTERNAL IDL Message !$pragma C(IDL Message)
   check the length and set the last character to a char(0)
C
   I = LEN(INPUT)
   DONE = 0
   DO WHILE (I.GT. 0.AND. DONE .EQ. 0)
    IF (ICHAR(INPUT(I:I)) .GE. 33 .AND.
  & ICHAR(INPUT(I:I)) .LE. 126) THEN
     DONE = 1
    ELSE
     I = I - 1
    ENDIF
   ENDDO
   IF (I .GT. 0) THEN
    IF (I.GE. MAXLEN) I = MAXLEN-1
    TEMP = INPUT(1:I)//CHAR(0)
   ELSE
    TEMP = ' '//CHAR(0)
   ENDIF
   IF (FLAG .EQ. 0) THEN
    CALL IDL_Message(%VAL(-1), %VAL(262144), %REF(TEMP))
    CALL IDL_Message(%VAL(-1), %VAL(0), %REF(TEMP))
   ENDIF
```

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