Subject: Read & write data files b/w IDL & Fortran 90
Posted by bridgemat on Thu, 08 Apr 2004 20:33:38 GMT
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As someone who knows just the basics of IDL and the basics plus a bit more of Fortran 90, I'm sure this is just some rookie mistake, so hopefully someone out there can help me out.

I'm trying to write an idl array to a file, read the file in Fortran 90, manipulate the Fortran array, and then write that new array to a file that I then read into IDL. Here's how I write the original array to a file:

```
test=indgen(3,4,5)
openw,lun,'testidl.dat',/get_lun
writeu,lun,test
free_lun,lun
```

Then I try to run this Fortran 90 program:

```
PROGRAM testidl
  INTEGER::in=3,out=6
  INTEGER,DIMENSION(3,4,5)::arr_in,arr_out

  OPEN(UNIT=in,FORM="UNFORMATTED",FILE="testidl.dat")
  OPEN(UNIT=out,FORM="UNFORMATTED",FILE="testf90.dat",STATUS= "REPLACE")

  READ (UNIT=in) arr_in

  arr_out=arr_in*2

  WRITE (UNIT=out) arr_out
END PROGRAM
```

It compiles (pgf90), but I get this error when I run it:
PGFIO-F-217/unformatted read/unit=3/attempt to read past end of file.

This is my first time dealing w/ unformatted files. Needless to say, I don't even get to try out the last part of my scenario - reading the file w/ the new array into IDL.

Another issue: array dimensions! My IDL book tells me that both IDL and Fortran arrays are column-major. Although I've been using Fortran longer than IDL, I haven't done much w/ multi-dimensional arrays, so I looked in my Fortran book, and it says that Fortran is row-major! Ack!!! So does that mean my Fortran array should be declared as DIMENSION(5,4,3) in this case? I tried that, too, but got the same error...

Sorry to be so long-winded!
-Bridget