Subject: Re: how can i call a compiled fortran code from IDL?
Posted by thompson on Thu, 06 Feb 2003 14:27:45 GMT
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"mads" <madhu@erc.msstate.edu> writes:

> Hi,
> I have a compiled FORTRAN code and I need to call it from a procedure in
> IDL. The FORTRAN code does not require any i/p. It reads everything from a
> data file and creates a data file as o/p.
> Madhu

It's been a long, long time since I last did this, and there are probably more modern ways to do it, but I was able in the past to use LINKIMAGE to link Fortran procedures into IDL. The secret was to put a C wrapper around the Fortran. For example, here is a C wrapper for some software that I'm still using, where the IDL input and output arguments are converted via C into the kind of things that Fortran can understand. (For some strange reason, when the Fortran routine is called from C, it ends up with an extra "_" appended to its name.) Probably something similar can be done with a DLM.

You can see all the C and Fortran code, plus make files for some different platforms, at

ftp://sohoftp.nascom.nasa.gov/solarsoft/gen/idl_external/

Bill Thompson

```
#include <stdio.h>

void f_median_c(argc, argv)
    int argc;   /* The number of arguments */
    void *argv[];  /* The arguments */
{
  float *in, *out, *missing, *workspace;
  long *ndim1, *ndim2, *n_width1, *n_width2;

  /*  Convert the IDL input parameters into FORTRAN parameters.  */

  in = (float *) argv[0];
  out = (float *) argv[1];
  ndim1 = (long *) argv[2];
  ndim2 = (long *) argv[3];
  n_width1 = (long *) argv[4];
  n_width2 = (long *) argv[5];
  missing = (float *) argv[6];
  workspace = (float *) argv[7];
```

```
  /*  Call the FORTRAN routine F_MEDIAN.  */

   f_median_(in,out,ndim1,ndim2,n_width1,n_width2,missing,works pace);
  return;
}
```
