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Subject: Re: IDL -> FORTRAN translator?  
Posted by [sjt](#) on Thu, 24 Aug 1995 07:00:00 GMT  
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David Matthews (dlmatt@bu.edu) wrote:

: We are writing a lot of IDL code to analyze large data sets. A colleague at  
: another institution doesn't want to use IDL, wants us to provide Fortran  
: source to do the same jobs. Has anyone written a program to run on unix or VMS  
: that will translate IDL source (\*.pro) into Fortran? I recognize that the IDL  
: approach is sufficiently different from Fortran that it might be very hard to  
: do a complete job automatically, but Fortran equivalents to IDL are sometimes  
: given in the IDL manuals.

: Something analogous to f2c.

: Email or post, will post summary if anything useful appears.

: Dr. David Matthews, Center for Space Physics, Boston U.

Whether it can be done at all (even by hand) depends on several factors,  
but essentially if your IDL code contains either of:

1) Arrays whose size is not known until some inputs have been given or  
calculations made

2) variables used as more than one type

then there is little chance of being able to generate a fortran code to  
do the same thing without MAJOR restructuring -- unless F90 has things to  
do this.

Programs which violate (1) but not (2) could probably be re-cast into C  
code relatively automatically -- although if it's efficient IDL it would  
need a program of compiler standard to avoid turning array operations  
into lots of little loops where one big one would be cleared and faster.

The other big stumbling block would be graphics, although if you had a  
suitable library you could probably make an IDL plot commands emulator  
library.

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