Subject: Re: problem converting FORTRAN to IDL
Posted by thompson on Mon, 17 Apr 1995 07:00:00 GMT
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rivers@cars3.uchicago.edu (Mark Rivers) writes:

> In article <3mlnpd$qnd@reznor.larc.nasa.gov>, zawodny@arbd0.larc.nasa.gov (Joseph M Zawodny) writes:
>> In article <D6zHn2.LyF@ireq.hydro.qc.ca> brooker@toka.ireq-ccfm.hydro.qc.ca writes:
>>> This is an observation I have just made about IDL.
>>>
>>> When you compile a FORTRAN program, you can specify G_floating
>>> implementations of REAL*8. This extends the range of numbers to +-0.56D308.
>>> (For default D_floating, the maximum number allowed is 0.29D38.)
>>>
>>> On the other hand, IDL has no option for the larger G_floating numbers. This
>>> makes for problems when you convert a "G_floating REAL*8 " FORTRAN program to
>>> IDL.
>>>
>>> Peter Brooker
>>
>> Gee, maybe I do not understand your problem, but I did this quick test.
>>
>> IDL> a=.5d308
>> IDL> print,a
>>   5.0000000e+307
>>
>> Therefor you should be able to use the IDL DOUBLE to implement FORTRAN
>> G_floating calculations.

> I belive the original post was probably referring to a DEC Alpha machine. On
> the Alpha one can compile double precision code to be D_FLOAT, G_FLOAT or
> IEEE_FLOAT. The default for the DEC C compiler is G_FLOAT. IDL is clearly
> compiled with D_FLOAT, presumably so that the Alpha version is compatible with
> old VAX binary files, where D_FLOAT is the default. It would be possible and
> perhaps nice if RSI would provide 3 different versions (D_FLOAT, G_FLOAT and
> IEEE_FLOAT) of IDL for the Alpha platform. If you use CALL_EXTERNAL on the
> Alpha you need to make sure any routines you call are compiled with the same
> floating point format used for IDL.

Actually, the only thing that can be said for certain is that the original post referred to a machine running VMS. You can't tell whether that's VMS on the VAX or on the Alpha/AXP platform.

When running IDL under OSF/1, DEC's implementation of Unix for the Alpha, the floating point format used is IEEE.

Bill Thompson