
Subject: Re: External c calls broken in IDL 5.5

Posted by [Stein Vidar Hagfors H\[1\]](#) on Wed, 04 Sep 2002 19:05:45 GMT

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Bob <b_o_b_1962@nospam.yahoo.com> writes:

> Nigel Wade wrote:

>

>> The interface you have specified is for a DLM/LINKIMAGE function, but you
>> have tried to call it with call_external (which has a completely different
>> execution method).

>>

>> Try instead:

>>

>> IDL> linkimage,'test','./test.so',0,'test'

>> IDL> test,n,x

>

> OK, thanks. I didn't realize that they were different. But this doesn't
> change the fact that my old DLM's no longer work in IDL 5.5. Am I the only
> one with this problem.

Yo! Someone who's seen the light and is using DLMFORM, cool!

Now, to deal with the DLM/LINKIMAGE versus CALL_EXTERNAL first, Nigel is quite correct; however, if you make sure to set IDL_DLM_PATH to include the directory where your test.so file (and the "test.dlm" file produced by dlmform) is residing (before starting IDL) you should not have to use the linkimage procedure at all. Simply drop that line, and say:

IDL> test,n,x

That's it. The information provided in the linkimage statement is provided in the .dlm file, which IDL scans upon startup (as long as it has the IDL_DLM_PATH set to find it!), and in the IDL_Load() procedure in the C file, which is executed on loading the module. Try help,/dlm for a list of all the DLM's that it has found (a lot of IDL's packages, like mpeg/hdf/etc, are implemented this way nowadays). Note that the name of the procedure "advertised" in the .dlm file and provided in the IDL_Load() registration routine is based on the fortran function name plus prefix "F77_". If you edit the name of the function advertised in the C file (e.g. taking away the "F77_" prefix), you should also do so in the DLM file for the automated loading to work (i.e. without the linkimage statement).

Now, for the crashing, I bet your fortran routine uses complex numbers?? (Okay, I don't bet a lot, but this is my only "known" suspect). Guess what - IDL changed the spec of the IDL_CvtComplex

call in IDL 5.4 and told no-one about it (in the edg.pdf at least, at the time). So, I suspect this is your problem (I haven't tested dlmform on 5.5, since I don't run that here.. be my guest).

Now, I did make a workaround involving a C preprocessor #if statement some time ago, I just hadn't uploaded it to the web page in Oslo. Beware that I also made some changes between the first "publication" and the current version to adjust to perl v 5. The #!/usr/local/bin/perl line at the beginning may have changed from the version you have also.

Pick up the new version now from <http://www.astro.uio.no/~steinhh/idl/dlmform.html> and tell me if it fixes your problem (no support promised if it doesn't, though!).

> And last, is there a newer version of dlmform. I really like this
> routine but it is using some obsolete functions.

Thanks. They weren't obsolete in 1999 ;-) That's when this project gave me a "tennis elbow" that hasn't left me since (it should be called a "perl elbow", from typing all those dollar signs using the pinkie and the index finger on the same hand!).

I know that there are a few anachronisms that should be updated in the code for dlmform... Supporting the new types like 64 bit types is one, but unless I see or hear of a need for it (I'm assuming this is mostly used for legacy code in fortran, and it wouldn't have those as inputs, would it?). Here's a deal: If you send me a list of the obsolete functions that you'd like to see replaced (with the replacements and, preferably, the IDL version in which the change was made!!), I'll see what I can do!

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