
Subject: R: AAARGH!!! IDL5.2 crashes with CALL_EXTERNAL

Posted by [StefanoM](#) on Fri, 27 Apr 2001 06:45:39 GMT

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My PC is running WIN98 II (second edition) and the C and Fortran compiler are that of Microsoft Develop Studio 4.0.

The problem seems to be not related to the compilers, since (as I wrote) I get problems even calling a routine in a system library, in fact I follow the example suggested by Ronn Kling to explain the DLM utility "idl_tools.dlm":

```
print, EXTPROC_DEFINE("mysin","msvcrt.dll","sin","d(d)",/cdecl)
```

that should assign the function "sin" of the library "msvcrt.dll" to the IDL function "mysin", the function should take a single argument as double and return a double ... "d(d)". When I type the above command IDL seems to accept the definition of the new function "mysin", but then when I try to use "mysin" IDL crashes (idlde causes errors in IDL32.DLL and MFC42.DLL). The same result is obtained compiling the SUM_ARRAY examples in the IDL distribution ...

There are a lot of useful Fortran libraries in the web, it is really sad that I cannot use them with IDL !!!

have a nice day

Stefano

Mark Rivers <rivers@cars.uchicago.edu> wrote in message
kU5G6.354\$E4.22251@uchinews...

>

> StefanoM wrote in message <9c9hqv\$hbe\$1@canarie.caspar.it>...

>> AAARGH!!! IDL 5.2 crashes every time I try to call a DLL subroutine with

>> CALL_EXTERNAL.

....

....

....

> Tell us a little more. What platform are you running on, what compiler,
> etc.?

>

> I certainly have used IDL 5.2 with CALL_EXTERNAL with no problems.

>

> Mark

Subject: Re: R: AAARGH!!! IDL5.2 crashes with CALL_EXTERNAL

Posted by [Randall Frank](#) on Sat, 28 Apr 2001 05:12:06 GMT

Stefano,

I think you missed my point. EXTPROC_DEFINE will not work with IDL 5.2. You must be running IDL 5.3 or higher for it to work. If you are using the idl_tools.dll from Ronn's web site, it was compiled for the IDL 5.3 entry points and will crash IDL if used with 5.2. If you recompile the DLL yourself for IDL 5.2, you will find that EXTPROC_DEFINE will return (-1) for your example.

From the comment in the source code for idl_defproc.c:

```
/* at present only under Windows and IDL 5.3 and higher */
#if defined(WIN32) && ((IDL_VERSION_MAJOR > 5) || ((IDL_VERSION_MAJOR == 5) && (IDL_VERSION_MINOR >= 3)))
```

If compiled under IDL 5.2, the functions are defined as:

```
IDL_VPTR IDL_CDECL extproc_define(int argc, IDL_VPTR argv[], char *argk)
{
    return(IDL_GettmpLong(-1));
}
```

```
IDL_VPTR IDL_CDECL extproc_query(int argc, IDL_VPTR argv[], char *argk)
{
    return(IDL_GettmpLong(-1));
}
```

So a properly compiled idl_tools.dll will always return (-1) under IDL 5.2.

Now, I am running Win98 myself and IDL 5.3.1 and I run:

IDL Version 5.3.1 (Win32 x86). (c) 2000, Research Systems, Inc.

```
IDL> print, EXTPROC_DEFINE("mysin","msvcrt.dll","sin","d(d)",/cdecl)
% Loaded DLM: IDL_TOOLS.
      0
IDL> print,mysin(0)
0.00000000
IDL> print,mysin(!PI*0.5)
1.00000000
```

This approach works very nicely for FORTRAN DLLs (lots of interesting libraries out there, e.g. FFTW) and things like VTK for example.

I cannot comment on your problems with CALL_EXTERNAL as I have insufficient information, but the crash you are getting w/idl_tools.dlm

is due to the fact that you are mixing DLLs compiled for different versions of IDL (which cannot be done reliably). Your `idl_tools.dll` was compiled for IDL 5.3 and running it under IDL 5.2 is expected to cause a crash. If you want to use `EXTPROC_DEFINE`, you will need to upgrade to at least IDL 5.3.1. If you are using IDL 5.4, you will need to recompile the DLM yourself (all the sources/project files are there).

Hope it helps.

StefanoM wrote:

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>>
>> Mark

--
rjf.
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