
Subject: CLAPACK and IDL

Posted by johnpeterkelly@gmail.com on Fri, 31 Mar 2006 21:08:14 GMT

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I'm writing a program in C which is called from IDL using the `call_external` routine. I'd like to run a CLAPACK routine from the C program to find some eigenvalues and eigenvectors, however, everytime I try to call and CLAPACK functions I get a segmentation fault. I know that I can use the built in IDL functions for this, but I'd really rather not pass my data back to IDL at this point, since I have more processing to do in C.

I've written some standalone testing programs that use the same CLAPACK functions and they run just fine. When I use the exact same code through the `call_external` function, I get a seg fault.

Any thoughts?

--John

Subject: Re: CLAPACK and IDL

Posted by johnpeterkelly@gmail.com on Mon, 03 Apr 2006 14:43:45 GMT

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Figured it out:

I had compiled the CLAPACK routines without the `-m32` option, meaning the *.a libraries were 64 bit. I have been using the `-m32` with all my IDL `make_dll` calls to maintain compatibility with some older machines we have. So, when I tried to compile the IDL-called C routines (32 bit), they were trying to link to the incompatible CLAPACK libraries (64 bit). They would compile but have a runtime error. I figured this out by using `/show_all_output` in `make_dll`, which show several error messages that I wasn't seeing:

```
/usr/bin/ld: warning: i386:x86-64 architecture of input file
`lapack_LINUX.a(zheev.o)' is incompatible with i386 output
```

```
.
.
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```

Hopefully this will help anyone else who runs into this problem.

--John
