Subject: Re: Using FFTW with IDL??
Posted by jnettle1 on Tue, 09 Dec 2003 16:32:42 GMT

Just out of curiosity, why would you use this kind of dll over IDL's fft function?

Cheers,
Jeff

"Brian" <brian.huether@NOdlrSPAM.de> wrote in message
news:<c9adde4a2a413838f2ae58b9b2a76664@news.teranews.com>...
> Hi,
>
> I am fairly new to IDL, and when it comes to calling external code, I am
> pretty clueless. I downloaded the windows binary from www.fftw.org. But now
> what? As I understand, the first thing one must do is create a "plan" that
> fftw uses to optimize its speed on a given platform. So does the fftw3.dll
> provide all this functionality? What is the calling convention like? Is
> someone willing to post a short tutorial that details the process (i.e. a
> tutorial that goes through the steps of creating the "plan", executing the
> fft, reusing the plan)?
>
> thanks,
>
> brian

Subject: Re: Using FFTW with IDL??
Posted by Richard French on Wed, 10 Dec 2003 00:06:59 GMT

On 12/9/03 11:32 AM, in article
330af58b.0312090832.64a41e2c@posting.google.com, "Jeff" <jnettle1@utk.edu>
wrote:

> Just out of curiosity, why would you use this kind of dll over IDL's fft
> function?
>
> Cheers,
> Jeff
>
1) You can do REAL FFTs rather then complex ones, cutting the size of the
arrays in half, which can be significant for very large arrays that press
the limits of available RAM;
2) For large arrays, the FFTs are about three times faster, using FFTW, in
the applications I use.

I've succeeded in getting FFTW2.3.1 working on Solaris and COMPAQ Tru64, using a DLM to make the routine callable from IDL. What I have NOT succeeded in doing is getting FFTW3.0 working with a DLM under MAC OS X. I can't successfully compile the DLM. I get error messages:

ld: warning multiple definitions of symbol _XauDisposeAuth
/usr/X11R6/lib/libX11.6.dylib(AuDispose.o) definition of _XauDisposeAuth
/usr/X11R6/lib/libXp.6.dylib(AuDispose.o) definition of _XauDisposeAuth
ld: warning multiple definitions of symbol _XauReadAuth
/usr/X11R6/lib/libX11.6.dylib(AuRead.o) definition of _XauReadAuth
/usr/X11R6/lib/libXp.6.dylib(AuRead.o) definition of _XauReadAuth
ld: /usr/local/lib/libfftw3.a(q1_3.o) has external relocation entries in
non-writable section (__TEXT,__text) for symbols:
restFP
saveFP
make[1]: *** [rfftwnd.so] Error 1
make: *** [all] Error 2

I have not been able to figure out how to load what is libidl.so in Solaris but which appears to be a host of other shared object libraries under Mac OS X.

Dick French