
Subject: fftw and IDL

Posted by [leda82](#) on Sun, 28 Dec 2008 17:41:54 GMT

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Hi everybody!

IDL's fft() is very slow to me. I tried to use fftw (<http://www.fftw.org/>). I've read next (http://www.mpia-hd.mpg.de/~hippler/tip3_fftw_idl_6.html): "Download the fftw package (fftw-3.1.2.tar.gz) from www.fftw.org and configure it with ./configure the following way (this is taken from instructions written by Henry Chapman, and found in the comp.lang.idl-pwave newsgroup):

- ```

```
- 1) Create a shared, multi threaded, single precision library  
./configure --enable-shared --enable-threads --enable-float  
make  
make install
  - 2) Create a shared, single precision library  
./configure --enable-shared --enable-float  
make  
make install
  - 3) Create a shared, multi-threaded, double precision library  
./configure --enable-shared --enable-threads  
make  
make install
  - 4) Create a static, double precision library  
./configure  
make  
make install
  - 5) Build the system wide wisdom file (this took about 3 hours on my machine)  
fftw-wisdom -v -c -o wisdom  
cp -p wisdom /etc/fftw
  - 6) Get fftw.c, Makefile\_fftw, and fftw.dlm and build fftw.so with:  
make -f Makefile\_fftw
  - 7) Copy fftw.so and fftw.dlm to the IDL !DLM\_PATH, ie:  
cp -p fftw.so fftw.dlm /usr/local/rsi/idl/bin/bin.linux.x86\_64
  - 8) Before testing fftw with IDL make sure that the fftw libraries are in the libraries search path, ie:  
setenv LD\_LIBRARY\_PATH /usr/local/lib "

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But when i run `make -f Makefile_fftw` i get:

```
cc -I/usr/local/itt/idl70/external/include -I/usr/local/include -
c -fPIC fftw.c -o fftw.o
fftw.c: In function 'fftwf_init':
fftw.c:187: warning: assignment makes pointer from integer without a
cast
fftw.c: In function 'fftwf_finish':
fftw.c:211: warning: assignment makes pointer from integer without a
cast
fftw.c: In function 'fftw_transform':
fftw.c:235: warning: assignment makes pointer from integer without a
cast
fftw.c: In function 'fftwf_transform':
fftw.c:248: error: 'fftwf_complex' undeclared (first use in this
function)
fftw.c:248: error: (Each undeclared identifier is reported only once
fftw.c:248: error: for each function it appears in.)
fftw.c:248: error: 'src' undeclared (first use in this function)
fftw.c:248: error: 'Fsrc' undeclared (first use in this function)
fftw.c:249: error: 'fftwf_plan' undeclared (first use in this
function)
fftw.c:249: error: expected ';' before 'plan'
fftw.c:255: error: expected expression before ')' token
fftw.c:256: error: expected expression before ')' token
fftw.c:260: error: 'plan' undeclared (first use in this function)
fftw.c: In function 'fftwrf_transform':
fftw.c:275: error: 'fftwf_complex' undeclared (first use in this
function)
fftw.c:275: error: 'Fsrc' undeclared (first use in this function)
fftw.c:276: error: 'fftwf_plan' undeclared (first use in this
function)
fftw.c:276: error: expected ';' before 'plan'
fftw.c:283: error: expected expression before ')' token
fftw.c:287: error: 'plan' undeclared (first use in this function)
fftw.c: In function 'fftwr_transform':
fftw.c:315: warning: assignment makes pointer from integer without a
cast
fftw.c: In function 'FFTW':
fftw.c:359: error: 'FFTW_PATIENT' undeclared (first use in this
function)
fftw.c:360: error: 'FFTW_EXHAUSTIVE' undeclared (first use in this
function)
```

What is the problem? I use Debian 2.6.18-1-686 and IDL 7.0.  
Maybe there exist more easy way to speed up fft or to use fftw?

Thank you!

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Subject: Re: fftw and IDL

Posted by [Craig Markwardt](#) on Wed, 31 Dec 2008 22:38:35 GMT

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On Dec 28, 12:41 pm, led...@gmail.com wrote:

> Hi everybody!

>

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...

>

> What is the problem? I use Debian 2.6.18-1-686 and IDL 7.0.

> Maybe there exist more easy way to speed up fft or to use fftw?

> Thank you!

I think your first problem is that you are asking an FFTW question on an IDL newsgroup. There might be a few people here that have used FFTW, but probably not many.

CM

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Subject: Re: fftw and IDL

Posted by [Jeremy Bailin](#) on Thu, 01 Jan 2009 15:10:26 GMT

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On Dec 31 2008, 5:38 pm, Craig Markwardt <cbmarkwa...@gmail.com> wrote:

> On Dec 28, 12:41 pm, led...@gmail.com wrote:

>

>> Hi everybody!

>

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> ...

>

>> What is the problem? I use Debian 2.6.18-1-686 and IDL 7.0.

>> Maybe there exist more easy way to speed up fft or to use fftw?

>> Thank you!

>

> I think your first problem is that you are asking an FFTW question on

> an IDL newsgroup. There might be a few people here that have used

> FFTW, but probably not many.

>

> CM

I've actually used FFTW quite often, but never the IDL binding. :-  
( I find that anything computationally intensive enough to require  
FFTW is best off written in C)

-Jeremy.

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Subject: Re: fftw and IDL

Posted by [Haje Korth](#) on Mon, 05 Jan 2009 23:13:07 GMT

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Hi,

I had actually coded my very own convenient DLM interface for FFTW3. It was available at the codebank until recently when a member of the IDL community started bugging me about violating the GPL by not making available the source code. As the result I had to pull the code. That's unfortunate for the rest of the community but I don't appreciate being threatened for free services.

The warnings I am seeing look like poor programming to me. For the errors I would check where `fftwf_complex`, `fftwf_plan` are defined. Similarly `FFTW_PATIENT` and `FFTW_EXHAUSTIVE` must be defined somewhere. Is this in `FFTW3.h`? Is this file properly included in the build process?

Good luck,  
Haje

"Craig Markwardt" <[cbmarkwardt@gmail.com](mailto:cbmarkwardt@gmail.com)> wrote in message  
news:a7aa1be2-f858-49eb-af02-cff40cf65302@e25g2000vbe.google groups.com...  
On Dec 28, 12:41 pm, led...@gmail.com wrote:

> Hi everybody!

>

> IDL's `fft()` is very slow to me. I tried to use `fftw`

> (<http://www.fftw.org/>). I've read

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> Maybe there exist more easy way to speed up `fft` or to use `fftw`?

> Thank you!

I think your first problem is that you are asking an FFTW question on an IDL newsgroup. There might be a few people here that have used FFTW, but probably not many.

CM

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Subject: Re: fftw and IDL

Posted by [Foldy Lajos](#) on Tue, 06 Jan 2009 07:41:37 GMT

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On Mon, 5 Jan 2009, Haje Korth wrote:

> Hi,  
> I had actually coded my very own convenient DLM interface for FFTW3. It was  
> available at the codebank until recently when a member of the IDL community  
> started bugging me about violating the GPL by not making available the  
> source code. As the result I had to pull the code. That's unfortunate for  
> the rest of the community but I don't appreciate being threatened for free  
> services.

Why don't you release your DLM under GPL?

(Using the FFTW3 library your code automatically became GPL. Asking for the source code of GPLed software is not "bugging". I think FSF shares my view :-)

regards,  
lajos

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Subject: Re: fftw and IDL

Posted by [Haje Korth](#) on Tue, 06 Jan 2009 13:33:49 GMT

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Lajos,

I don't release the code simply because I don't care to. I understand the GPL and you are correct that my code is automatically GPLed (something I actually never thought about until I had to). Thus I had to make a decision, clean up and release the code (so that I can wait for people bugging me how to compile the sucker) or simply pull the code. Since I am not out to benefit from the release in any way and I am not out for fame, going with the second option was a no brainer.

BTW: There is a difference between "bugging" for the code and "bugging" about violation of the GPL, where the latter a direct threat.

Haje

news:Pine.LNX.4.64.0901060836520.11527@lxserv0.kfki.hu...

>  
> On Mon, 5 Jan 2009, Haje Korth wrote:  
>

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> Why don't you release your DLM under GPL?  
>  
> (Using the FFTW3 library your code automatically became GPL. Asking for  
> the source code of GPLed software is not "bugging". I think FSF shares my  
> view :-)  
>  
> regards,  
> lajos  
>

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