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Subject: Re: dissapointing fftw

Posted by [R.G. Stockwell](#) on Wed, 11 Feb 2004 17:39:11 GMT

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"Steven G. Johnson" <[stevenj@alum.mit.edu](mailto:stevenj@alum.mit.edu)> wrote in message  
news:27cfb406.0402102108.3e4a96ae@posting.google.com...

> "R.G. Stockwell" wrote...

>> [...] But I also use it for arbitrary lengths of time

>> and the requirement of the fftw to calculate a plan for each different

>> length is a real killer. Plus, the creation of the plan can be very very

>> slow (i.e. minutes). [...]

>> Oddly enough the matlab invocation of fftw does not seem to have that step

>> (of calculating the plan).

>

> You can create plans with the FFTW\_ESTIMATE option to skip the

> plan-optimization step and just pick one based on heuristics. I think

> that's what Matlab does, probably with precomputed plans ('wisdom')

> for a few sizes like powers of two.

Yes, matlab probably does something like that. In my time tests I ran the  
/exhaustive plan to find the optimal fftw algorithm, then I looped through  
repeated calculations on the same size random time series. This gave the  
best possible times for fftw which are dissapointing when compared to idl's fft.  
Presumably running the code with /patient or /estimate would be even slower  
(at least not faster) than the results I got.

You bring up a good point though. For my application of arbitrary sized ffts,  
I should compare the /estimate plan, and calculate the time required for those  
fftw computations as compared to IDLs.

Cheers,  
bob

PS I have always thought that IDL's fft was really quick, up until I saw  
Matlab's fft a month or so ago.

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