Subject: Re: Complex -> Real FFT
Posted by Jeff Wasserman on Mon, 26 Jul 1999 07:00:00 GMT
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David Fanning wrote:
>
> Jeremy Kepner (jvkepner@muse.Princeton.EDU) writes:
>
>> Does anyone know of a Complex to Real FFT that has
>> been implemented in IDL. (Likewise a corresponding
>> Real to Complex FFT would also be nice).
>
> I'm probably missing something deep here, but
> doesn't this do what you want?
>
> result = FLoat(complex_fft_expression)
> result = Imaginary(complex_fft_expression)

If you don't care about phase information with your FFT data, and instead want just an absolute power measurement (like a spectrum analyzer), you could use
power_spectrum = Abs(complex_fft_data)
[the abs function returns the value of sqrt(real^2+imaginary^2) if it's argument is complex]
Conversely, you could also get the phase info into an array
phase_array = Tan(complex_fft_data)
[The tan function also nicely works with complex data]
From these two arrays you could then go back to the complex array. However, as far as I know, there is no way to obtain the two independent variables of the original complex array after it's been converted to reals.

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