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Subject: Re: Need help with Wavelet Workbench  
Posted by [Amara Graps](#) on Thu, 08 Apr 1999 07:00:00 GMT  
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Jonathan Bishop wrote:

>  
> I'm trying to use Wavelet Workbench on a long (48000 pt) signal. I  
> think that two separate problems are occurring.  
>  
> I upsampled the data set to 65536 points (by zero padding in frequency  
> space). I hacked wreaddat, wdyadlng, wdyad, and wfwtpo to use long  
> integers in some places. The result is that I can now plot the  
> scalogram for my data set (wreaddat, wintwave, wdoscog are the  
> programs I'm calling). However, the plot of the scalogram looks like  
> only the first half of the data set is being used. The coarser scales  
> have some variation just beyond the half-way point (bleed-over from  
> the convolution process?), but the more detailed scales show a solid  
> color in the upper half of the time axis. Anyone have any ideas what  
> is going on?

This scalogram is from the Matlab Wavelab code. I translated it as is. It is pretty strange code to me, and I never went back and did anything with it to make more sense of the results and display. The idea is that you should see another representation of the values of your wavelet coefficients at each  $2^n$  scale.

The discrete wavelet transform results are much more intuitive to me, and that's what I rely on, instead.

Feel free to hack up that scalogram code .... (I don't know when I will get around to working on that part.)

Also the scalEgram (note the "e" difference) calculates the absolute power of the wavelet coefficients, (but I have to use a Haar wavelet for integrating over the scale, see the notes to the software about why I (and the WaveLab folks) do it that way). So perhaps that scalegram would be a more useful representation of your transformed coefficients.

Hope this provides some insight,

Amara

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"Never fight an inanimate object." - P. J. O'Rourke

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