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Subject: Re: Building Voxel arrays from png files (compression, analysis, and visualization)

Posted by [David Fanning](#) on Mon, 22 Aug 2005 23:43:27 GMT

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Greener writes:

> Thank you for your reply. Just before I viewed this page I printed off  
> the page that you linked me to. Hopefully that is a good sign :-)  
> I will try both the rebin and congrid functions, I am pretty sure that  
> they both use interpolation to calculate the new voxel values. I have  
> been trying to figure out how the interpolation within IDL actually  
> works (in hopes to reduce the data loss I notice during compression,  
> oh, and I am no mathematician either, can anyone say 'fish out of  
> water' :-) I have looked for the interpolate function script with no  
> success as of yet.

The INTERPOLATE command is an internal command, so you won't find a script for it. Loss of information is inevitable, of course, if you change the size of the array. You should try resizing with both nearest neighbor and bilinear sampling. (Check the keywords to REBIN and CONGRID.) In our medical images, we usually use bilinear sampling. It is good enough for our purposes, but you might need something better. I've heard wavelets are good for this, but I've never used them.

> Thanks again for your advice, I have noticed a fairly significant  
> improvement just with the removal of the `[*,*,*]`.

Well, we are headed in the right direction then. That's a good thing. :-)

Cheers,

David

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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