Subject: Help: resample an image at higher resolution, adding detail
Posted by wgallery on Wed, 09 Dec 1998 08:00:00 GMT

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I have a real image at 1 km resolution that I want to resample at 0.125 km resolution while adding structure or details at the smaller scales (1 to .125 km). The goal is to add "realistic" if artificial small scale details to the image. The scene would then be processed by a sensor simulation model which includes a point spread function larger than 0.12 km.

Simple interpolation to higher resolution would not add any small scale structure. One approach would be to take a 2-D fourier transform of the image to get the power spectrum and phase, then extend these somehow to smaller length scales. Does anyone know of a dicussion of this approach? What would be the appropriate way to extend the power and phase?

I am also vaguely aware that fractals might be applied to this problem. Again, any pointers to a discussion?

Thanks,

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(our usenet connection is temporarily down so I am using dejanews)