

STATISTICS OF DIGITAL IMAGES AND THEIR USES IN MODELING

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Abstract. The paper proposes a synthesis method for digital images that combines statistical models and wavelet decomposition. The original image will be represented in frequency domain using a three-level two-dimensional wavelet transform. Afterwards, the coefficients in each subband will be modeled as drawn from a Gaussian distribution with same mean and variance as the subband. Both local and global statistical models will be applied.

Key words: statistical model, wavelet transform, image synthesis.