

ABSTRACT

A wavelet based robust image watermarking scheme in which a binary image is embedded in the horizontal and vertical quadrants of a wavelet transformed image is proposed. The algorithm exploits the inter-coefficients relationship within a DWT block of a predetermined size. Only one wavelet coefficient is perturbed slightly in order to embed a single bit of the watermark and also to produce a watermarked image of high perceptual quality. The embedded DWT coefficients block is selected by the use of a secret key in order to enhance the security of the scheme. The retrieval process is blind and only requires the knowledge of the key. Results, obtained by MATLAB simulation have been used to confirm the feasibility and effectiveness of the proposed algorithm against common attacks such as lossy image compression, low pass filtering, additive white Gaussian noise, and image cropping.