

ABSTRACT

This paper proposes a digital image watermarking technique based on Discrete Wavelet Transform (DWT). For embedding process, I consider the watermark signal as a binary sequence which is embedded to the diagonal high frequency (cD2) band at 2-D level decomposition of Y channel in YUV color model. The size of embedded amplitude is controlled no more than the mean of cD2 coefficients.

For detecting process, the cD2 coefficients are divided into two groups by random seed; one group is watermarked coefficients, another group is non-watermarked coefficients. The mean of non-watermarked group works as threshold; and the mean of watermarked group is compared with the threshold to determine whether the watermark is presented or not. For cropped images, the detecting method is different which needs original image participate.

The experimental results show that the method is comparatively robust to some attacks such as JPEG compression, sharpen, blur and scaling.