Abstract

With Internet, anyone can publish his/her creation into digital data simply and inexpensive, and absolutely easy to access by everyone. However the problem appears when anyone else claims that the creation is their property or modifies one part of that creation. It causes necessary protection of copyrights; one of the examples is with Watermarking Method in digital data.

The application of watermarking technique on digital data especially image, it mention good if inserted data can not be visible in plain view, carrier image does not feel the decreasing of quality and also the inserted data must hold out with attack. In this final assignment watermarking will be implemented on digital image with Discrete Wavelet Transform (DWT) method and Singular Value Decomposition (SVD) by expectation in good performance of watermarking result.

Insertion of watermark at level decomposition of 3 yielding quality of good result image. Scaling factor < 0.1 applied is good for insertion, by yielding PSNR watermarked image > 30 dB. Daubechies order of 1 is optimum to Gaussian blur, Gaussian noise and Sharpening attack. Insertion at low frequency subband is more robust to Gaussian blur and JPEG compression, while at high frequency subband is more robust to Gaussian noise (deviation standard > 25) and Sharpening.

***Keywords:** Watermarking, Discrete Wavelet Transform, Singular Value Decomposition*