

ABSTRACT

Image watermarking is the process of protecting the copyright of an object (image) by giving a sign inside the object. Image watermarking technique is said to be good if the inserted sign does not appear to be visible and the carrying object does not experience a decrease in quality and the inserted sign must be resistant to various signal processing.

This final project implements an image watermarking system on watermarks and hosts in the form of black and white and Red Green Blue (RGB) images. The image watermarking system uses the Compressive Sensing (CS) method based on Discrete Cosine Transform-Discrete Wavelet Transform (DCT-DWT), Stationary Wavelet Transform-Singular Value Decomposition (SWT-SVD) and the reconstruction process using the Orthogonal Matching Pursuit (OMP) algorithm.

Tests are carried out on systems that are built and several test scenarios have been carried out in obtaining analysis related to the system performance that can be produced. The effect of CS on the test results in the value of Mean Square Error (MSE) 4,396208, Peak Signal to Noise Ratio (PSNR) 41,70416 and Bit Error Rate (BER) 0,185565. And the effect without CS on the test resulted in the value of MSE 3.53102, PSNR 42.6518 and BER 0.19686

Keywords: *Image watermarking*, CS, DCT-DWT, SWT-SVD, OMP, MSE, PSNR, BER