

ABSTRACT

The process of sending and protecting information is a problem that often occurs in the development of information technology today. The development of multimedia and technology is now easier and cheaper. These developments bring benefits, and at the same time provide opportunities for people who are not responsible for falsifying and attacking copyrighted works. One way to solve this problem is to use compression and watermarking techniques on confidential data.

In this final project a watermarking image system is implemented in a watermark and the host is a black and white image. In image watermarking systems using DWT-based Compressive Sensing (CS) method, the insertion technique uses the Stationary Wavelet Transform-Singular Value Decomposition (SWT-SVD) method and the reconstruction process uses an algorithm. The influence of the size of the Watermark Image (CW) and the Host Image (CH). The measured parameters are Mean Square Error (MSE), Peak Signal to Noise Ratio (PSNR) and Bit Error Rate (BER).

Based on system testing in which message insertion using the blue layer, sub band LL, mother wavelet db 1, and measurement rate of 80% produces an average PSNR value of 130,386 dB; MSE of 0.795; and BER 0.081. This system can withstand the attack of Salt and Papper.

Keywords: *Image watermarking, CS, SWT-SVD, IRLS, MSE, PSNR, BER*