

ABSTRACT

Today development of technology is much easier to get, especially the development of multimedia systems. This development is characterized by integrated control systems using computers for the manipulation, presentation, storage and communication of digital information. This technological development brings benefits, both to the copyright owner of a work and to those who are irresponsible for illegally falsifying and spreading copyright that certainly very detrimental to the owner of the work. One of the method to protect copyright works is by using watermarking techniques. Watermarking is a process of protecting copyrighted works by giving a sign in the work.

This research is conducted when watermark images have a greater resolution than video hosts, where the requirement for image insertion is a watermark image having smaller resolution than the video host resolution. The methods used in this research are the Compressive Sensing method combined with Discrete Cosine Transform (DCT) to compress inserted image, Stationary Wavelet Transform (SWT), Singular Value Decomposition (SVD) as a watermark insertion method. Then the Orthogonal Matching Pursuit (OMP) method was used as a method to reconstruct the watermarked video.

After testing the designed scenario, the highest BER value is 0.403512 obtained in the attack scenario. The highest PSNR produced is worth 50.03 dB in testing the level of the embedding process. While the highest MSE is worth 19.84 which is obtained at the level testing in the embedding process.

Keywords : *Watermarking, Compressive Sensing, Discrete Cosine Transform, Stationary Wavelet Transform, Singular Value Decomposition, Orthogonal Matching Pursuit, Bit Error Rate, Peak Signal to Noise Ratio, Mean Squared Error.*