

ABSTRACT

The development of digital information technology and internet networks has provided many facilities and freedoms to its users, especially in publishing created works. However, the number of cases of copyright infringement that have occurred reflects that the need for a method can be used to protect the copyright of the owner of the work. One of the techniques used is the watermarking method.

Watermarking is the technique of inserting confidential data (watermark) into a digital information (host). The watermark input is a black and white image with a resolution of 128×128 , after that the RS code process is carried out before the watermark is compressed and then the DCT and DWT process will be performed on the watermark. In the process of inserting the image watermark into the host video using the DWT-SVD method, then the watermark is reconstructed with the OMP method and the results of the OMP process on video watermarking will be an RS code process to check and correct the error bits. In this final project the parameters used are BER, PSNR, and MSE. Attacks given to video watermarking use gaussian blur, salt & papper, and rescalling

The design is done using MATLAB software. testing of the quality of watermarked video is done by measuring the value of the Peak Signal to Noise Ratio (PSNR) parameter with an average value of 54,799 dB. While the testing of the quality of the watermark in the form of an image from the extraction results is done by measuring the value of the Bit Error Rate (BER) parameter with an average value of 0.25, and Mean Squared Error (MSE) with an average value of 0.215. In this test the watermark used is not resistant to attacks by gaussian blur and salt & pepper but is resistant to rescalling attacks.

Keywords: *Watermarking, Video watermarking, Discrete Wavelet Transform, Discrete Cosine Transform, Singular Value Decomposition, Compressive Sampling, Orthogonal Matching Pursuit Algorithm.*