ABSTRACT

The development of information technology at this time made the internet as one of the sought after in the exchange of digital information. As a result of the many exchanges of digital information this is what makes people interfere to find out confidential information. Therefore, the need for a security system that is not easy to break into information exchange, one of which is watermarking

Image watermarking is intended for analysis of how the influence of layer types used on DWT, SVD scale factor values on watermarking performance. The parameters used are Peak Signal to Noise Ratio (PSNR), Mean Square Error (MSE) and Bit Error Rate (BER). Testing scenarios include attack schemes in the form of Salt and Papper, Gaussian Blur and Recaling. Based on the IEEE journal entitled A study of DWT and SVD Based Watermarking Algotrithms for Patient Privacy in Medical Images (2013), in this paper the author uses the DWT method which has advantages in computational time and imperceptibility while SVD itself has the advantages of robustness and data capacity inserted. . Whereas in this thesis want to explain that DWT-SVD with RSA encryption has advantages that may not be owned by DWT with RSA encryption.

Watermark image analysis using the DWT-SVD method with RSA encryption produces the best watermarked images using a sub band frequency with a scaling factor of 0.1 because the image will be damaged if given a lower frequency band, while the watermark can be lost by the quantization process if given a higher frequency sub band .

Keywords: non-blind watermarking, discrete wavelet transform, singular value decomposition, RSA