

ABSTRACT

Nowadays the video technology is a very important part of multimedia communication, where the video presents information that can combine such as text, image and sound information. The use of video technology has been applied in the life field such as health, entertainment, business and education. These developments bring benefits, and at the same time can provide opportunities for the illegal distribution.

Watermarking is a way to protect property rights over multimedia products (images / photos, text, video, audio) by inserting information into multimedia data. One of the requirements for watermarking is imperceptible, the watermarks couldn't get perceived visually / auditorially because watermarks can't damage the quality of the host media and the size of the watermark must get smaller with the host media. From requirements the watermarking process requires a watermark compression. Image compression uses compressive sampling base on Rs Code and DST. Then watermark insertion is processed on the frame of the video that has been compressed in the embedding process. The extraction process is the result of the watermark data that will be returned to get measured base on the system performance. The method in this study are SWT and SVD as data insertion methods and OMP is proposed for image reconstruction.

The results is being obtained from this study are a video that has a message in the form of an image on the subband and image layer. Compressive sampling can be used as a compression method with an average BER value of 0.152 and PSNR 33.848. In the Gaussian Noise Blur test, the average BER value is 0.131 and PSNR is 28,927 dB. Salt and Pepper testing that is obtained an average BER value of 0.187 and PSNR of 28,789 dB. Rescaling testing gets an average BER value of 0.097 and PSNR 36.151 dB.

Key: *Watermarking, Stationary Wavelet Transform, Discrete Sine Transform, Singular Value Decomposit, RS Code. Compressive Sampling, Orthogonal Matching Rescaling, Gaussian Noise Blur, Salt and Pepper.*