

ABSTRACT

The security and confidentiality of the data is very important as the growing exchange of information through digital media. To ensure the security and confidentiality of the data it needed a technique for securing the data, one of them with steganography. Steganography is a method used to hide messages by using digital media in the form of pictures, audio, or video. With the presence of steganography is expected to prevent the occurrence of data theft and misuse of data so that the information can be up to the recipient securely.

In this final task, created a system of steganography to insert messages (*.txt) on the video (*.avi) . The method used to embed messages is a Discrete Wavelet Transform (DWT), replacing the value of coefficient below threshold value with a secret message. Insertion of message is performed on image when the selected phase was detected by using the process of Fast Fourier Transform (FFT) which is realization of DFT.

The parameters used as testing Video Steganography such as : Time computing, BER, CER, PSNR, MSE and MOS. The result of Steganography system with fastest computing time of 2.9450 seconds when embedding and 0.1782 seconds when extracting. MSE values for 0.0309 and the PSNR value reach 63.2293 dB, with BER and CER the same value is 0 when there is no attack noise Gaussian. A steganography system is resistant to attacks on the image with a Gaussian noise mean = 0 until variance 1×10^{-4} , when the system attack with variance 1×10^{-2} the value of BER is 0.4695. The results obtained from surveys of the MOS against 30 correspondents have the average value of the total 3.62 which means the stego video quality is pretty good.

Keywords: Steganography, Discrete Wavelet Transform (DWT), Phase, DFT