

ABSTRACT

Steganography is one technique to secure a data by inserting data into a multimedia file without arousing suspicion. In this final project research, a steganography system is created using an image as a medium to hide the secret message and this research will discuss the design of steganography technique.

In this final project use Compressive Sensing at image of message which will be done by insertion and cover image processing by DCT (Discrete Cosine Transform) method to convert spatial domain to frequency domain and DWT (Discrete Wavelet Transform) method that divide 2 dimension of signal called decomposition, and produce DWT coefficients that can construct the original image, and SVD (Singular Value Decomposition). SVD is a technique for decoding input data into three sub-matrices, as well as OMP reconstruction techniques to return compressed messages and get optimal results in certain parts.

Results obtained from this final project is an image that has a message in the form of image subband-subband frequency of the image. Based on several tests that have been done on the system, has obtained some performance results with the average value of Peak Signal to Noise Ratio (PSNR) of 60.4604%, and the average value of Bit Error Rate (BER) of 0% on testing certain.

Keywords : *Discrete Cosine Transform, Discrete Wavelet Transform, Singular Value Decomposition, Orthogonal Matching Pursuit*