

ABSTRACT

Security factor in the process of exchanging data between information devices in a network information is very important to be noted as the confidentiality of the data sent. One technique to support secure data is steganography technique, but the use of steganography need to be modified in order to improve the security of the message. One modification is to make double process of steganography that allows swindle against the cracker.

In this final project, done twice concealment message with steganography techniques or double steganography. Secret data .txt is inserted into image data with a bitmap format (. bmp) using the method of Diamond Encoding. The image cover is divided into blocks based on parameter k where one block consists of two neighboring pixels. This method will produce diamond characteristic value (DCV) that calculated in the process of insertion and extraction. After the completion of the first insertion, insertion is carried back to the bitmap file (stegoimage) that containing confidential data to the audio file format (.wav). The process is performed using insertion based on Discrete Wavelet Transform (DWT) that determines the timing and scale of a signal using digital filtering techniques and subsampling operations.

From the results obtained, this system has a good enough performance seen from the stego audio SNR value. The value is between 25.06-40.15 dB. The system also has a high resistance against AWGN attack seen from the extraction of messages that generate CERs value = 0%.

Keywords: Double Steganography, Diamond Encoding, Discrete Wavelet Transform (DWT)