

ABSTRACT

The increasing development of data communication technology is certainly directly proportional to the security and data confidentiality aspects. There are some ways to protect information from unauthorized parties. Some of these ways are using steganography techniques and cryptographic techniques. Nowadays steganography technique is commonly used, so it still allows the inserted secret information is solved by other parties. This problem can reduce the level of data security and confidentiality.

To overcome these problem, in this study steganography techniques will be combined with cryptographic techniques. Design of the built system is done by combining the application of Rivest-Shamir-Adleman (RSA) cryptography algorithm in encrypting the message on application of the image steganography method in concealing the encrypted messages generated into a color image (RGB) on the Discrete Wavelet Transform (DWT).

The results to be obtained from this final project is an image that has an encrypted message on the subband frequency of the image. Based on some tests that have been done on the system, the result of average performances score is showed by Avalanche Effect of 43,486%, Peak Signal to Noise Ratio (PSNR) of 67,2755%, Bit Error Rate (BER) and Character Error Rate (CER) of 0%.

Keyword : RSA Cryptography Algorithm, Image Steganography, Discrete Wavelet Transform