ABSTRACT

The digital image is one of the most common media is known by the public. Steganography is a method of cryptography used to hide data in a digital image so that data transmitted cannot be identified by irresponsible parties. One of a kind of digital imagery that is is a BMP format or bitmap, bitmap file format may consist of 1, 4, 8, 24, and 32 bits of color for each pixel.

In this final project, the system simulation and analysis of image with BMP format which will be inserted text messages that have been through the process of caesar cipher cryptography. By developing a method of cryptography and steganography then sending data which do not only have a good level of security, but also has a level of security to protect a copyright of a digital image.

The result of steganography system with the fastest encode and decode time is 0,000650 seconds for encode process and 0,000752 seconds for decode process. The result of cryptography system with the fastset encrypt and decrypt is 0,00048 seconds for encrypt process and 0,0000451 seconds for decrypt process. The System also generates MSE and PSNR, reached 0,00001 for best MSE and 95,2428 dB for best PSNR. The noise salt & pepper 0,001 and 0,005 attack on the image greatly affects the value of MSE and PSNR as well as on the BER and CER values. The MOS results obtained from a survey 102 correspondents has a mean total of 4,22 which means system have a good stego image quality.

Keywords : *Digital Image, LSB, Steganography, BMP*