ABSTRACT

Nowadays, with the development of internet media and applications that use the Internet is increasing also crime in information systems. Information security becomes very important for human life as a social being. Many confidential information such as personal data, financial data, and even state secrets that need to be protected so that it can not be misused by others who are not authorized to do so. One technique to maintain information security is by using steganography technique. Steganography is a technique where messages can be hidden by certain methods. Steganography on the image is the development of science from steganography.

In this final project system simulation and steganography analysis on TIFF (Tagged Image File Format) image. The inserted secret message is a text-type message. The steganographic process in this system uses the Bit-Plane Complexity Segmentation (BPCS) method that utilizes the human vision characteristics that can not see the binary pattern changes that occur in the image and Spread Spectrum method in message randomization.

In this final project, the authors get the results of the steganography system with the fastest insertion process time is 0.028 seconds and 0.037 seconds during the extraction process. This system also produces MSE 0.0001 and the best PSNR value 87,972 dB. Image quality before and after message insertion is measured by calculating the value of MSE and PSNR. A good MSE score is close to zero, while a good PSNR value is above 40 dB (decibels).

Keywords*: Steganography, TIFF, BPCS, Spread Spectrum.*