

ABSTRACT

The development and advancement of information technology is very rapidly impact on various aspects of life. One of them is the process of exchange, accessing, and dissemination of digital media that can be done more quickly and easily. In the midst of the ease of the process causes its own problems in the security and confidentiality of data. So it is necessary techniques to maintain the security and confidentiality of data so that data is not misused by other parties who are not eligible. Steganography is one way to solve the problem. In steganography a message or secret data is hidden into a media so that others are not aware of any messages in the media.

In this final project performed simulation and steganography analysis on image, steganography process done twice to add system complexity so that inserted secret message not easily known by others. In this system the text is inserted in the grayscale image and then the grayscale image containing the secret text is inserted again into the RGB image. The method used in the process of insertion and extraction is the Eight Neighbors method.

From the test results obtained value of Mean Square Error (MSE) of 4.7903 and the value of Peak Signal to Noise Ratio (PSNR) of 95.4639 dB. The stego image results from the steganographic system made when compared with the original image is not visible significant difference, it is evidenced by the Mean Opinion Score (MOS) value of 4.3187. And the performance of the Bit Error Rate (BER) is equal to 0.

Keyword : *steganography, grayscale image, RGB image, double, eight neighbors*