

ABSTRACT

Steganography is the art of hiding messages. This techniques aims to conceal a file or other type of messages which allow it to be invisible for the third parties. The messages can be in the form of articles, item lists, programme code, etc that are hidden within the media such as images, videos, sound files, or texts.

In this final project, the steganography was implemented by inserting and re-extracting the messages using two methods, the LSB and adaptive methods. The inserted messages itself were texts in the format of GIF image.

Several tests were carried out on the stego result after successful implementation of the system. The tests covered image quality testing based on MSE and PSNR values, the time taken for inserting and extracting the messages, the resistance of the images to interferences or noises, and the optimum number of the inserted characters. The results of the performance tests showed that the MSE and PSNR on the GIF images using adaptive method indicated better performance compared to the LSB method. The approximate average PSNR tested using adaptive method was 49,3411 dB while using LSB method was 33,3778 dB.

Keywords: Steganography, Least Significant Bit (LSB), Adaptive, GIF Image.