

Abstract

Developments in information technology and the internet has made delivery of digital data becomes easier. This allows the data is susceptible to being manipulated. Therefore, the security of the data becomes very important. Moreover, if the data is strictly confidential or should only be known by certain people, for example, medical data. One solution that can be used is to use steganography. Steganography method that is often used is the least significant bit (LSB).

To minimize gradation of the resulting stego data, the message bits are encrypted using the chaos method. The parameters on chaos method are selected using differential evolution (DE) algorithm. Research of this kind has been done before but by using a genetic algorithm to select the parameters on chaos method. In this final task, LSB techniques using chaos method and DE has been implemented. The results showed that the method used in this final task is better than the method used in previous studies in terms of Peak Signal to Noise Ratio (PSNR).

Keywords: Steganography, *differential evolution*, *logistic map*, *discrete wavelet transform*.