

ABSTRACT

Based on previous research with title "Simulation and Analysis of Digital Image Steganography with Encryption Based on Rubik's Cube Principles", has done the combining steganography method with encryption based on rubik's cube principles. The results is encrypted messages are not vulnerable by statistical attack and Brute-Force attack. However, the system still has shortcomings, such as the damaged or lost secret messages because of disturbance during the process of transmitting data. To improve the quality and performance of steganography, has been done research that merge the encryption method and error correction method.

In this final project, it has been simulated steganography system using a secret information in the form of text and digital image as a cover. Encryption method is an encryption based on rubik's cube principle. Error correction method is BCH Code. Steganography using Least Significant Bit (LSB).

The result is steganography by adding encryption system based on rubik's cube principle and BCH code produces 100% accuracy, PSNR value reach 78,122 dB and a minimal computing time is 5.45004 seconds. Steganography system using BCH code is more resistant to Gaussian noise, Salt and Pepper noise, Poisson noise, Localvar noise, rescale and rotation than system without BCH code. Whereas for cropping attack, system using BCH code is only resistant at ratio 50%. At ratio 25% and 12,5%, system using BCH code has worse accuracy than system without BCH code

Keywords : steganography, digital image, LSB, rubik's cube, BCH Code