

ABSTRACT

Data security is one of the important parameters in the data transmission and reception of data. In the process of sending the data, there are many security threats that can affect the data. One way to secure data from attack is the encryption process. Symmetric cryptography is cryptography uses the same key in the encryption and decryption process. Some examples of methods of cryptography is DES, Baker Map, AES, Cat Map, Block Random Permutations, SDES.

In this final will be a comparison between DES algorithm with algorithms Baker Map in digital imagery. Since both of these algorithms can be categorized qualify that good in terms of security, and faster in encryption. The goal in this thesis is a comparison between the algorithm and the DES algorithm Baker Map with view avalanche effect, brute-force attack of each algorithm.

From the results of tests using grayscale and image sized 800x600. showed that the algorithm Baker Map has the best value for the computing time of 0.04572 seconds with 5 iterations, the accuracy of the noise, Brute Force Attack with 4.4×10^{181} time, and quality with an average MOS 4,885, while the DES algorithm is better in the field of Avalanche effect by 100%.

Keywords: Cryptography, DES, Baker Map, brute force attack, avalanche effect, Digital Image.