

## ABSTRACT

The rapid technology development make level security in the system must in boost. Security a confidential information at this moment are important. A way to secure is to use encryption. The encryption is one method that serves to secure any information by making information that cannot read without aid special knowledge.

In the previous research, providing security by applying steganography or encryption. In this final assignment want to provide two levels of security. . In the first level to hide the message using steganography techniques in the last bit of biner image. In the second level the system using 2D cellular automata. Where the result of the insertion of text into the encrypted image resulting scrambled image.

The result that have been obtain by using 2 level security to the message to be sent. The level of security of information transmitted is higher make the information from eavesdroppers message. LSB Steganography is resistant to Gaussian noise. Computational time needed to perform image encryption cellular automata method depend on size of the image.

**Keywords:** Encryption, Cellular Automata, Steganography