

CHAPTER III

RESEARCH AND METHODOLOGY

Steps in the creation and completion of this project are :

1. Searching and Learning Algorithms

The first step in accomplishing this project is to find and study the whole algorithm to be used in completing this project. Required algorithm is Edge Detection Sobel and Least Significant Bit (LSB).

2. Design

Firstly project will use Edge Detection Sobel. This algorithm is used to convert a grayscale image that has been refined into an image edges. Images that used can be any image but before that processed first to be converted into a grayscale image that has been smoothed to obtain more optimal image edges. Once the edge of the image has been processed then the next step is to insert a message into every last bit of each pixel edge in the layer red using Least Significant Bit (LSB). In the process of LSB, the first step is to change the message that will be hidden into ascii and then changed again into binary. Then insert each bit into the last bits of pixel image. When finished entering the message, output result is an image that has been inserted message.

Next step is decrypt message. The input is an image that has been inserted messages. Then processed with edge detection in advance to get edges, then edges layer red pixel of the steganography image converted to binary and then grab the last bit. If you've reached the 8-bit, first change into the letter, the program will do loop process until end of messages and the program will display a messages that contain in the image.

3. Implementation and Test

The program will use a graphic display user interface. The purpose of making this graphic user interface is to facilitate users in using this application. Applications that have been finish must be do a tests using different pictures and different messages to locate faults that still exist.

