PROJECT REPORT

Steganography On Dithered Image Using Least Significant Bit (LSB)

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INFORMATICS ENGINEERING DEPARTMENT
FACULTY OF COMPUTER SCIENCE
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APPROVAL AND RATIFICATION PAGE

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by

Atieq Ivana Nifah – 12.02.0102

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ABSTRACT

In this century internet has become the most popular media, through internet we can share any kind of messages or information easily. Therefore Security and secrecy are important aspects required in the exchange of information or messages over the network / internet. Steganography is one of the most powerful techniques to conceal the existence of hidden secret data inside an image. The simplest approach to hiding data within an image file is called least significant bit (LSB) insertion. In this method, we can take the binary representation of the hidden data and overwrite the least significant bit of each byte within the image. If we are using 24-bit color, the amount of change will be minimal and indiscernible to the human eye.

This project was made using the Java programming language and the algorithm using Floyd-Steinberg Dithering and Least Significant Bit (LSB). The image will be transformed become dithered image by using Floyd-Steinberg Dithering before the data is inserted. The image which is used to input is greyscale image with extension png, jpg and jpeg.

The output will be png image. There will be also decode process in this program. It used to unhide the informations or messages that inserted to the image. The output of the decode process will be the messages which was inserted by the user.

Keywords: Floyd-Steinberg Dithering, Least Significant Bit, Steganography.
Finally the writer finished this last project entitled “Steganography on Dithered Image using Least Significant Bit (LSB)”. This last project have some contents. First chapter will talk about the background, the scope and the objective of this last project. In this project the writer using two algorithms, Least Significant Bit (LSB) algorithm and Floyd-Steinberg Dithering algorithm. The data structure using array. That will be explain on chapter two.

The third chapter will show the steps planning of the writer to finish this project. On fourth chapter the writer is explaining the analysis and design of the program that the writer will build. The writer will explain all the program using use case diagram, flow chart and also class diagram. And then the fifth chapter will talk about implementation and testing program. And finally the sixth chapter will talk about the conclusion of the program and also the writer give some suggestions to the further research.
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