

# TITLE

## Information Hiding Using Least Significant Bit Steganography

### INTRODUCTION

Privacy in digital communication is desired when confidential information is being shared between two entities using computer communication. To provide secrecy in communication we use various techniques. One such technique is Steganography that is the art of hiding the fact that communication is taking place, by hiding information in other information.

### Literature Survey

**Steganography** is the practice of concealing a file, message, image, or video within another file, message, image, or video. Generally, the hidden messages appear to be (or be part of) something else: images, articles, shopping lists, or some other cover text. The advantage of steganography over cryptography alone is that the intended secret message does not attract attention to itself as an object of scrutiny. Steganography is concerned with concealing the fact that a secret message is being sent as well as concealing the contents of the message. In digital steganography, electronic communications may include steganographic coding inside of a transport layer, such as a document file, image file, program. One of the method of doing this is:

Least significant bit (LSB) method: In this method the least significant bits of some or all of the bytes inside an image is replaced with a bits of the secret message.

### PROPOSED WORK:

Encoding and Decoding of data in an image using the least significant bit method.

Software Used: MATLAB R2017

MATLAB is a high-performance language for technical computing. Matlab function is an easy to use, user interface function that guides a user through the process of either encoding & decoding a message into or from the image respectively.

## **LSB Algorithm**

### **A. Conversion of image to matrix**

In the conversion process of image to matrix we convert the input cover image into matrix values which is stored in a variable. Firstly an image is read from computer, the original image is in the form of RGB. We get a matrix of  $3 \times 256 \times 256$ .

### **B. Encoding the message**

We replace the least significant bits of all pixels inside the image with a bit of the secret message. Save the image file.

### **C. Conversion of matrix to image**

In this stage intensity values are converted back to image. The image obtained has message embedded into it. The cover image and the image obtained here have to be identical. Hence the objective of Steganography is satisfied.

### **D. Decoding the message**

We collect the least significant bits from all pixels inside the image and the bits are converted to get the secret message.

## **REFERENCES:**

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