ENHANCED LSB ALGORITHM FOR IMAGE STEGANOGRAPHY

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Abstract : Steganography is used to transfer the data with image technique. Its easier to transfer data securely without modification. The concept using steganography introducing algorithm "ENHANCED LSB ALGORITHM FOR IMAGE STEGANOGRAPHY". In steganography it hide secret message to the image processing .

Keywords: Carrier Image, Enhanced Least Significant Bit, Image Steganography, Information Hiding, Least Significant Bit, Steganography

I. INTRODUCTION

The steganography we using cryptography by using encryption and decryption for hiding the data in the image by steganography using least significant bit algorithm. The text can be hidden in the image by covering object in the text, audio, video, image. Steganography algorithm does not hide data efficiently. In steganography we can hide many text through image processing using least significant bit. The steganography are used newly algorithm that we called as LEAST SIGNIFICANT BIT (LSB)

II. LITERATURE SURVEY

In steganography we can hide the data it is called as least significant bit (LSB). In literature survey we using 24-bit color image. In steganography there are three adjacent pixels (bytes) in this following

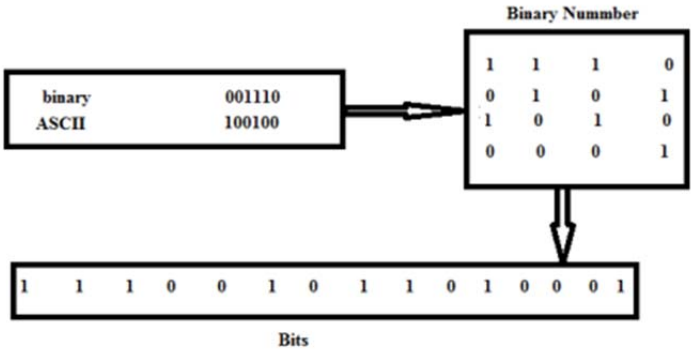
RGB encoding:

01010010 10101100 10110111
10101100 00011101 11101010

Now using RGB encoding binary bit of 9 bits data 0101101. Using RGB encoding we can change binary bits of 9 bits.

01010011 10100011 10110100
10100011 00011110 11101101

The following procedure for using steganography process: Cover picture(image)+hidden data (text) = stego picture
In this description , the cover image through the text by hidden process.



III. PREVIOUS WORK

The existing work in the steganography using pixel based technique are used to produced pixel by pixel image in synthesized. Each character represent by dots that as consider binary digits, it consist of 6 bits only instead of 8 bits as original LSB algorithm and enhanced method. By using new approach for data hiding that can be presented in spatial domain. Steganography has three color components of each pixel but message can be stored in the LSB algorithm that we consider as one of the three components as RED(R), GREEN(G), BLUE(B).

IV. PROPOSED WORK

Least significant bit are altered by using covering image. For following example it shows how letter B can be hidden in the first eight bytes of three pixels in a 24-bit image. LSB insertion shows average half of the bits in image that can be changed . They also increased capacity information of the cover image and it more statiscally. By using LSB we converting binary bits to texts. In steganography for using security purpose we are implementing enhanced and LSB algorithm.

INPUT: Secret message n-bits and used to encryption and decryption in one or two images .

OUTPUT: Secret message received successfully in n-bits

Advantages of LSB Insertion:

Major advantage of the LSB algorithm is it is quick and easy. There has also been steganography software developed which work around LSB color alterations via palette manipulation.
LSB insertion also works well with gray-scale images.
> A slight variation of this technique allows for embedding the message in two or more of the least significant bits per byte. This increases the hidden information capacity.

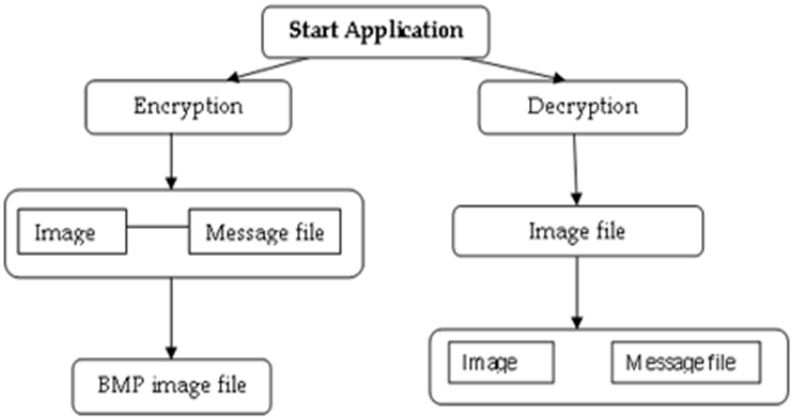


Fig 1: Proposed LSB Steganographic system architecture

Encryption

Encryption is the process of sending data or plaintext through cryptography concept . It used to convert original plaintext to ciphertext. The encrypted message can be read only given necessary key to decrypt cipher text to original plain text. Encryption doesn't hide message its difficult to read message . In encryption can hide any type of image file with secret information.

Decryption

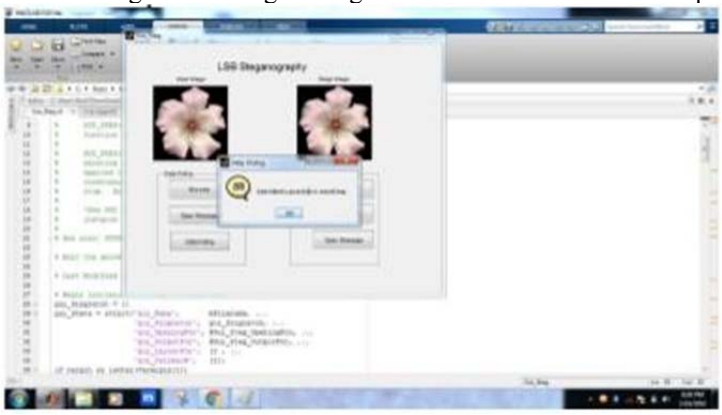
The process of decoding message that has been encrypted into a secret format. Decryption requires a secret *key* or *password*.
Decryption can get the secrete information from image file.

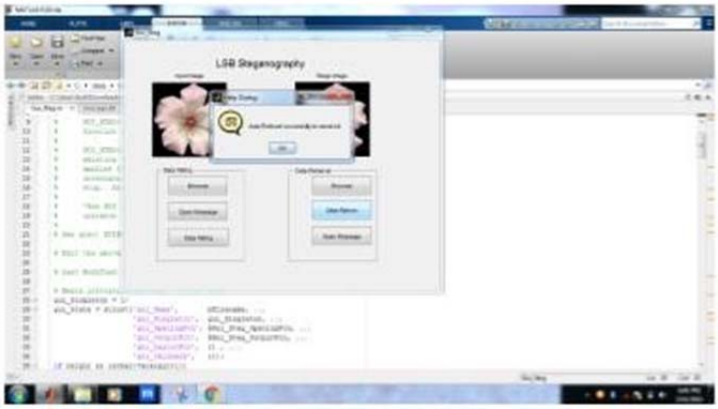
BMP Work

Bitmap (or raster) images are stored as a series of tiny dots called pixels. Each pixel is actually a very small square that is assigned a color, and then arranged in a pattern to form the image. When you zoom in on a **bitmap** image you can see the individual pixels that make up that image.

V. EXPERIMENTAL RESULTS

Our algorithm covers the source texture image and embedded secret message that concluded the process of texture synthesis. This used us to extract the secret message and source texture from a stego image and LSB enhanced algorithm using message extraction and authentication process.





VI. CONCLUSION

The enhanced LSB technique described in this project helps to successfully hide the secret data into the cover object without any distortion. 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. Since LSB doesn't contain any information there is no loss of information and secret image recovering back become undistorted.

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