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## AN SECRET OF TWOFOLD IMAGE USING FLOW CODE PROCEDURE

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### Abstract

**Background and objective:** Secret of twofold images is essential for message communication. During communication more chances for hacking the message communication take place between the sender and receiver, because this communication normally take place through network.

**Methods:** This paper brings the solution for the above problem using twofold image code procedure using stream secret message technique. The Twofold image is represented in a transcript technique this input then encrypted using stream secret message.

**Results:** This reduce the message hacking both networks. Increasing message communication it is important to maintain the privacy in networks. Thus, it is essential that the images must be encrypted before being transmitted in a network. Image encryption done with help of character convention chart. Inputs are encoded with help of character conversation chart.

**Conclusion:** This technique reduce the traditional problem such as remembrance of key values. Experimental results prove that proposed technique produces good result than existing system.

**Keywords:** Image processing, twofold image, Secret, Decryption, Simple text, Converted Image.

### Introduction

Introduction Twofold image are the simplest type of image which is used widely in a variety of commercial applications. Twofold images will be of monochrome images and that has been quantize with two values, usually 0 and 1, represents black and white. It brings twofold images are easy to acquire also occupy less storage. In both communication technique communication between the sender and receiver are not safe more chances for message hacking. Reduced image size

alone never produce good results, it may good only in storage. Thus, it is essential that the images must be encrypted before being transmitted in a network. Stream secret is a identical key technique where crypto key used for generating secrete message.. The produced cipher image is not possible to break in mathematically. The advantage of using Stream secret is reduce the processing time and technique utilize less components.

Proposed technique works with help of character convention chart using this input images are converted in the form of text, then text are encrypted. This reduces the key flow, size of generated key are less or equal to the input message. Generated keys are consisting of secrete input information. Based on the input message the character convention chart generate secrete text. Based on this text, each character are then further encrypted. The keys in the key stream which are not occurring in the Simple text are replaced with their ASCII values. Each character is identified with defined ASCII value, that values are added in the final generated secrete message.

### **Existing system**

Various methods for twofold image Secret are already existed. However these methods gives burden to the user hard to remember various keys and same to be used for communication.

Drawback of Existing system:

1. More keys are involved.
2. Key distribution are complex.
3. It occupy more storage.
4. User had burden to remember the keys.
5. Images are not converted to text form.
6. No Character conversion charts.

### **Literature Survey**

Lee et al. had proposed a examination mold method for twofold image secret. Based on this approach images are treated as bits, with help of bits they generate secrete message. In examination model they used pseudorandom generator to create a order of select casual pattern using this bits location are modified based on image examination Finally with each bit an XOR operation performed. Drawback of the approach images are first converted to bits and each bit user to compute XOR operations, both this bits and XOR output communicate to the receiver it increase the network traffic.

Biham and Seberry proposed a fast and secure Stream secret for secret. This method used new technique called rolling array. It very similar to Lee technique here input information's are jumbled it gives the burden to the attacker, without key it very difficult to guess the real sequence. The main drawback of this technique 256 keys are used for the communication. It very difficult to maintain this key. Generation of key not depend on the input.

### Proposed System

In the proposed system based on image code flow procedure technique. Proposed technique works with help of character convention chart using this input images are converted in the form of text , then text are encrypted. This reduces the key flow, size of generated key are less or equal to the input message. Generated keys are consisting of secrete input information. Based on the input message the character convention chart generate secrete text. Based on this text , each character are then further encrypted. The keys in the key stream which are not occurring in the Simple text are replaced with their ASCII values. Each character are identified with defined ASCII value, that values are added in the final generated secrete message.

### Advantage of proposed system:

- No need to remember the keys.
- Every characters are replaced with predefined value.
- User burden reduced.
- Occupy less storage space.

### B.Proposed Architecture Diagram

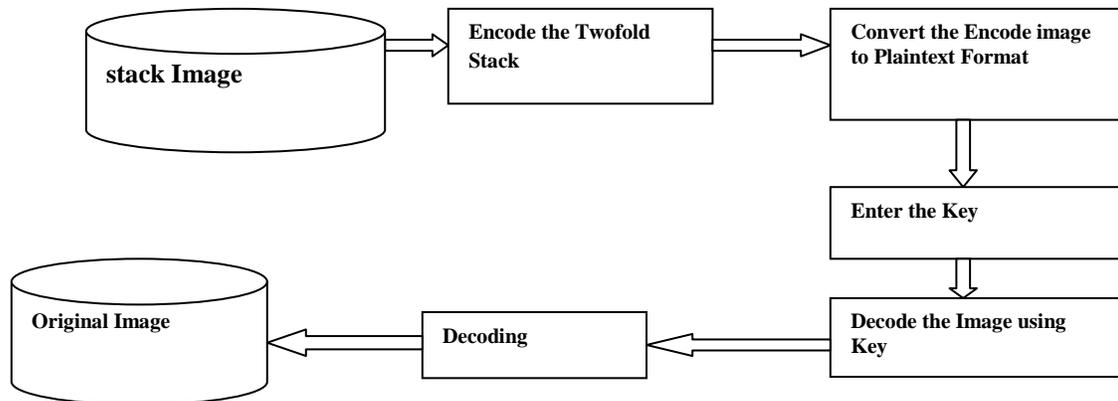


Fig1. Architecture for image secret.

## **Experimental Setup**

### **A. Loading an image**

In this process an image which is to be encrypted will be loaded from the local drive. The user has to select an image from the folder. Based on users selection image get displayed. This image selected as input image. The image may be a color image with extension like .jpeg, .png, .bmp, .gif etc.

### **B. Converting loaded image to twofold image**

In this process the loaded colored picture will be converted in to twofold image. Twofold image are simplest type of image that will be of monochrome and that has been quantize with two values, usually 0 and 1, represents black and white. The improvement of twofold images is that it occupy less memory space. So, converting the colored image in to twofold image will reduce the time taken for secret.

### **C. Secret Module**

In this process two fold image encryption take place. In process one user select input image, that image coveted to text form, each text further converted to predefined ASCII value. Input information is converted to predefined values. Each time user can get the values from character conversion chart. For maintain the secrete the character conversation chart are Simple text form.

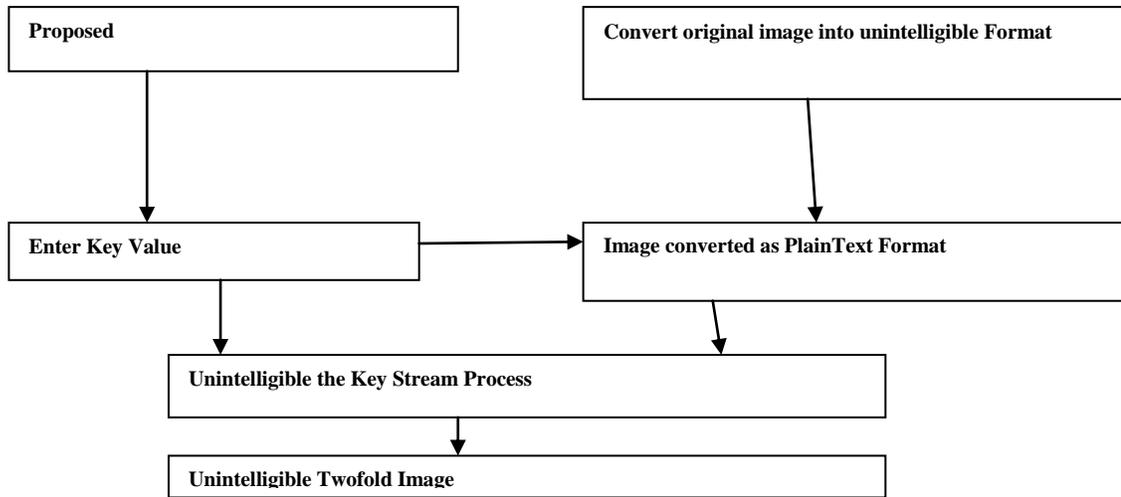
### **D.Decryption Module**

In this process original information's are get back with help of decryption. This process is reverse process of part of the secret process, cipher image is performed to obtain the original image. This process also use the same set of keys used for generating secrete message. The key function generated by the two fold code algorithm used to encrypt the Simple text. This module is reverse process of Secret module. The decryption system decrypts the encrypted twofold image using the same set of keys used for secret.

Keys of the key stream are encoded by a simple table lookup operation. An XOR operation is performed between the encrypted twofold image and the key values to obtain the values of the Simple text. The character code table is used to decode twofold image. The encoded twofold image is then decoded in the form of 0s and 1s to get the original twofold image.

**Secret Process**

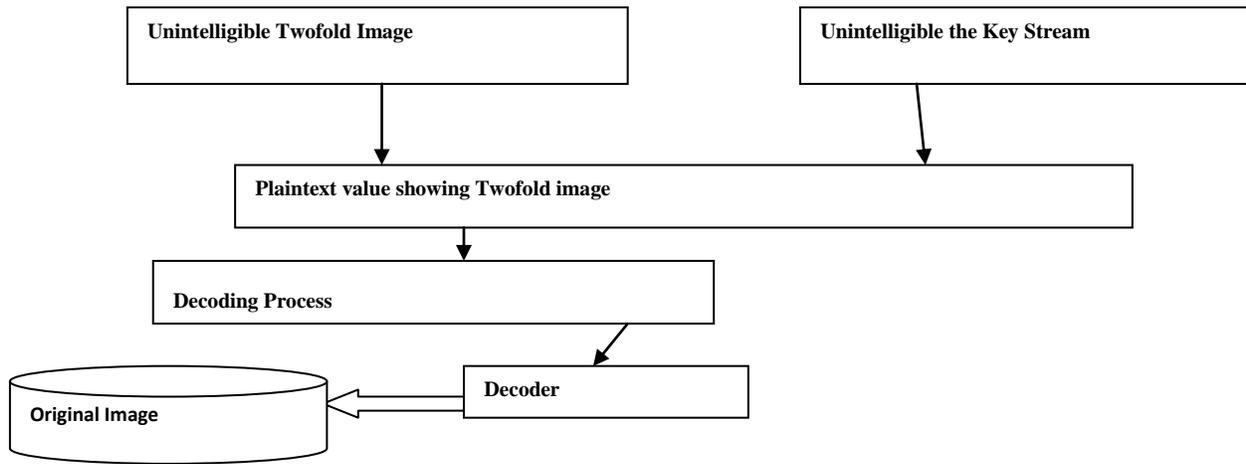
A proposed two fold image code technique generate secrete twofold image in the form of simple text having only lower case characters this helps to generate key flow for conversation. Generation of this key consisting of collection of characters, this helps for secure communication. To maintain the confidential the generation pair never used again, it used only once in the communication between the user and receiver. Characters generated here with help of input image and text values are converted to predefined ASCII values. This values are taken from character conversion chart. Image values are replaced with simple text then further text are replaced with predefined values are used for maintain the high security. Hackers may get the character conversion chart values in the chart are never gives any meaning, until they using the value performing some encoding operation. If the length of the Simple text representing the secrete twofold image is higher than the length of the key stream, then the values of the keys in the key stream are added to a predetermined value to generate the key values for the characters in the Simple text which is at a position greater than the length of the key stream. In the character conversion chart values are calculated by dividing the length of the Simple text representing the encoded twofold image by 2. The Simple text representing the encoded twofold image is divided into blocks of size of key stream length.



**Fig 2.Model of a secret System.**

**Decryption Process**

Process of decryption shows below. The decryption system decrypts the encrypted twofold image using the same set of keys used for secret. The content of the character conversion table used for encoding is hidden and the base address of the table is stored in the memory. The key stream generated by image flow code procedure used to generate secrete Simple text representing the encoded twofold image is given to the receiver. The base address of the character.



**Fig 3.Model of a Decryption System.**

**A. Model of a decryption System**

Code table used for encoding is loaded from the memory and the function of the function stream are encoded by a character code table lookup operation. The function of the function stream not occurring in the character code table are replaced with their ASCII value. The fixed value is computed by the receiver depends on the size of the two fold image. An XOR operation is performed between the encrypted twofold image and the key values to obtain the values of the Simple text. The character code table is used to decode twofold image. The encoded twofold image is then decoded in the form of 0s and 1s to get the original twofold image.

**Initial character code table generation**

The characters in the Simple text representing the secrete twofold image are counted and represented in the form of a hierarchy according to the chance of incident. The left hand side branch of the hierarchy is labeled as ‘0’ and the right hand side branch is labeled as ‘1’. If the value of the image in the corresponding column position is 0 it si replaced by the character a, if the value of the image in the corresponding column position is 1 and column position mod 25 value is 0, then replaced by the character z.

If the value of the imaged in the corresponding column position is 1 and column position mod 25 value is not equal to 0 it is replaced by the corresponding characters having the character value. Consider a twofold image “1010”. The twofold image is encoded in the form of a Simple text as “bada”. The code for each character in the Simple text representing the encoded twofold image is found by traversing the tree. The value of the character is found by taking the decimal equivalent of the code forming the character code table.

## Experimental Outcomes

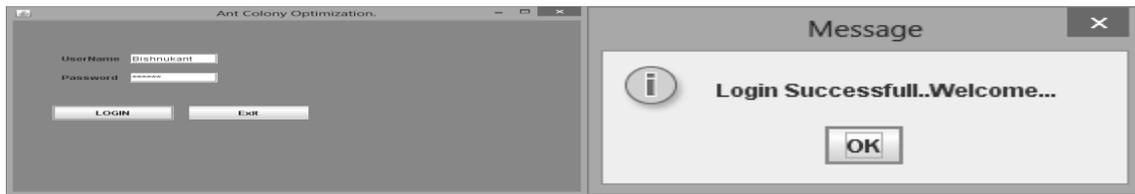


Fig.4 User Authentication for secret.



Fig.6. Select an image to load.



Fig 7. Loaded Image.

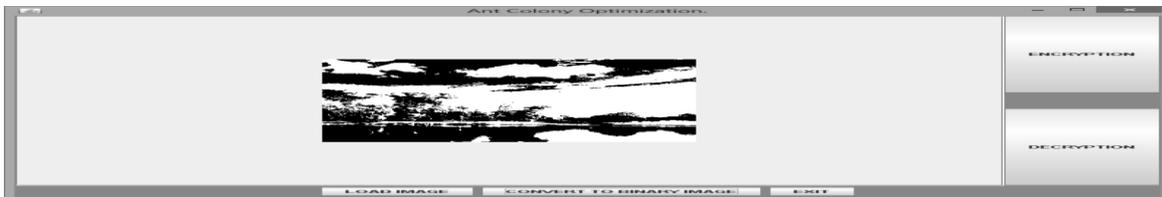


Fig 8. Color image is converted into Twofold Image.

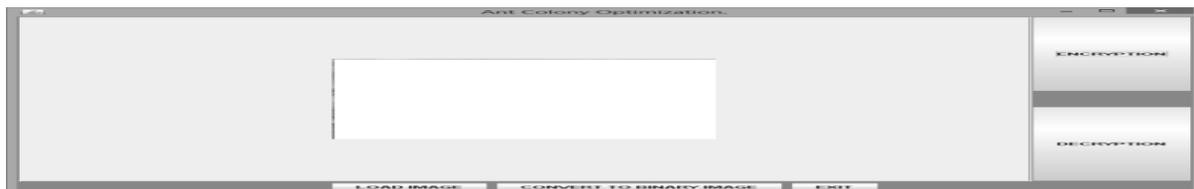


Fig 9 Encrypted Images.



Fig 12. Image after Decrypt.

## **Conclusion &Future Enhancement**

Secret is an important issue in both communication technique since the data transmitted in the network is more vulnerable to fraud and eavesdropping. This proposed technique two fold image using image code procedure used to generate secrete message communication. The proposed method reduces number of keys used for message communication, image encryption also done with character code table , this method difficult for the hackers to find the corresponding key and plain text information. Proposed method also occupy less storage

**Future Enhancement**--Due to time and computing limitations, I could not explore all facets of Twofold Image Secret. After researching various techniques already implemented, I chose to improve upon one, can only protect the image from third party and can produce the secrete image such that it is not possible to break in mathematically. However, it deeply enhance the safety and provides confidentiality as it uses a character code table The problem lies with this concept is that time taken for secret and decryption is differs depends of the dimension . For very large image this will take more time. In future i can reduce the time taken for large size images.

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