Secure Data Transfer Over Internet Using Image steganography

Mrs.Rikeeta Mahajan[1], Mr. Bholenath More[2], Mrs.Lina Gunjal[3], Mr.Bhavesh Waghulde[4], Mr.Rohit Narkhede[5]

[1]Professor, Dept of Computer Engineering
[2, 3, 4]Dept of Computer Engineering
[1, 2, 3, 4] Sandip Foundation's Sandip Polytechnic, Nashik, Maharashtra, India.

Abstract- *The study of hiding or embedding "data" in a transmission media is known as steganography. Its ultimate goals, which include invisibility, The rapid expansion of data transport via the internet has made it possible to convey data to its destination in a more precise and timely manner. There are numerous transmission media for transferring data to destinations such as e-mails and social networking sites. At the same time, hacking may make it easier to alter and misuse vital information. As a result, in order to send data securely and without change to the destination, Image Steganography is used. This project report deals with image steganography, also it provides in-depth discussions of different steganographic algorithms like Least Significant Bit (LSB) The language used is (JAVA), IDE used (Apache Net Beans).*

Keywords- Steganography ,Secret key ,Secret Text, Hiding

I. INTRODUCTION

In past year we got lots of privacy issues like facebook , apple data, breach and whatapp so here is the better idea for everyone . In this generation we all are scared about loosing our personal data so it is better to go with secure conversation using

"IMAGE STEGANOGRAPHY" .we think our data is wast for use but it is usefull for other people like Hacker or big companies . we can used many different kind of type hiding text into image, video and etc .Image Steganography is the science of encrypting the data into the image, Steganography and watermarking, two forms of data concealing in digital media, strive to insert secret data into covers for purposes of identification, copyright protection, and commentary. The quantity of message data and the requirement of embedded data invariability under distortions such as lossy compression, third-party removal, or alteration are the key constraints of this procedure.

The current system that is being used for hiding personal information into Image. During the period of pandemic everything became online, peoples were communicating with each other through different social media platforms.

II. SYSTEM DESIGN

In this system, Image steganography is used. Basically, Image steganography is a technique of hiding our private data or any personal message in image by using encoding method. In our system LSB algorithm is used to hide the private data in image.

Working Of the LSB Algorithm :- LSB-Steganography is a steganography technique in which we hide messages inside an image by replacing Least significant bit of image with the bits of message to be hidden. By modifying only, the first most right bit of an image we can insert our secret message and it also make the pictureunnoticeable.

Let us know how the system works :- At very first we select an image in which our data or the message is going to be embed (Hide). Then write the message which you want to hide. Then click on the Encode Button, this will encode your private message into the image. After encoding nothing is changed except the size of your image. Now save this new image called as Stegeo image with security of key. Now the Decoding process, for the decoding process receiver must know the secret key which is used while encoding. Just select the stegeo image, enter the secret key and click on the decode button and that's all. The system is easy to use, anyone can use the system there is need of any type of knowledge about the system. IDE used (Apache NetBeans) , Language used (JAVA).

Advantage:

1. This approach included security, capacity, and resilience, which are the three qualities of steganography thatmade it effective for concealed information sharing through text documents and secret communication.
2. Government and law enforcement agencies can communicate in secret using Steganography Corporation.

3. By hiding the message behind a suspicious image, steganography may also be used to safeguard identities and important data from theft, unwanted reading, or potential sabotage.

Disadvantage:

1. Because there is a large amount of data and a large file size, anyone can suspect it.
2. When a picture is attacked, such as translation and rotation, it is difficult to retrieve the message.

IV. MODELLING
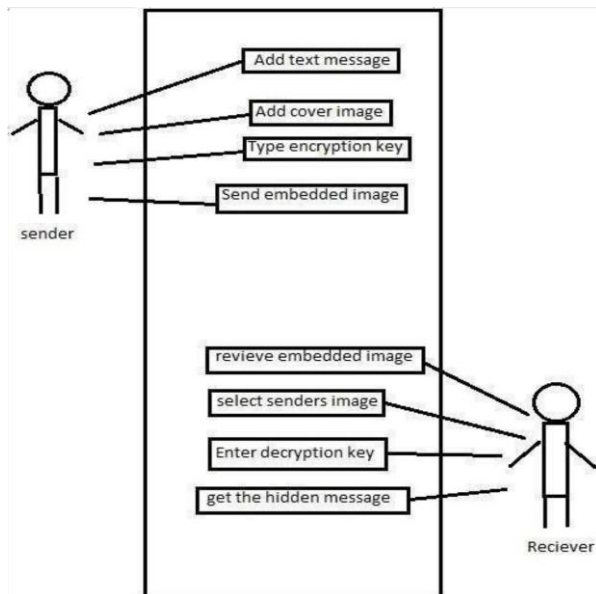
Fig.3 Data Flow Diagram

V. RESULT

VI. CONCLUTION

The application creates a stego image in which the personal data is embedded inside the cover file image. Used the Least Significant Bit algorithm in this project for developing the application which is faster and reliable and compression ratio is moderate compared to other algorithms

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