Abstract

Nowadays, network has important roles for transferring data accurately and fast from source to a destination. The data is not secure enough to transfer highly confidential. The security of information has become one of the principle challenges of resource sharing with data communication over computer network. Cryptography and Steganography are two methods for protecting data from intruders while transferring over an open channel network. Cryptography is a method to encrypt data and steganography is the art and science of hiding secret message in a cover image. In this paper a Hash Least Significant Bit (H-LSB) with Affine cipher algorithm has been proposed for providing more security to data in a network environment. First we encrypt the data with the new cryptography algorithm and then embed in the image. Eight bits of the secret message are divided into 3, 3, 2 and embedding into the RGB pixels values of the cover image respectively. A hash function is used to select the particular position of insertion in LSB bits. This system allows a message sender to select keys to encrypt the secret message before embedding into the image and a receiver is used the keys to decrypt the message. Receiver can be decrypted the encrypt message with incorrect the keys but to a different form.
from the original message. This system has the ability to provide better security while transferring the secret message from one end to the other end in network environment.

References


New Approaches to Encrypt and Decrypt Data in Image using Cryptography and Steganography Algorithm


Index Terms

Computer Science

Algorithms

Keywords

Cryptography, steganography, secret message, Hash based LSB, Affine Cipher, encryption, decryption and embedding process.