Reversible Data Hiding Using LSB Scheme and DHE for Secured Data Transfer

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Abstract

There are many ways to make data secure with different processing techniques. The data is insinuated in a host and converted using encryption methods for further transfer. The host medium is mutated using some principles of alteration rules, and the genuine host medium is reclaimed back after the extraction of secret data from it. This paper adopts reversible data hiding approach to surge the security by hiding data in an image. This paper makes use of color images rather than grayscale to exaggerate the capacity of hidden data. Senders can encrypt the original image using data hiding in encryption (DHE) by using an encryption key and dynamic histogram. The LSB is then compressed to make space for the data hiding key to be used to hide the data. The receiver makes use of both encryption and hiding keys for accurate retrieval of data. If the receiver makes use of only one key, the particular functionality will respond depending on the key used.

Keywords

Reversible data hiding Image and data recovery Dynamic histogram
Image encryption Least significant bit

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