An Improved Cryptographic Technique to Encrypt Images using Extended Hill Cipher

Abstract

This work proposes an improved scheme to encrypt the digital image for its security. The proposed system is divided into 3 main phases. In first phase, the single digit number into which the given digital image can be divided is calculated. In the second phase, bit rotation, reversal & randomization method is applied on each block of the image. In the third phase, the extended hill cipher technique is applied on the image which is an output of second phase. At the receiver end, if the receiver has appropriate decryption key, he can generate the image similar to the original image. This paper is organized into following sections. Section 1 contains a general introduction to the cryptography, image encryption and hill cipher. Section 2 contains literature review on some existing image encryption research papers. Section 3 contains description of the proposed system. Finally paper is concluded in the Section 4.
An Improved Cryptographic Technique to Encrypt Images using Extended Hill Cipher


Index Terms

Computer Science

Security
Keywords
Cryptography  Image  Key  Encryption  Decryption  Hill Cipher