SECURE IMAGE TRANSMISSION USING UNIFIED DATA EMBEDDING AND SCRAMBLING ALGORITHM AND RUBIK'S CUBE SCRAMBLING ALGORITHM

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Security of digital images to maintain confidentiality, integrity and authentication has become vital in this digital world. Encryption ensures that only the authorized person can access the secret information. Cryptography, the science of encryption has seen a boom in this e-age to protect the information from inquisitive eyes. In this paper, two encryption techniques are compared. The first technique is based on Rubik's cube scrambling principle(RCS) and the second one is based on Unified data embedding and scrambling method(UES). UES is a data embedding technique that embeds the secret image into the cover image and transmits the stego-image. In RCS, the image is scrambled using Rubik's cube principle and XOR operation is performed on the rows and columns using the two secret keys.

Keywords— Embedding; Scrambling; UES; RCS; Encryption; CBP

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