



RESEARCH ARTICLE

An Efficient Pixel-shuffling Based Approach to Simultaneously Perform Image Compression, Encryption and Steganography

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Abstract— With fast growing network, many people utilize the internet to transfer digital image information. The need of the time is to implement an extremely securable, economic and perfect system of image encryption that can be well protected from unauthorized access. Also, the bulk size of the image data produces many problems in their transmission via internet. So, in this paper, a very new and combined approach for DCT based image compression, pixel shuffling based encryption, decryption and steganography is proposed for real-time applications and also comparison is done with the traditional lowly securable key-based encryption algorithm to show the effectiveness of the proposed algorithm.

Key Terms: - Image Security; DCT; Compression; Pixel Shuffling; Encryption; Decryption; Image Hiding; Steganography

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