Image Encryption using Adaptive Pixel Masking under Various Noise Attacks

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Abstract

Cryptosystems have always had tremendous applications in the fields of data security. With ever growing applications of digital images, encryption of images has emerged as a highly sought after area of research. In this present paper, a novel adaptive pixel masking scheme has been introduced for image encryption. Since images undergo degradations while transmission as well as storage, an image degradation model has been designed and simulated for common types of noise and blurring effects. Further a technique comprising of linear filtering has been proposed. It has been shown that the proposed technique achieves improved results in terms of Peak Signal to Noise Ratio and Mean Square Error as compared to previous works. A detailed description of the aforesaid aspects ensues.

References

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**Index Terms**

Computer Science

Image Processing

**Keywords**

Digital Image Processing (DIP), Image De-noising, Peak Signal to Noise Ratio (PSNR), Mean Square Error, Adaptive Pixel Masking.