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Abstract

The simplest method least-significant-bit (LSB) substitution embeds the important data in the least significant bits and introduces small distortion into the pixels of cover image. Many data hiding techniques mainly focused to reduce the distortion of cover image when sensitive data is embedded into the cover image. It also prevents the visual quality degradation of cover image. However, the post processing of stego image or stego image occur transmitting errors. The receiver cannot extract the correct information from the stego-image having any such type of errors. To overcome these problems, a novel method for crypto data hiding within grey scale

image in the spatial domain is proposed, so that the interceptors will not notice about the existence of the important data. The basic concept of the proposed method is to embed the important crypto data in the 4th moderately-significant-bit of pixel of an image. The first 3 LSB bits of image pixel is used for local pixel adjustment to reduce the effect of degradation in the cover image due to moderate bit insertion. Experimental results are performed on four different same size images and shows that the visual quality of the stego image is acceptable. This method provides a higher security and more robust to attacks such as compression, cropping and some other image processing methods than the LSB of stego-image.

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Index Terms

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Communications

Key words

Data-Hiding

Crypto Data

Steganography
Moderately-significant-bit