Abstract

Main goal of steganography is to communicate securely in a completely undetectable manner. It is an art of hiding secret data in an innocently looking dummy container. In the Steganographic process, communication is masked to make the hidden message not discernible to the observer. Hidden message may be textual or image. In this paper, a novel image steganography method based on randomized bit embedding is presented. Firstly the Discrete Cosine Transform (DCT) of the cover image is obtained. Then the stego image is constructed by hiding the given secret message image in Least Significant Bit of the cover
image in random locations based on threshold. DCT coefficients determine the randomized pixel locations for hiding to resist blind steganalysis methods such as self calibration process by cropping some pixels to estimate the cover image features. Blind steganalysis schemes can be guessed easily hence the proposed technique is more practically applicable. Quality of the stego image is analyzed by tradeoff between no of bits used for embedding. Efficacy of the proposed method is illustrated by exhaustive experimental results and comparisons.

Reference

- S. Miaou, C. Hsu, Y. Tsai and H. Chao, A secure data hiding technique with heterogeneous data-combining capability for electronic patient records, in: Proceedin
Randomized Embedding Scheme Based on DCT Coefficients for Image Steganography

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Index Terms

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Key words

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Image hiding

Randomization