While cryptography keeps unknown the hidden content of information, steganography provides a higher level of data security by making even the existence of hidden information secret. It is the art of dissimulating information in digital media considering it as an unremarkable support. In this paper, we propose a new two methods of image steganography by using Haar discrete wavelet transform. The secret data are hidden in the frequency domain to minimize the distortions occurring on the cover during the steganographic process. The floating point in the coefficients of the transform can cause a loss in information. To prevent this problem, data is embedded in the integer part of high frequency coefficients in such a way that increases the imperceptibility.

Extensive experiments on variety of images were performed and the results show that the proposed methods provide better image quality and a high imperceptibility in comparison with prior works. This was achieved using a random key that scrambles the location of the pixels.
where data is hidden.

References


Index Terms

Computer Science Image Processing
Keywords

Steganography, Hiding information, Haar discrete wavelet transform, Imperceptibility, Random key.