A New Data Hiding Approach in Images for Secret Data Communication with Steganography

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Abstract

In this paper, a new secret data hiding and communication is proposed for natural images. In this proposed methodology. The aim of steganography is to hide an information message within harmless cover medium in such way that it's not possible even to observe that secrete message. It doesn't replace cryptography however rather boosts the security using its obscurity options. In the projected its obscurity features. In the proposed algorithm we have used second order differential equation to hide the data which improve the security level of hidden data. In encryption, information is transformed in such a way that it cannot be detect by hacker. But during encryption, message is changed so it become distorted and intruder may suspect about the presence of important information. For this skin tone detection is performed using HSV (Hue, Saturation and Value) color space. Additionally secret data embedding is performed victimization frequency domain approach – DWT (Discrete wavelet Transform), DWT outperforms than DCT (Discrete cosine Transform). Secret information is hidden in one of the high frequency sub-band of DWT by tracing skin pixels therein sub-band. Totally different steps of data hiding are applied by cropping a picture interactively. The output of our technique
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provides higher results because with the assistance of cropping an increased security than hiding data while not cropping i.e. in whole image, thus cropped region works as a key at decryption aspect. thus with this object destined steganography we have a tendency to track skin tone objects in image with the higher security and satisfactory PSNR (Peak-Signal-to-Noise Ratio).Modern steganography’s goal is to stay its more presence undetectable.

References

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Index Terms

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Keywords

Steganography, DWT, Data Hiding, RGB, Second order differential equation