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Abstract

Communication security has taken an important role with the advancement in digital communication. The difficulties in ensuring an individual's privacy has become increasingly challenging. Techniques such as digital watermarking, cryptography and Steganography are used for information hiding. This paper introduces a new Steganography algorithm to hide data inside images using three layer image shielding. Steganography is the art and science of hiding the existence of data in another transmission medium. It helps in achieving a secure and safe communication. The proposed algorithm uses spatial domain Steganography technique in the transformed color space. Here the three layers RGB (red,

green, blue) of the cover image are transformed to HSV (hue, saturation, value) layers. The pixels of any two HSV layers are used to embed the message inside it. The remaining layer act as an indicator to store and retrieve the message from the other two layers efficiently. The final image is the stego image. Different sizes of data are stored inside the images and the PSNR (Peak signal-to-noise ratio) is also captured for each of the tested images. Based on the PSNR value of tested images, the stego image has a higher PSNR value.

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Index Terms

Computer Science | Security

Keywords

Steganography Spatial Domain Psnr Cover Image Stego Image.