A Secure Method for Data Hiding in Encrypted Image using Progressive Recovery

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Authors:

Bhakti Narayan Patil, Sanyukta Bhaskar Patil, Mansi Kailash Patil, Neha Mahyavanshi

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Abstract

The existing paper explains reversible data hiding in encrypted images based on progressive recovery. Image processing is a method to convert an image into digital form and perform some operations on it, in order to yield an enhanced image or to extract some essential information from it. Three parties are involved in the framework, including the content owner, the data-hider, and the recipient. The owner encrypts the original image using an algorithm i.e. stream cipher. The method proposes stream cipher algorithm such as the AES (Advanced Encryption Standard) and uploads cipher text to the server. The data-hider on the server divides the encrypted image into three channels and respectively insert different amount of additional bits into each channel to generate a marked encrypted image. On the recipient side, additional message can be extracted from the marked encrypted image, and error free image can be recovered. Reversible data hiding is a technique used to recover original content it can be perfectly restored after extraction of the hidden message.
References

Index Terms

Computer Science

Image Processing

Keywords

Encryption, Decryption, Reversible Data hiding, scrambling, intrasrambling, AES algorithm