Abstract

Security has become an important issue with the proliferation of digital communication. Multimedia sources such as images play an important role in security of data communication. Data hiding technique can be used to implant secret data in host images where existence of data is undisclosed which reduces chances of unauthorized access. Some applications containing legal considerations require recovery of the cover image after extraction of secret data where reversible data hiding comes into view. Limitations of existing data hiding schemes in terms of robustness against digital attacks are major obstacles in the security of hidden data. Content protection scheme that integrates both encryption and data hiding for its protection and
authentication will provide major protection against security attacks. This paper presents an efficient spatial domain reversible data hiding technique and also proposes implementation of image encryption upon reversible data hiding technique to protect the stego-image against attacks during communication. Histogram shifting based reversible data hiding technique results significant embedding capacity and achieve good reversibility property of images. Proposed approach guarantees PSNR 48db or more for most of the images like crowded, semi crowded and textured images.

References

Encryption Protected Reversible Data Hiding for Secret Communication

- Rajkumar Ramaswamy, Vasuki Amurugam, "Lossless data hiding based on histogram modification", The International Arab Journal of Information Technology, Vol. 9, No. 5, 2012

Index Terms

Computer Science  Security

Keywords

Digital Rights Management  Histogram Shifting  Prediction Difference  Mode Value

Entropy

Correlation