Gurumukhi Text Hiding using Steganography in Video

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Abstract

Revolution in telecommunication systems has made the secret information vulnerable to many types of attacks. Steganography provides a method to conceal the very existence of secret message. Due to tremendous growth in technology, secret messages are getting exchanged in many languages other than English through different media like images, videos, and audio and text documents. Video Steganography has become a popular topic due to the significant growth of video data over internet. This paper presents an effective LSB based approach to disguise encrypted Gurumukhi text inside a video. In this paper, besides employing the modified LSB substitution technique at a fundamental stage, advantage of refined OPAP, Canny edge detection and identical match techniques has been taken to improve the results. To provide dual layer of security AES techniques has been used to permute the message before embedding it. Experimental results shows enhancement in security performance, embedding capacity, Bit Error Rate (BER), Peak Signal to Noise Ratio (PSNR), Mean squared error (MSE), Histogram Error values after implementation of this hybrid approach as compared to other video Steganography techniques.
References


Index Terms

Computer Science  Pattern Recognition

Keywords
AES, BER, PSNR, Histogram Error, MSE, LSB, OPAP