Abstract

Data embedding techniques embed the secret image into another image for increasing the privacy. The data embedding techniques can also be substituted to the videos so that the confidentiality of the image, video, and the embedded data can be maintained. In this paper, multiple compression techniques such as Principle Component Analysis (PCA) based method, Set Partitioning in Hierarchical Trees (SPIHT) algorithm and fuzzy concepts are analyzed. The embedding techniques are classified into two types such as digital image watermarking and data hiding algorithms. The digital watermarking techniques like Discrete Cosine Transform (DCT), Discrete Wavelet Transform (DWT) and Least Significant Bit (LSB) are surveyed. Further, the data hiding techniques such as H.264/AVC video stream and MPEG videos are analyzed. In the survey results, it is clear that the existing techniques do not efficiently restore the compressed image, the pixel information is lost during the transformations. Further, the existing techniques have increased time complexity and computational complexity.

Index Terms

Computer Science  Image Processing

Keywords

Principal Component Analysis (PCA), Set Partitioning in Hierarchical Trees (SPIHT) algorithm, Least Significant Bit (LSB), Discrete Wavelet Transform (DWT), Discrete Cosine Transform (DCT), Fuzzy.