Abstract

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Information Hiding Process in a Steganographic System

Steganography is the art and science of hiding information through communication channel a steganographic system thus embeds hidden content in unremarkable cover media so as not to arouse an eaves per's suspicion. The embedding process creates a stego medium by replacing these redundant bits with data from the hidden message. Modern steganography's goal is to keep its mere presence undetectable. Steganography can be applied on different media types such as Text, Audio signals, and Images. The Least Significant Bit (LSB) ion method is probably the most well known image steganography technique. Unfortunately, it is extremely vulnerable to attacks. Discrete Cosine Transform (DCT) and Discrete Wavelet Transform (DWT) are algorithms used in Steganography Systems which hides the secret message in these transformation domains. In this thesis different types of steganography techniques that uses spatial and transformation (spectrum) domains will be addressed then new secure steganography system that uses discrete transforms (Discrete Cosine Transform (DCT) Discrete Wavelet Transform (DWT)) will be presented. A comparison among these different techniques using Peak Signal to Noise Ratio (PSNR) and Root Mean Square error (RMS) measures is done to distinguish between these different techniques. These steganography techniques are implemented using five standard images to realize effective comparison.