

Frequency of Occurrence Hybrid Watermarking Scheme

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Abstract : Generally, a watermark is information that identifies the ownership of multimedia (text, image, audio or video files). It is achieved by introducing modifications into these files that are imperceptible to the human senses but easily recoverable by a computer program. These modifications are done according to a secret key in a descriptive model that would be either in the time domain or frequency domain or both. This paper presents a procedure for watermarking by mixing amplitude modulation with frequency transformation histogram; namely a specific value is used to modulate the intensity component Y of the YIQ components of the carrier image. This scheme is referred to as histogram embedding technique (HET). Results comparison with those of other techniques such as discrete wavelet transform (DWT), discrete cosine transform (DCT) and singular value decomposition (SVD) have shown an enhance efficiency in terms of ease and performance. It has manifested a good degree of robustness against various environment effects such as resizing, rotation and different kinds of noise. This method would prove very useful technique for copyright protection and ownership judgment.

Keywords : watermarking, ownership, copyright protection, steganography, information hiding, authentication

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