

AUDIO AUTHENTICATION AND COPYRIGHT PROTECTION USING DWT AND ARNOLD TRANSFORM

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ABSTRACT

Digital Audio Water marking involves the concealment of data within a discrete audio file. Digital water- marking is identified as a partial solution to related problems like illegal reproduction and distribution of digital media. The technology of embedding image data into the audio signal and additive audio watermarking algorithm based on one dimensional discrete wavelet transform (DWT) and discrete cosine transform (DCT) for the application of copyright protection. This algorithm is realized to embed a binary image watermark into the audio signal and improve the imperceptibility of water- marks.

The embedding information used is a binary image and Arnold Transform is used for image encryption. In addition, the performance of the proposed algorithm is measured in terms of Peak Signal to Noise Ratio (PSNR). The proposed scheme achieved good robustness against most of the attacks such as requantization, filtering, addition and multiplication of noise. The extracted watermark image quality is shown by considering correlation coefficient (CC) value with a suitable scaling parameter for embedding.

KEYWORDS: Arnold Transform, DCT, DWT, PSNR and CC