

Abstract

Along with the growth of the multimedia system, it provides ease in the distribution of multimedia content, thus the protection of distributed content, such as multimedia copyright protection, becomes an important issue. One of many solution for this problem is digital watermarking.

This final project proposes an implementation of blind digital image watermarking by using Code Division Multiple Access (CDMA) scheme on Discrete Wavelet Transform (DWT) domain. DWT is an accurate model of the Human Visual System (HVS) and a promising environment to apply robust watermarking. While the advantages of CDMA is a watermark that related with Pseudo-random Noise (PN Key) before being embedded in the LH and HL subband of 1-lv decomposed of host image. Through implementation of this scheme is able to increase robustness with minimal impact on image quality. The testing results, from the system had built, demonstrated that the scheme has a good imperceptibility for the normal copyright until copyright with 40x150 pixels, and also robust against lossy image compression and Additive White Gaussian Noise (AWGN).

Keywords: blind watermarking, DWT, pseudo-random noise, CDMA scheme.