ABSTRACT

In this Final Project created a Digital watermarking audio system with the title "Didital Audio Watermarking with Wavelet Transform Algorithm and Complex Cepstrum Transform". Audio Digital watermarking is a way to provide protection for audio files and is done by inserting the desired data, and the final task of this data is a binary image.

The system of Watermarking use the complex cepstral analysis. The complex cepstral analysis is a homomorphic mapping and is the most effective extractionmethod in audio identification. In this method, a pseudo-random sequence was used to watermark the audio signal. The watermark is then weighted in the cepstrum domain according to the distribution of cepstral coefficients and the frequency masking characteristics of HAS.

Two kinds of tests done to prove the capability of this Digital Watermarking, which is an objective test using Signal to Noise ratio (SNR), Mean Square Error (MSE) and Normalized Correlation (NC) and subjectively by using the Mean Opinion Score (MOS). With the resulting SNR achieved 55,4821 dB and the resulting MSE achieved 9,45x10-8. Whereas for the subjective assessment of the average reached 4,65, or can say excellent. In this system also provided the attacks to demonstrate the quality of the audio Digital watermarking is made, the attack is additive white Gauss noise (AWGN).

Keyword : *watermarking, wavelet transform dan cepstrum transform.*