

ABSTRACT

In this modern era, the spreading of information is so fast and digital information is easy to obtain. But, that easiness has caused problems with the copyright piracy. To protect the copyright, there is method named audio watermarking that can embed information to the audio file.

In this final project, spread spectrum is used as audio watermarking method where the original audio is process with log coordinate mapping (LCM) feature first and the embed information is black and white image. The watermark is embedded in the LCM feature, but it is actually embedded in the Fourier coefficients which are mapped to the feature via LCM. With this LCM feature, the watermark is robust against geometric distortion such as time scale modification (TSM), pitch shifting, resample TSM, and random cropping.

The result of this final project is an application based on matlab with watermarking scheme. With this method, the average watermarked audio SNR is more than 20 dB, BER=0, and SSIM score is equal to 1.

Keyword : Audio watermarking, spread spectrum, LCM