

Abstract

Digital media has been replacing the role of analog media in some application. It is caused by the beneficial factor that digital media owned. But, there is one weaknesses from digital media, that weakness is about the protection of digital media copyright. Digital watermarking developed as one of the answer to this problem. Audio watermarking is a process of message insertion that having information of the audio data such as the creator name, date of creation, purpose, and other data without causing any effect on the quality. There's a lot of method that can be used to do watermarking in audio data. One of the method that often used is Phase Coding method.

On this final task some testing scenario will be tested such as extraction time testing, embedded watermark time, watermark durability on signal process testing, and inaudioability on audio watermark testing. Based on those testing it is seen that audio watermarking using phase coding method doesn't have robustness on signal processing like resampling, filtering, and cropping. But beside of that this method also have a beter side on inaudiobility, where the watermark that being embedded can reach 200 character with quality as good as the real one. Fourier transform that being used on this phase coding method didn't have impact on the quality of watermark audio, but the watermark durability that being embedded had impact on the embedded time and watermark extraction time.

Keywords: *Audiowatermarking, Phase Coding, Fourier Transform.*