Abstract

As the expansion of digital technology, all aspects in our life has been touched by technology. In the world of entertainmet, the problem of copyright piracy in which image, sound, and video can be easily pirated becomes the main focus in the recent years. The loss which is due to the unpaid licency is extremely big. Therefore, in the world of digital, the scientists and computer experts develop technology to protect the copyright namely *watermarking* digital technique.

Audio *watermarking* a technique to embed digital data (in this case text or image) into digital audio file (WAV extension) was implemented on this Final Project using STFT (Short Time Fourier Transform) dan SVD (Singular Value Decomposition).

The results of testing using combination STFT and SVD based audio *watermarking* system, show that *watermark*ed audio have almost equal quality compared to original audio file if SNR resulted is above 32.47 dB and *watermark*ed audio quality depend on multiplier coefficient (scale factor) and the *watermark* length. The result of testing show that on multiplier coefficient 0,001 quality of audio file close to it's original. Meanwhile the result of *watermark* robustness test against digital signal processing show that on STFT and SVD based audio *watermarking* system is relative robust to down sampling and compression.

Keywords : *audio watermarking*, *short time fourier transform*, *singular value decomposition*