ABSTRACT

To protect a property so as to avoid the illegal copying of digital audio, a solution is required that is watermarking techniques. There are so many studies on audio watermarking, one of the transformation method is Discrete Wavelet Transform (DWT) and cepstrum. Research uses binary imagery as watermark on audio, so this watermark has resistance to noise attack, LPF, resampling and lossy compression.

This research continues the previous research by adding the AG method as a method to find the optimum value on each parameter of insertion, so that the AG method can give the best parameters in terms of Payload, Robustness, and Transparency.

The results of this study show that AG can determine the proper insertion location so that it has good resistance to LPF attack, BPF audio rock, resampling, echo, speed change, and mp3 compression which has parameter value BER <0.2. For other optimum parameter values ODG> -1, and SNR> 21.

Key Words: *Audio Watermarking, Discrete Wavelet Transform (DWT), Cepstrum, Genetic Algorithm (GA)*