

ABSTRACT

The development of the Internet to change the person becomes fond to split everything in social media, making the preservation of audio not only for the individuals but to be published to the public. However, with free access to data via the Internet, the dissemination of illegal and uncontrolled distribution of the files becomes the owner. Until eventually many complain about the problem file someone who recognized someone else without being able to prove anything. Therefore, developing a science for copyright protection of a file that is very sophisticated. No sense can be seen and heard but seen clearly by digital devices. It is called watermarking. Watermarking is a way of concealing or planting data / specific information into a digital data.

In this research designed audio watermarking system using Discrete Wavelet Transform and Histogram. In this research, used a genetic algorithm to optimize the performance of audio watermarking seen from BER parameter.

The results of this research are ODG > -1, SNR > 30, and BER are close to 0. Audio watermarking tested with attacks such as low pass filter, noise, resampling, time scale modification, pitch shifting, stereo to mono and speed change before optimized generate value of BER < 0.4 and after optimized generate value of BER < 0.07.

Keywords: *Audio Watermarking, DWT, Histogram based Watermarking, Genetic Algorithm.*