ABSTRACT

The development of information technology, especially the Internet and multimedia, delivery and deployment of digital media becomes easier to do. This causes frequent copyright violations, like retrieve and modify multimedia data illegally. To mitigate this, the watermarking is needed. Watermarking technique is useful for hiding or planting data / information in a specific other digital data. How to insert the information into digital data is performed such that it does not feel its presence and can be extracted back correctly. Watermarking system in the audio file which is used as a protection of copyright. This system has the main goal to insert the data into the data in the form bit audio file format. * .wav Where the message is first converted into binary form. Watermarking system to be built using the Discrete Wavelet Transform (DWT) for embbeding and extracting process will be further analyzed using genetic algorithms and processes for insertion method, - average. A system of watermarking audio file. The parameters to be optimized by the genetic algorithm is alpha, subband, and level, these parameters are useful as parameters pengisipan the best. Where to process audio quality testing using parameter PEAQ (Perceptual Evaluation of Audio Quality), MOS (Mean Opinion Score), and BER (Bit Error Rate) is expected to obtain good results where the average PEAQ> -1 and the average MOS> 4 and for testing the quality of the message using the parameters of the system is able to produce value BER BER <5%.

Keywords: Watermarking, Discrete Wavelet Transform, Genetic Algorithm