

ABSTRACT

The latest development of the digital world has greatly facilitated the transmission and manipulation of multimedia data such as text, images, audio or video. Ease of access and duplication of multimedia data has caused serious problems for the protection of the rights cipta. Oleh because it needs the technology to protect digital content to prevent copyright infringement.

Digital watermarking is a technology for a solution to prevent copyright infringement. Digital watermarking is a technique in which an information is inserted into a host-set of data (images, video, audio, etc.) in a way that the information does not interfere with the use of host-normal data and can not be released in a way that always. With blind technique watermarking, the extraction process does not require the watermark information and the original digital audio file.

In this final project implementation and analysis of blind audio watermarking system using QR Decomposition with bits insertion technique using QIM techniques. From the test results, obtained on average SNR > 20 dB when the system is capable of producing variable Δ BER value of 0% on any type of audio that was tested with all of the variables Δ . Blind audio watermarking systems are made highly resistant to linear speed change shows BER 0 level attacks 32k, 64k, and 128k. In Addition Noise attack BER 0 when parameter gain 1/100. LPF attack, the system created lasting only at the level of the cut-off frequency of attacks 19000. For MP3 and MP4 Compression Compression can not give a BER value of 0%, so the system can not stand against such attacks.

Implementation of QR Decomposition method in blind audio watermarking with quantization QIM is made to run well. The system can reach a value of 0% BER and SNR above 20 dB, and ODG more than -1. Robustness of the system only in a linear attack speed change, addition and LPF noise at a certain level and not resistant to attack Compression MP3 and MP4 Compression.

Keyword : *Blind audio watermarking, QR Decomposition, SNR, MOS, BER, Robustness.*