Abstract

As the time, digital data is growing rapidly, in digital data that must be considered, that is the spreading of digital data aunthentication. The authenticity of digital data is very important, for example images, audio, and video, especially in the medical and military. Watermarking is the solution of this problem Watermarking can enter the secret data into other data for such purposes, there are two types of watermarking, reference watermarking and signature watermarking. Reference watermark is uses to detect the authenticity of a digital audio if the audio has been modified or not. The watermark will be destroyed if the digital data have been modified. And signature watermark is uses for claimed ownership that the watermark will nit destryed if that data got modified.In conventional watermarking the some of original data will be lost in watermarking process. In its development that found reversible watermarking that allow to delete the secret data that has been submitted to restore data to its original.

In embbeding process to digital data is using least significant bit modification method to a data that has been converted into a wavelet with integer wavelete wavelete transform. The Secret data will be inserted into data digital. The secret data is an original audio that has been hashed by secure hash algorithm 256 (SHA-256) that purpose to data authentication. In testing watermarked data will be tried for an attack to determine robbustness. In this last project used noise AWGN and LPF filter to attack and used Peak Signal to Noise Ratio (PSNR) to evaluate performance of the system that produces a value greater than 70 dB.

***Key Word**: Reversible Watermarking, Audio, IWT, LSB Modification, SHA-256.*