

ABSTRACT

The number of plagiarism and copyright infringement is impact of technology. To resolve this problem, it needs a technique of concealment of information or data as copyright on a particular media where the data must be resistant to attack which called watermarking. In this paper, we will analyze combined audio watermarking with Stationary Wavelet Transform (SWT) and Cepstrum method in Compressive Sampling (CS) framework.

SWT is a wavelet transformation algorithm designed to overcome the lack of translational-invariant Discrete Wavelet Transform (DWT) and cepstrum method has great robustness from sundry attack. Before the embedding process, the watermark changes to one dimension and then adds a little header for the sync process to perform the CS encoding. Then host the audio will be on the attack and in the extraction. The extraction of a watermark is done by means of manipulation Statistical method (SMM) and host audio within the domain of the cepstrum. After doing some process, embedded data and info will be tested successfully or not taken.

In this final project compared results of watermarking process prior to insertion of the data and after the extraction is done on a watermarking attack. In this research, optimized audio watermarking and tested with several attacks. Obtained the best parameter value is $N=1$, $N_{frame}=512$, $threshold=0.9$, $typew=1$, $alfa=0.004$, $nblock=8$, $nbsi=10$ dan $alfass=0.3$. the piano audio type has the parameters of the best durability and quality values with $SNR\ value > 20\ dB$ and $SNR < 10\%$ and $ODG > -1$.

Keyword: *Audio Watermarking, Compressive Sampling, SWT, Cepstrum*