

## ABSTRACT

Currently, telecommunications and information technologies experience a rapid development, so that information around us can be broadcasted to anywhere very rapidly. Sharing information in multitude may lead to many unexpected risks. There are many ways to commit crimes such as data manipulation done by certain party which can harm others both material and non-material.

Many things such as ownership should be protected in term of its copyrights and authenticity. Sounds, images and videos are digital data that are prone to be tapped and to be claimed by irresponsible people. In this term, technology which protects information data to minimize illegal data spread is very needed to provide a sense of security to the owner by protecting copyright from hackers.

Audio watermarking is a technique for inserting data in the form of sound without affecting the original quality. As for actions that can be done to maintain the originality and protect the sound hosts, watermark techniques use several criteria such as robustness and imperceptible. Application of some methods on the sound hosts is expected to provide safe protection in overcoming the existing problems. This final test would do “**Designing and Analyzing *Discrete Sine Transform (DST)*-based *Audio Watermarking Using Lifting Wavelet Transform (LWT)* and *Centroid Methods*”.**

The result of the research shows that watermaking audio system which has arranged has good endurance parameters toward attacks of LPF (3K,6K,9K), BPF (25-6k), Re-sampling (22,05k, 11,025k, 16k), TSM (1%, 2%, 4%), LSC (1%, 5%, 10%), Compression MP3 (32k, 64k, 128k, 192k), and compression MP4 (32k, 64k, 128k, 192k) in which obtained BER is <10%, 24,3625 dB SNR value ,and it has big payload parameter with 689,0625 bps

**Keywords :** DST, LWT, *Centroid, Audio Watermarking, Watermark*