

ABSTRACT

In present day, information and communication technologies are increasing quickly and sophisticated. The exchange of information can be done wherever and whenever by using the internet in real time. But behind the convenience provided by the internet technology there are disadvantages in terms of security. Therefore, it takes a technique to be able to secure the informations.

Steganography in stereo audio is a technique to hide data or secret information on stereo audio media without arousing any suspicion of others. In this research will be implemented a stereo audio steganography system in time domain by using Compressive Sampling (CS), Lifting Wavelet Transform (LWT), and Singular Value Decomposition (SVD) with synchronization and Quantization Index Modulation (QIM) method. First, synchronization of the audio host to determine the location of the secret message insertion, then transformed the audio signal with LWT and decomposed on the singular value matrix by the SVD process. There are two processes that are embedding to embed the secret messages into the host audio and extracting process. Before the embedding process, the secret data is compressed with CS to compress the bits of the message to be embedded. In the recipient extracting process is a process to get the original secret messages that have been embedded.

The results of this study obtained an average value of BER of 0.2. In the audio as host.wav audio, piano.wav, guitar.wav, drums.wav, and bass.wav have performance that is quite resistant to attack compared before the optimization, and has a good SNR value. The best SNR value after the optimization obtained SNR value of 30.0078 dB and the average value of ODG generated equal to -2.1074.

Keywords: *Stereo Audio Steganography, LWT, SVD, CS, SS.*