ABSTRACT

Nowadays, technique to hide a secret message into a specific data or known as steganography is having a rapid expansion. These days various methods of hiding a message can be found easily, even more there are many of unresponsible parties that's using this method for criminal activity. Therefore technique that can detect is there any message which is hidden in a specific data or not is needed. This technique is known as steganalysis. Observation towards distribution of secret messages can be done with this method.

In this final task an analysis of speech signal file with wav format is performed by comparing the statistical features of the signal with two different methods. The first method is using cepstral analysis that performed a low-time liftering in quefrency domain to get the characteristics of vocal tract. The second method is using Mel-Frequency Cepstral Coefficient (MFCC) which is used as a good vector traits for representing the speech signal with 20 mel-filterbank.

Comparison between these two methods are done to know which method is better in statistical analysis to get an output of speech signal that has a secret message inside or not. The obtained accuration value that using 45 train and test file for cepstral analysis method is 51,11%, meanwhile for MFCC is 77,78%. Accuration value is obtained from statistical features that consist of kurtosis, skewness, and standard deviation from both methods using Support Vector Machine (SVM) for its classification.

Key Words : Steganalysis, MFCC, Cepstral Analysis, WAV, Statistics, SVM