Abstract

Pre-processing of speech signals is considered a crucial step in the development of a robust and efficient speech or speaker recognition system. This paper deals with different speech processing techniques and the recognition accuracy with respect to wavelet transforms. It is shown that by applying wavelet transform to the conventional methods the signal recognition
Comparison of Different Speech Feature Extraction Techniques with and without Wavelet Transform to Kannada Speech Recognition

accuracy will be increased by using discrete wavelet transforms and the wavelet packets for clean and noisy speech signals respectively. Results presented in the tabular form, shows the advantage of pre-processing the signals with wavelet techniques gives good results over conventional methods.

Reference

- N. Venkatesh, B. Chethananand, “Tutorial on Kannada speech Recognition using Wavelet and LPC”.
- Nikhil Rao, “Speech compression using wavelets”, ELEC 4801 THESIS PROGEK.
- M.A. Anusuya and S.K. Katti, “Kannada speech recognition using Discrete Wavelet Transform-PCA”, International conference on computer applications-2010,
Dec.24-27,Pondicherry,India

**Index Terms**

- Computer Science
- Signal Processing

**Key words**

- Speech signal
- pre-processing
- Discrete Wavelets
- Transforms (DWT)
- Wavelet packet decomposition (WPD)
- Linear Predictive co-efficient (LPC)
- kannada
- isolated words
- Mel frequency cepstral co-efficient (MFCC)
- RelAive Spectral Transform- Perceptual Linear Prediction approach (RASTA-PLP)
- Euclidean distance