

Abstract

Various systems of today require an identification session because of the system is as a limited user system. So that only users who registered and through the identification session can enter into the system. To ensure this condition, people has developed a variety of identification systems that are reliable. Identification process is basically using the disciplines of PR (Pattern Recognition). With using PR, the media identification which is more complex and uniq and taken directly from the human itself now can be used as a Personal Recognition. The personal media of identification that have been used a lot, such as iris of the eye, ear, skull shape, voice, fingerprints, and DNA.

The goal of this final assignment is developing an identification system with the concept of voice parameter extraction and cross-correlation. The voice extraction is using Linear Predictive Coding and the cross-correlation menthod is using Neural Network with back-propagation algorithm. using. LPC is used because it provides compression and feature extraction parameters at a very good level and has been widely used. The use of Neural Network is aimed to obtain high accuracy of the cross-correlation results in a short amount of time.

The identification system was builted using MATLAB as interface and the entire body system. The system is supported with a GUI using MATLAB so that it can be more practical used by the user. Users can choose to perform a new input directly, identification mode, play sound, and display the graphic of original and estimated signal at one axes block for 300 first sample. With a voice as a medium of identification, the accuracy from the test results has got 20% accuracy rate.

Keywords: *Personal recognition, Linear Predictive Coding, cross-correlation, Neural Network.*