ABSTRACT

Baby crying is a form of activity and the desire of a baby to communicate with other people. But in the handling of many who misinterpret the cry of the baby. As a result the baby continues to cry and his needs are not met. Therefore a baby crying sound detection system is made to make it easier for someone to know the meaning of baby crying.

This study designed a baby crying sound identification system. Input system in the form of baby crying sounds obtained from the database baby language language and recording the sound of crying babies using a smartphone. The sound signal is extracted using Discrete Wavelet Transform (DWT) and Mel-Frequency Cepstral Coefficient (MFCC). The results of feature extraction are classified using the Linear Discriminant Analysis (LDA) method.

The amount of data is 150 training data and 50 test data. The system can identify the sound of a baby's crying into 5 classes namely discomfort, hunger, colds, belching and drowsiness. The best parameters are number of MFCC 20 coefficients, frame size 256 data per frame, DWT at level 1 and Db 8. Accuracy results obtained 94% and computation time 1.5506 seconds.

Keywords: Baby crying, MFCC, DWT, LDA