ABSTRACT

International relations between Indonesia and Korean goes in all sectors, especially in the social, cultural, educational, and economic. The business relationship between Korean and Indonesia is growing now. Interests of Indonesian people increase to Korean culture, led to a desire to learn the Korean language. Korean use different letters with Latin letters, so as to understand the Korean language, previously studied spelling patterns and the letters and then learn the meaning of the Korean language.

In this final project is done the design of Korean text to speech system using a concatenation synthesizer based on diphone. Results recorded in Korean words for text to speech is stored in the database. Recordings are segmented into diphone units. Concatenation of diphone units is done by using Frequency Domain PSOLA algorithm (FD PSOLA). FD-PSOLA algorithm provides the ease of modifying the pitch.

The results of the testing performed by the method based on diphone concatenation and concatenation of FD-PSOLA algorithm, the synthetic speech generated close to a natural human voice and clearly understood. Based on the results of the Mean Opinion Score (MOS) with 30% overlap values yield the most optimal speech synthesis. From MOS ratings obtained, the parameter of naturalness reaches 3.67, intelligibility reached 4.5, and Fluidity reached 3.66. Thus the ability of the system to pronounce the Korean language is good enough.

Key words: Korean language, concatenation synthesizer, text to speech, diphone, pitch.