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TEXT - TO - SPEECH SYNTHESIS FOR
SINHALA LANGUAGE

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(FGS/06/02/08/2004/01)

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Abstract

This thesis is concerned with the Sinhala text to speech synthesis which is an addition to the MBROLA Speech Synthesizer developed by the Facult'e Polytechnique de Mons (Belgium), based on the concatenation of diphones. The motivation behind the project was to fulfill the gap which is existed at present in the research area of Sinhala Speech Synthesis.

The Sinhala voice implementation consisted of several stages. Initially, letter to sound rules, rules for converting words from their orthographic representation to their phonemic transcription and lexicon, a database to store the pronunciation of exceptions, were built. Next, further post lexical rules were written to deal with sound changes between words. This was followed by a number of tokenization rules dealing with homographs and the conversion of symbols and numbers. Numerous shortcomings were identified and these were addressed through improvements to its tokenization and prosodic capabilities. Finally, a diphone database was recorded and processed. The segmental and sentential intelligibility were measured using Segmental tests and considerably success was achieved.