

DEVELOPMENT OF THE PORTABLE SINHALA TEXT TO SPEECH CONVERTER BASED ON MICROCONTROLLER

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Text to speech (TTS) is the process of converting a written text into its audible format. There are many computer based applications have developed for particular purpose. This type of application can be used by dumb person who can't speak, to communicate with others. Most of the available text to speech applications are computer based. Most of them are only available in English language or other common languages. The usability of such computer based applications get limited due to the lack of portability.

The project is focused on Sinhala text to speech conversion process. The concept of Sinhala text to speech can be used to facilitate disable people (dumb) who can't speak, to express his/her ideas with others. Once the written text is given it generates relevant audible output.

Come up with a portable device, which can adhere with Sinhala text to speech conversion is an applicable solution to overcome the lack of portability associated with computer based systems. Due to the portability of such device, dumb person can use it anywhere to communicate with others. Further, portable solution which has a less development cost will be able to introduce as a toy for children to practice Sinhala pronunciation.

The objective of the phase one of the project is to develop a fully functioning computer based Sinhala text to speech conversion system. The computer based system is mainly to demonstrate and identify the method of implementing Sinhala grammar rules associated with Sinhala text to speech conversion scenario.

Phase two of the project includes the partial development of portable Sinhala text to speech convertor based on microcontroller. Under the partial development of portable device, it has justified the procedure and aspects which leads to come up with a fully functioning portable Sinhala text to speech converter, as a low cost solution.