

Real Time Text to Braille Converter

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Abstract

Writing is a very effective means of communicating our thoughts to people. We use scripts provided by the language to convey our thoughts to paper. However, in case of people who don't have the sense of vision, they use a different type of script, known as Braille, named after its founder, Louis Braille.

Braille scripts are used by visually impaired for their communication purposes which is quite different from what the sighted use. It uses the sense of touch, though this script is very useful for communication amongst the blind, it suffers from several shortcomings such as real time conversion is not possible. We propose to tackle this problem by constructing a Braille hardware which enables real time conversion of text. Every stage in the conversion process is examined and an attempt is made to improve each stage. This unique method of conversion in which text is read serially or extracted from an E-book is converted to Braille characters, can be easily felt by the visually impaired. The proposed software uses embedded C and python languages and output from the program module is fed to Braille hardware where the sensation of touch is enabled. The proposed hardware uses servo motors and a Braille pad for its construction. This proposed method of our project can overcome several shortcomings found in the existing Braille hardware and hence demonstrates better performance.

Keywords

Braille hardware — Real time conversion — Serially — Embedded C — Python

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Project Guide

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