ABSTRACT

It is inevitable that the digital technology devices is currently rapidly develop. Humans are not depending on paper media to be able to enjoy a wide variety of reading content . Many digital media has replaced the paper functions as a reading content media . Humans prefer to use applications that are embedded in electronic devices such as tablets and mobile phones to read a passage content . On the other side of the development of digital technology , there is a minority man with limited vision can not enjoy this service . Making converter text to braille for the visually impaired is expected to create a Braille cell that can represent the character of the existing text in the file with extension txt..

This device consists of three main parts. The three parts are USB storage as data input , Raspberry pi as a data processor , then the output of braille character can be viewed on braillebox . Core function of this tool is to convert the alphabetic characters contained in text format files into braille characters that can be displayed on the braille box . The process begins when a USB storage in connect with the usb port on the Raspberry pi , then the file that has the text format will be detected . In the Raspberry pi characters coming in the form of the alphabet will be defined in a braille character . In the Raspberry pi characters coming in the form of the alphabet will be defined in the Braille characters. The output of the process is shown in braille cell.

The results of this study are a series of Braille cell that can represent dynamically Braille character according to the digital format data input. Results legibility of Braille characters through cell Braille format using electromagnet is 100%. With such high legibility results, this Braille cell characters using electromagnets can be developed into a reader module element in more complex content.

Keywords: Braille, Read, Tool