ABSTRACT

Can’t be denied that the development of telecommunications technology is currently very rapid. Distance and time are no longer a major obstacle for humans to telecommunicate. A lot of kind of telecommunications features offered to solve requirement long distances telecommunication. One of the most effective telecommunication services are SMS (Short Message Service). But there are some groups of people with limited vision can’t enjoy this service. Through the production of this tool, the writer hopes to create a tool for the visually impaired in reading the SMS so that blind people can enjoy the service.

This device consists of three main parts. They are the GSM module as receiver of the message, the minimum system microcontroller as the main controller, and hardware as viewer Braille characters. Core function of this tool is to convert the alphabet characters in the HP screen into Braille characters which can be displayed on the Braille box. The process begins when the GSM module receives text messages from the sender, and then the message data proceed to the microcontroller using a serial connection. In the microcontroller alphabet characters are separated each other and they are defined in the Braille characters. The output of the process is displayed on the Braille box. Braille box is a hardware using electromagnetic principles that can bring out the points which reflect the Braille characters.

The result achieved is a series of blind tool that is able to convert alphabetic characters into braille characters. Where such a device can be used as a tool to read the sms for the blind. Data obtained at the time tried to blind of 170 characters, which read as many as 142 characters. From these results the failure rate of the tool is still fairly high at 16%, because the manufacture of hardware Braillebox manually using the hand. It affects for accurantion rate for Braille is read.

Keywords: Telecommunications, SMS, Braille.