

PORTABLE BRAILLE – A MOBILE BASED COMMUNICATION SYSTEM FOR VISUALLY + IMPAIRED PEOPLE

Ms.Anin Manjusha.A^{*1},
*Assistant professor,
Department of ECE,
DMI college of engr.,Ch-123.

D. Kannadasan^{#2},
IV Year, Department of ECE,
DMI college of engr.,Ch-123.

T. Kalaiselvan^{#3},
IV Year, Department of ECE,
DMI college of engr.,Ch-123.

B. Avinash^{#4}
IV Year, Department of ECE,
DMI college of engr.,Ch-123.

ABSTRACT:

The main objective of this project is to provide a complete solution to communication difficulties for visually impaired people . In mainly We are facing India is now a home to the world's largest number of blind people. Technologies are developed day by day principally in communication through mobile phones which plays a crucial role. In out Method using this Braille System both reading and replying the messages possible by visually impaired people. In this system using Braille technology the blind people can access the message application in mobiles as a normal people. At the same time keypad using one by one messages will be sending in the based on the keypad options by user can easily send the information's through Message . Easily Blind People Message getting via GSM for mobile service communication.

I. INTRODUCTION

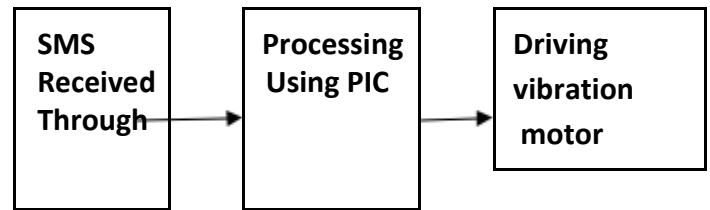
The SMS reading recognition system for blind people available in the market are mainly based on text to voice conversion. The drawback of this system is, in crowded place the blind person might not be able to hear and have to keep earphone plugged in ears which hurts ear if earphones are plugged in for long time. There is few system which converts text to vibration, but it requires smart phones. We have designed a system that converts text to speech and it doesn't require use of phone by the user. Here the user he/she receives the SMS that gets converted to vibrations similar to Braille pad using PIC microcontroller. Signal will be sent to a glove that will be worn by a blind person which will contain vibration motors which resemble the Grade-1 Braille dots. The SIM card is kept in a slot through which the text input goes to microcontroller, the a program in microcontroller converts the info into Braille characters.

II. LITERATURE SURVEY:

In this system have clearly mentions that the user will be able to send the SMS to blind and converts the same into Braille language by using a look up table present in its memory. With the help of six relays the Braille pad vibrates making a blind person to read SMS. The android version being an open source has been heart of this project. Whilst our project has a cutting edge over this concept as our project is android free, uses a programmable PIC microcontroller and vibration motors which makes our project cost effective (Rs. 2500/-).

III. EXISTING SYSTEM:

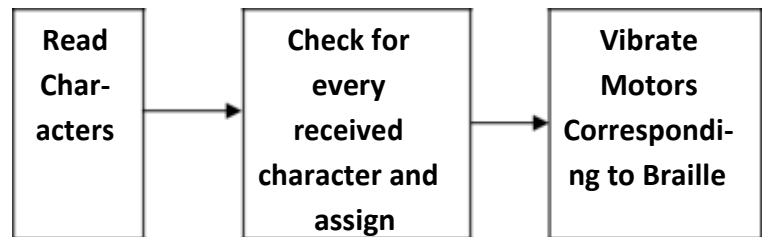
Existing System is an includes a smart glove that translates the Braille alphabet, which is used almost universally by the literate deaf blind population, into text and vice versa, The wearer can perceive and interpret incoming messages by tactile feedback patterns of mini vibrational motors on the dorsal side of the glove. Such as remote communication, as well as parallel one-to many broadcast. A Braille writer through which the deaf blind and the blind persons can write the Braille script.



SMS is received from the sender through GSM. Power Supply of 12V is provided. 5V voltage regulator is used convert 12V to 5V. Relay is having jumper so directly 12V is given. Vibration motors' operating voltage is 3V. Voltage regulator is used to convert 5V to 3V. SMS received is sent to PIC Microcontroller through serial input port RS232. A set of code is used is used to read the characters from the SMS and drive vibration motors in way that is analogous to that of Braille Pad. Six Relays are

IV. PROPOSED SYSTEM

The Proposed System help the blind people to communicates the message through SMS to a remote access. But here, using this Braille system both reading and replying the messages possible by visually impaired people. This system helps the blind people can access the message application in mobiles as a normal people. At the same time, the keypad is used to send one by one message based on keypad options so the user can send the information through messages easily. This system is also applicable for uneducated people.



used to drive Six Vibration Motors.

V.DESIGN OF SYSYTEM:

SMS is sent to the visually impaired person's phone number. SMS is received by the GSM. The received SMS is goes through a set of codes so that it can vibrate the vibration motors similar to the vibration of Braille Pad.

ADVANTAGES

- > Fast Refresh Rate.
- > Low Cost.
- > Portable.
- > Small Size.
- > Easy Access.

DIS ADVANTAGES

- > Requirements Of High-Voltage Supplies.

- Low Flexibility.

glove and feel vibration on finger on the basis of the text received.

V.FUTURE SCOPE:

- This SMS reading system can be incorporated with simple GSM cell phones
- Reply system can be incorporated with this glove
- Flex-sensors can be used to incorporate reply system
- Permutation and combination of different finger movement can be used to assign different characters
- This system can further be extended for e-mails. GSM-GPS module can be used to track the blind person who is wearing the glove
- Training with the kit can done on mass basis if the device gets popularized

VII.REFERENCE:

- 1) A Braille-Based Mobile Communication and Translation Glove for Deaf-blind People by Tanay Choudhary, Saurabh Kulkarni, Pradyumna Reddy, 2016

VI.CONCLUSION:

Blind People will be highly benefitted with the help of SMS Reading System using gloves fitted with vibration motors. Anyone will be able to contact blind people from anywhere in the world. Blind people can reply using simple GSM cell phone. Simple cell phones have indentation on the number '5' key and all the character on same key have different duration of vibration. With the help of this feature blind people can communicate with the people they want. We are using a system that doesn't even require a phone to receive SMS. To reply a simple GSM Phone can be used which is highly affordable. SMS received by GSM. Serial Communication Transmission Port (RS-232) is used to communicate between PIC Microcontroller and GSM. SMS goes through a set of code where PIC Microcontroller receives the SMS and vibrates the vibration motors on the basis of text received which is analogous to vibration motors Braille Pad. The vibration motors have been attached to a glove easy use of this device. Blind people can easily wear the