CSP 315

Mobile Text to Braille Converter.

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INTRODUCTION

- The task of our project is to create a product that can the enable blind-deaf to use mobile phones with better ease.
- We plan to build a Braille display which can reflect the contents of a mobile display, so that it can be read and manipulated even by the blind-deaf

METHODOLOGY

- Read the text from the display of the cell phone.
- Transmit it via bluetooth to the Bluetooth receiver connected to micro-controller.
- Microcontroller passes the received data to the Refreshable Braille cells.

BLOCK DIAGRAM

Text obtained from the screen by a screen reader application

Text sent by Mobile Bluetooth

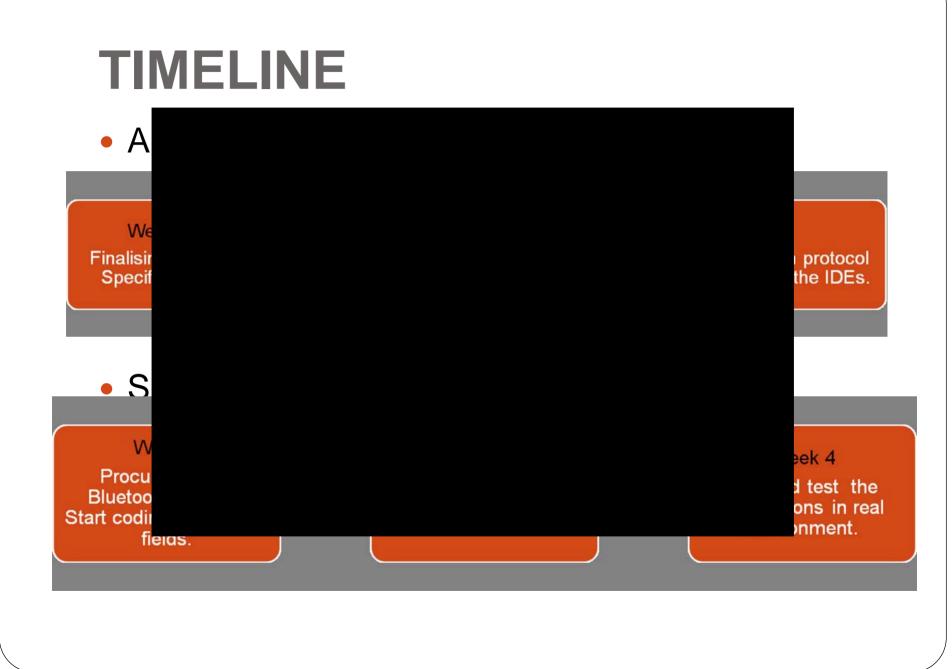
Text displayed on the refreshable braille cells. Data recieved by Blueooth module and interpreted by the microcontroller.

MAJOR TASKS

- The entire work can be split into two major tasks :
 - Development of a Mobile Application that can take relevant data from the mobile screen and send it via bluetooth. The application will essentially function as a Screen Reader.
 - Interfacing a bluetooth module with a microcontroller which can interpret the incoming data and send it to braille refreshable cells.

SPECIFICATIONS

- Software platform for mobile: J2ME (Java Micro Edition).
- Screen Reader softwares :
 - Mobile Speak (compatible with Symbian S60 & Windows Mobile)
 - Nuance Talks (compatible with Symbian S60/S80)
 - NVDA (Free & Open Source compatible with Windows)
- Bluetooth(v2.0 class1) USB Module: approx.
 \$10.95.
- Refreshable Braille Display.
- ARM Development Kit.



TIMELINE



Week 1 & 2 Adding Braille refreshable cells to the system



Week 3 & 4 Final Testing, Debugging and Improvements.

November –

Any work left and Documentation.

DIVISION OF WORK

 Mobile Application Development : Himanshu Nayar and Anshul Malhotra.

 Configuration of Bluetooth Module : Akshay Kumar and Varun Singla.

Thanks Your valuable suggestions are invited.

Web Link : www.mobile2braille.weebly.com