For more Project details visit:

http://www.projectsof8051.com/voice-controlled-wireless-electronic-notice-board-using-android/

Code	Project Title
1065	Voice controlled wireless Electronic notice board using Android

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Synopsis for

Voice controlled wireless Electronic notice board using Android

Introduction

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Voice commands are used to change scrolling message on Electronic Notice Board. Bluetooth is used as wireless communication technique. Android app does the function of speech recognition.

Main concept behind Voice operated Electronic notice board using rolling display is to show scrolling messages and to control them by using our own voice. We have already seen GSM based Electronic Notice board, however speech controlled Notice board has additional advantage of ease of use. User has to give voice command in his/her own voice to control the scrolling messages displayed on electronic notice board.

Voice recognition is done in the Android application. User has to install this Android application in his/her smart phone or tablet. Then user has to give voice commands to this android app. Android

app then passes these commands to the microcontroller using wireless communication. It means user doesn't have to go near the Electronic notice board to change the scrolling message.

Microcontroller receives these commands with the help of Bluetooth receiver and decoder. Then it passes these commands to the Rolling display which is made up of Matrix LEDs.

Dimension of rolling display: 376mm by 72 mm

The complete Rolling display is made up of 6 blocks of individual matrix LEDs. A single matrix display is made up of 8 by 8 LEDs. It means 8 rows and 8 columns of LED which makes it 64 LEDs in one block. So in total there are 48 columns and 8 rows of LEDs. All LEDs are Red in color.

Block diagram
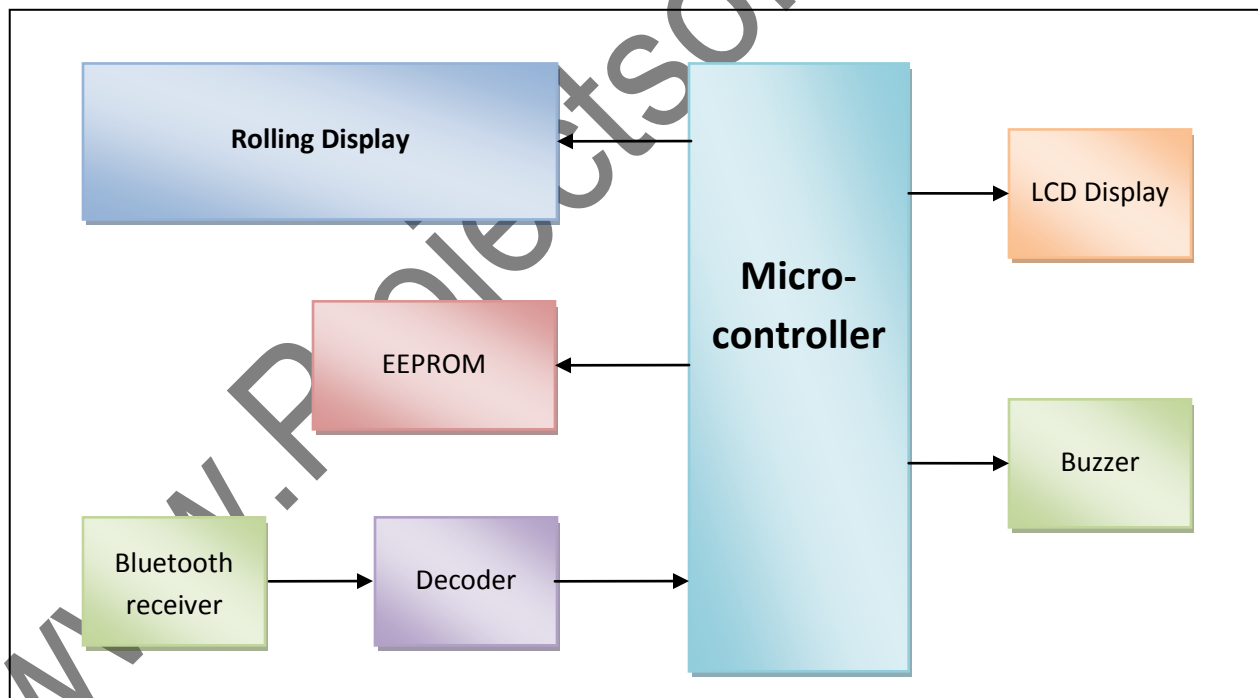
Block Diagram description:

1) Android application to detect voice commands: Android app on smart phone or tablet will be use for speech recognition.

2) Bluetooth receiver and decoder: This device is used to interact with the Android application.

2) Microcontroller: We have used 89s51 microcontroller which is an 8051 series microcontroller. It interacts with Bluetooth receiver, LCD display, rolling display. In short, it is the heart of the system.

3) Rolling Display: This is the main display unit, which shows various scrolling messages.

4) LCD display: It shows various messages. It is an optional device in this project and is just used for testing purpose.

Transmitter / Controlling Unit
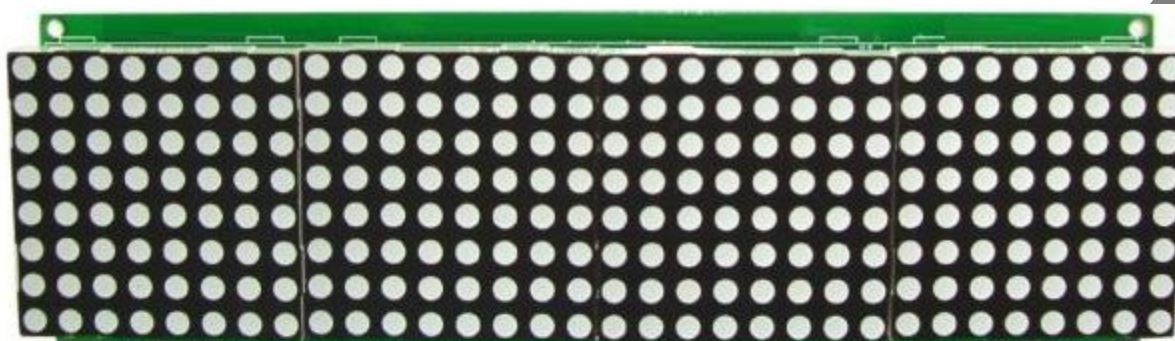
Bluetooth enabled android mobile

Application:

1. Advanced wireless notice board can be used in public transportation areas like Bus stations, Railway stations and even at Airports.
2. Voice operated electronic notice board finds it main application in educational premises like schools, colleges, university campuses. It can be used to display information like exam schedule, notice, event notification and exam result announcement.

Advantages

1. Wireless Notice board is easy to install and easy to use.
2. Speech controlled rolling display is really helpful for disabled people or handicapped people

Future development

1. We can add feedback system in Android app. So that user can get feedback of the action
2. We can implement password so that any other person can not control the system.