Voice based Notice Board Using Android

Pragati Tate[1], Nisha Mohite[2], Shweta Kamble[3], Mousami Gujar[4]

1,2,3Student -Bachelor of Engineering , Electronics & Telecommunication Engineering Department, Dr. DaulatraoAher College of Engineering, Karad , Maharashtra, India.
4Assistant Professor, Electronics & Telecommunication Engineering Department, Dr. DaulatraoAher College of Engineering, Karad, Maharashtra, India.

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Abstract -The era of mobile technology opens the window to the android app. the websites are disappearing and the mobile phones are prominent. It's the time to change from conventional websites and other things to apps, which has become the part of over daily routine. We are introducing the android application software which would convert the voice into text. It works on all android platforms, but also it can work with a working internet. It gives us more comfort and a better user interface. It is easy to use and easy to install Voice controlled notice board has additional advantage of ease of use. User has to give voice command in his/her own voice to control the messages displayed on the electronic notice board.

*Key Words::*Notice Board, Android Application, Information, Smart Phone, GSM, Bluetooth.

1. INTRODUCTION

We come across situations where we need to urgently need to display notices on a screen. For areas likes railway stations and other such as busy facilities the station announcer need not have to type in every announcement message manually on the screen. The display the notice without typing manually. Here, the announcer may speak out the message though her smart phone, the message is then transferred wirelessly and displayed on the screen. The LCD Screen to display the message. The LCD is interfaced with an 8051 microcontroller. We use the Bluetooth receiver to receive android transmitted message, send them to the microcontroller for decode and further into the process. The microcontrollers then display the message on the LCD screen. Use of notice board system can be used in various places including railway stations, offices to display emergency announcement on screen instantly, instead of typing the message at all times.

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Voice controlled notice board has additional advantage of ease of use. User has to give voice command in his/her own voice to control the messages displayed on the electronic notice board. Voice recognition is done in the android application. User has to install this android application in his/her smart phone.

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2. BLOCK DIAGRAM

Block Diagram
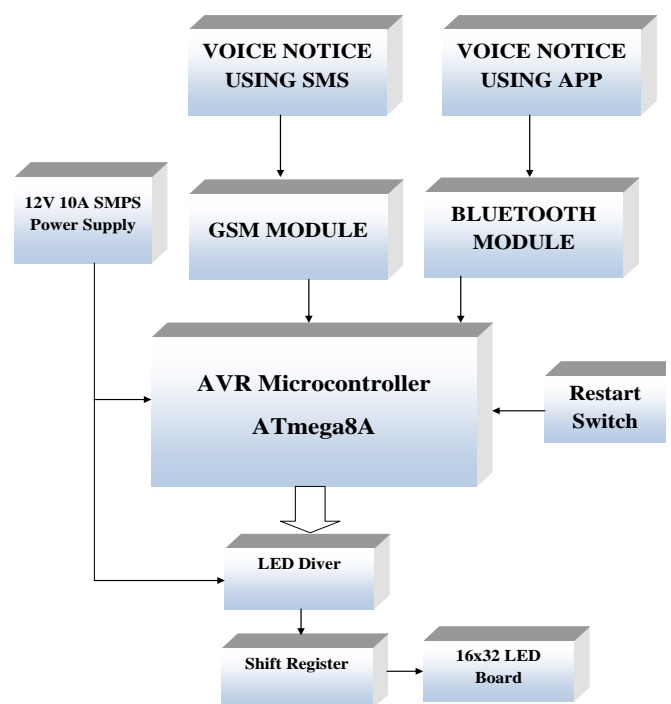
2.1 BLOCK DIAGRAM DESCRIPTION

AVR Microcontroller:

The Atmel   8-bit AVR RISC-Based microcontroller combines 32KB ISP Flash memory with read- while-write capabilities.1KB EEPROM,2KB SRAM,23 general purpose I/O lines,32 general purpose working registers, three flexible timer/counters with compare modes, internal and external   interrupts, serial programmable USART,a byte-oriented 2-wired serial interface,SPI serial port,6-channel 10-bit A/D converter. Programmable watchdog timer with internal oscillator, and five software selectable power saving modes. The device operates between 1.8-5.5 volts. The device achieves throughout approaching 1MIPS per MHZ.

Android Application Device:

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 .Then user has to give voice command to this android app passes these commands to the microcontroller using wireless communication.

Rectifier:

The function of rectifier is to convert AC to DC current or voltage. Usually in the rectifier circuit full wave bridge rectifier is used. in power supply unit   rectification is normally achieved using a solid state diode. Diode has property that wills late the electron flow easily in one direction at proper biasing condition.

The commonly used circuit for supplying large amount of DC power is the bridge rectifier. A bridge rectifier of 4 diode is used to achieve full wave rectification.

Transformer:

A transformer is an electromagnetic static device which transfers electrical energy from one circuit to another, either at same voltage or different voltage but at same frequency. The entire circuit is powered by a 12v supply through a transformer. This innovative system can be used in a variety of places including railway stations, schools, and colleges for displaying emergency announcement on the screen is instantly by just speaking out the message instead of the typing it in each time .

Scrolling Display:

The scrolling display is made up of matrix LEDs.The dimension of scrolling display is 376mm by 72mm.the complete scrolling 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 colour.

Regulator:

Voltage regulator constitutes an indispensable part of power supply section of any electronic systems. The main advantages of the regulator ICs are that it regulates or maintains the output constant, in spite of the variation in the input supply.

The voltage regulators play an important role in any power supply unit. The primary purpose of a regulator is to aid the rectifier and filter circuit in providing a constant DC voltage to the device. Power supplies without regulators have an inherent problem of changing DC voltage values due to variations in the load or due to fluctuations in the AC linear voltage. With a regulator connected to the DC output, the voltage can be maintained within a close tolerant region of the desired output. In this project for providing +12 v and +5v supply.

3. FLOW CHART
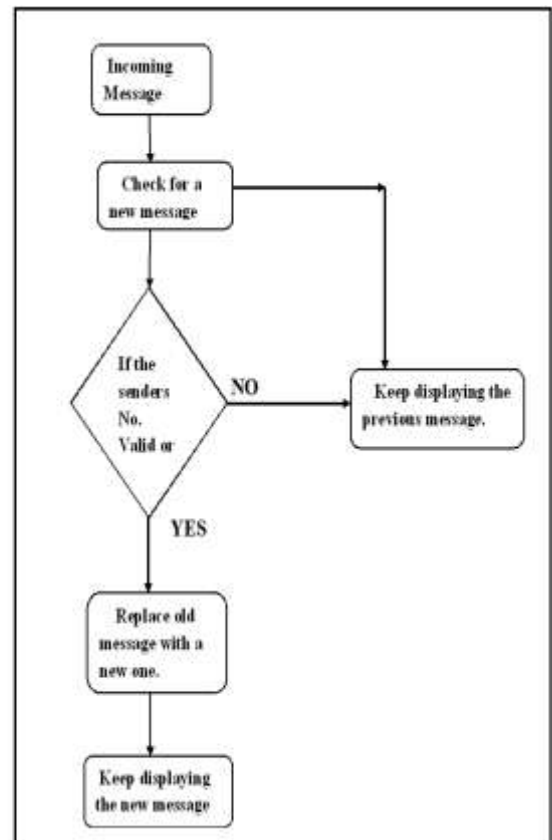
4. CONCLUSION

In this project, By introducing the concept of this technology in the field of communication we can make our communication more efficient and faster, with greater efficiency. We can display the message with less errors and maintenance.

This system can be used in college, school, offices, railway stations and commercial as well as personal used. The above technical paper explains how we can develop as well as modified voice control Android based wireless notice board.

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