

VOICE CONTROL NOTICE BOARD

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Abstract:

Now a days notice board has become an important thing in institutes/organization or public places like railway stations, bus stands and hospitals. But in many places, they are using paper notices stacked on a notice board which is a time taking and wastes a lot of resources like paper, printer ink, man power. We have proposed a system which will enable people to wirelessly transmit notices on a notice board using microcontroller. User has to give voice command in his/her own voice to control the messages displayed on electronic notice board. We can operate the notice board by our own using a smart phone. User needs to install an android application in his/her phone or tablet.

Introduction:

We are living in an era where technology changes day by day, where technology increases rapidly, where we want everything in smart way. So, we engineers proposed a smart notice board in which neither use of paper and nor a wooden frame for attaching the notices. We will use digital notice board where user can control the notice board by own. Simply user needs to install an android application in his/her android phone/tablet.

We come across situations where we need to urgently need to display notices on a screen. For areas like railway stations and other such busy facilities the station master/announcer need not have to type in every announcement message manually on the screen. So here we offer an innovative Android based notice display system which allows the user to display the notice without typing manually. Here the announcer/administrator may speak out the message through his/her android phone, the message is then transferred wirelessly and displayed on the screen. To demonstrate this concept, we here use an LCD screen to display messages. The LCD is interfaced with an Arduino. We use a Bluetooth receiver to receive Android transmitted messages, send them to the Arduino for decode and further into the process. The Arduino then displays the message on the LCD screen. Use of this notice board system can be used in various places including railway stations, schools, colleges, offices to display emergency announcements on screen instantly, instead of typing the message at all times. So that voice-based notice board project is very useful in different organizations.

The system is a low-cost wireless Machine and Cloud based note board system that includes a Wi-Fi transceiver circuit interfaced with a low-cost micro controller to transmit the requested information to the display board instantly. For data transmission using the accompanying transceiver circuit and micro-controller, the communication mode, i.e., Wi-Fi module, is chosen. The application can be accessed remotely via a URL, and any authorized person can log in and review the Notices shown.

Objective of this project:

- Main objective behind Voice operated electronic notice board using display is to show messages and to control them by using our own voice.

- It is the time to change old style notice board to smart digital notice board. For that we proposed voice control notice board. It gives us more comfort and a better user interface.
- We use a Bluetooth receiver to receive Android-transmitted messages, send them to the microcontroller for decode and further into the process. The microcontroller then displays the message on the LCD screen.
- Use of this notice board system can be used in various places including railway stations, schools, colleges, offices to display emergency announcements on screen instantly, instead of typing the message at all times.

Review of literature:

From 20th century voice control notice board playing an important role in many organisations and institutions and also in railway station, bus station. Neeraj Khera and Divya Shukla IEEE 2016[2] has developed an Android-based wireless notice board that seems to be simple and low-cost. Bluetooth or Wi-Fi-based wireless serial data communication has been used in their proposed framework.

Android-based software applications for Bluetooth and Wi-Fi communication between Android based personal digital assistant devices and the remote wireless display board are used for this purpose.

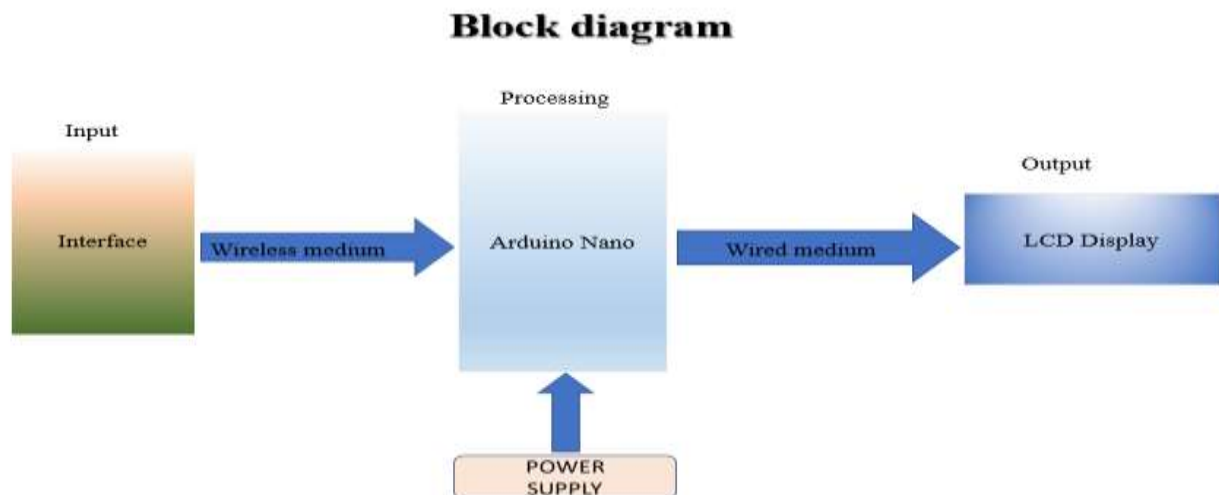
S. Rubin Bose and J. Jasper Prem IJRIER 2017[4] developed a GSM modem that uses asynchronous communication to communicate with the microcontroller and displays the message on a GSM-based LED scrolling display system. The microcontroller sends out AT commands to read the message sent by the user, and the smart notice board provides wireless transmission of information over the network to display the messages quickly.

This system is easy, effective, that can be used in real interactions by anyone, everywhere, with fewer mistakes and maintenance. Multiple LED notice boards are managed by multiple transmissions and message feeds on only one receiver, due to ZIGBEE Technology.

To enhance the messaging pattern, the controller sends many LEDs. The range of wireless communication is limited in this region, and this method can be used. This system proposes a GSM based system with far more display functionality than a programmable system.

Arun Mishra G. Lavanya P. Monika IJCAT 2017[5] developed a system that used a Raspberry Pi 2 as the central server. The Notice boards can only be accessed by using correct credentials on the Raspberry server throughout this system. A Raspberry Pi 2 is in charge of this electronic Notice board system. It should have a valid IP address and also it should be connected to the internet

Block diagram :



Methodology:

- In this project, Arduino is used for controlling the whole process, **Bluetooth module** used to receive the SMS/message sent from mobile phone and **LCD** to display the message.
- When we send SMS from mobile phone to bluetooth module then the bluetooth receives that SMS and sends it to Arduino. Now Arduino read this SMS and extract main notice message from the received string and stores in another string. And then sends the extracted message to 16x2 LCD by using appropriate commands.
- We can send some message or notice like “OK Circuit Digest”, “OK We Welcomes You” through the SMS. Here we have used a prefix in the message string that is ‘OK’. This prefix is used to identify the starting of the message or notice.

Result and discussion:

- An advanced wireless notice board can be used in public transportation areas like Bus stations, Railway stations and even at Airports.
- Voice operated electronic notice board finds its main application in educational premises like schools, colleges, university campuses.
- Electronic Notice Board is one of the applications where WIFI and Raspberrypi can be utilized successfully. It can likewise be utilized as a part of Malls and Highways for Advertisement reason. A moving showcase with variable speed can likewise be utilized as a part of place of static display

Conclusion:

By introducing the concept of this technology in the Field of the communication we can make our communication more efficient and faster, with greater efficiency. We can display the messages with less errors and maintenance. This system can be used in college, school, offices, railway station and commercial as well as personal used. The above technical paper explains how we can develop as well as modify voice control Android based wireless notice board. Wireless operations permit services, such as long-range communications, that are impossible or impractical to implement with the use of wires. It provides fast transfer of information and are cheaper to install and maintain.

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