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## IOT Based Notice Board Using Voice/Text

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**ABSTRACT:** The Wireless Notice Board is familiar to everyone as the Wireless Notice Board is already built using GSM and Arduino. But today by going one step ahead and instead of using GSM as wireless medium, this time in this project using Internet to wirelessly send the message from Web Browser/Mobile to the DOT Matrix LED Display which is connected to NODE MCU. As message is sent through the web browser, so it can be sent using Computer, smart phone or tablet, so it will add one more project in our IOT projects collection. In this Web Controlled Notice Board, in this project a local web server is created for demonstration; this can be a global server over internet. At the Raspberry Pi, an 8x96 LED dot matrix is used to display message and Flask for receiving the message over network. Whenever controller (NODE MCU) receives any wireless message from Web browser, it displays on the LED Dot matrix Display. With this project there are many commercial and as well as domestic applications like Schools, Colleges, Auditoriums, Function Halls, Shopping malls, Offices, Super markets and any advertising purpose these are used.

**KEYWORDS:** IOT, NODE MCU, WEB BROWSER, 8\*96 LED DOT MATRIX DISPLAY

### I. INTRODUCTION

Notice board is an essential information gathering system in our life. In our day-to-day life we can see notice boards in various places like educational institutions, railway stations, shopping malls, bus stations, offices etc. So we can say that Notice boards are the places to leave public information such as advertise events, announce events or provide attention to the public etc. Now a days a separate person is needed to stick those informations on the notice board. It will lead to loss of time as well as usage of manpower. In conventional analog type notice boards paper is the main medium for information exchange. We know that informations counts are endless. So there is a usage of huge amount of paper for displaying those endless counts of informations.

### II. RELATED WORK

In [1] authors introduces a low cost, handheld, wireless electronic notice board by using Atmel's ATmega32 microcontroller and different wireless technologies (Bluetooth and Zig Bee) and their performance analysis based on the parameter such as range, BER (bit error rate), RSSI (Received signal strength indicator), signal attenuation and power consumption. The board receives serial information from wireless module receiver and shows it on the graphical liquid display. We have realized a common communication receiver hardware for notice board having compatibility with both wireless modules i.e. Bluetooth and Zig Bee. We used KS0108 based 128x64 graphical LCD as display element. In [2] authors has developed a simple and low cost Android based wireless notice board. They proposed system uses either Bluetooth or Wi-Fi based wireless serial data communication. For this purpose Android based application programs for Bluetooth and Wi-Fi communication between Android based personal digital assistant devices and remote wireless display board are used. At receiver end, a low cost microcontroller board (Arduino Uno) is programmed to receive and display messages in any of the above communication mode. Using the developed system, two different applications for displaying messages on a remote digital notice board and wireless person calling has been implemented. The developed system will therefore aims in wirelessly sharing the information with intended users and also helps in saving the time and the cost for paper and printing the hardware.

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## III. PROPOSED WORK

The proposed work describes about the designing of wireless notice board using voice/text. We are using internet to wirelessly send the message from web browser / mobile to the dot matrix LED display which is connected to Node MCU. As message is sent through the web browser, it can be sent using computer, smart phone or tablet, so it will add one more project in IOT projects collection.

## IV. BLOCK DIAGRAM

In IOT based notice board system a user can send a message through mobile or laptop or tab or pc. After that the voice messages are converted into text messages with the help of third party app called adafruit. As we are using IOT here which means the network of connecting physical devices, vehicles etc so through IOT the adafruit app gets connectivity with node mcu and then display the converted text message on the notice board that is 8\*96 led dot matrix display which is interfaced with node mcu. To send messages we need internet so for the purpose of internet we are using the ESP8266 Wi-Fi module here which is in-built on node mcu. The block diagram of IOT based notice board system is as shown in the figure 1.

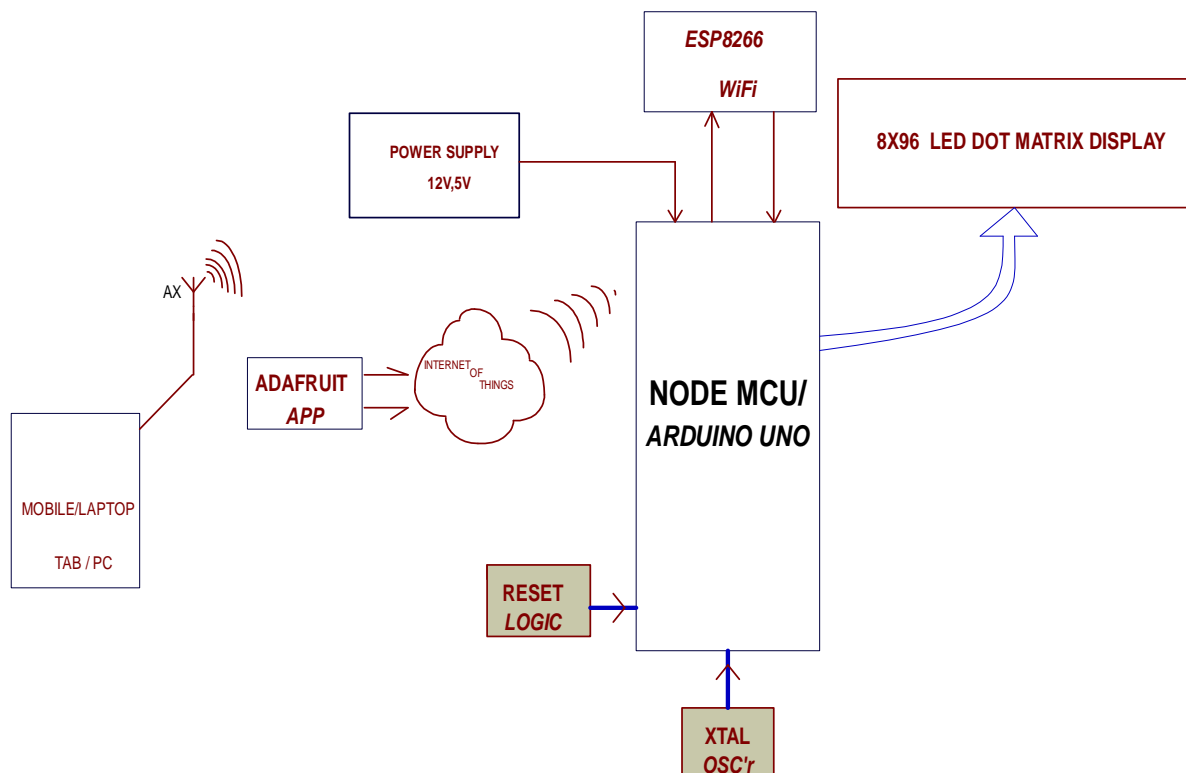


Fig 1: Block diagram of IOT based notice board using voice/text



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## V. CONCLUSIONS

Remote activities allow administrations, for example, long-go interchanges, that are inconceivable or illogical to execute with the utilization of wires. It gives quick exchange of data and are less expensive to introduce and keep up. This project gives an effective method for showing messages on Notice Board utilizing Wireless Technology. It likewise gives client validation to maintain a strategic distance from any abuse of proposed framework. The main purpose of this proposed work is to display the message on notice board easily by giving voice message through the Google assistance and the power consumption is also less as an led dot matrix display is used to display the message. The messages can be send to notice board from anywhere.

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