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LED ADVERTISING E-CIRCULAR NOTIFICATION BOARD USING BLUETOOTH

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Abstract: Notice boards are commonly used in variety of institutions which we come across in a daily basis. In the present generation the advertisement notice boards are beingmanaged manually. This process is difficult to involve in order to put a notice on the notice board. This waste a lot of things like paper printer ink, manpower and also brings the loss of time.

In this project we have proposed a system through wireless transmit notices on a notice board using Bluetooth. It makes the system compatible with more than one wireless technology our project name is "E - circular Notification Board ". In this wireless technology is used to transmit the notice on to the digital display. In this an authorized user will send the data via Bluetooth Module. Bluetooth sends the information to Arduino which will display the data according to the program. The notice can be modified and the required person altered according to client needs.

keywords: Bluetooth module, Arduino, 8x8matrix display,microcontroller,muti terminal

I.INTRODUCTION

In this world Mobile Phones and the related technologies are becoming more and more prevalent. Various technical arenas in the field of Telecommunication and Embedded Systems are becoming omnipresent in the people. The use of cell phones has rapidly increased over the last decade and a half Upgradation in networking technologies has encouraged the development and growth of very dense networks. Now-a-days the general mass prefer communicating while on the move therefore landlines usage has been drastically reduced. Notice boards are one of the widely used ones ranging from primary schools to major organizations to convey messages at large. A lot of paper is been used and which is later wasted by the organizations. This in turn leads to a lot of deforestation thus leading to global warming. Small innovative steps in making use of technology for regular purposes

would have an adverse effect on the environment issues which we are presently concerned about. The main aim of this paper is to design a SMS driven automatic display Board which can replace the currently used programmable electronic display and conventional notice boards. It is proposed to design to receive message in display toolkit which can be used from an authorized mobile phone. The whole process can be described from the transmitter and receiver section. The BLUETOOTH module receives a message from the authorized mobile phone and the message is extracted by the microcontroller from the BLUETOOTH module and is displayed on the MATRIX display board. Serial to parallel communication is used for the entire process from WIFI module to Microcontroller and from microcontroller to the matrix display. And for the acknowledgement LCD display is used. This proposed system in this paper has many upcoming applications in educational institutions and organizations, crime prevention, traffic management, railways, advertisements etc. Been user friendly, long range and faster means of conveying information are major bolsters for this application. By using this proposed methodology we can enhance the security system and also make awareness of the emergency situations and avoid many dangers.

II. LITERATURE SURVEY

Prof. Nawale Shubhangi et.al [1]: In this paper they conveyed a notion to style an SMS based automatic display panel which may restore the contemporary programmable electronic display. it's been proposed to style a display panel that has been programmed via a licensed mobile. This will be utilized in every place where message is conveyed in less time.

Mr. Ramchandra K. Gurav [2]: This paper, had been focused on GSM (Global System for Mobile) technology that designed a contemporary bulletin board." Wireless bulletin board employing a GSM System" it's a wireless module which sends the message wirelessly with the assistance of GSM module. Means user or designated person can equip to send the message from anywhere and therefore the message is displayed on LCD display. Additionally, this message is additionally sent to each one whose number is stored in memory. Everyone receives the message personally. Whenever a replacement message is received it gives a sign by the buzzer.

A. Meenachi et.al [3]: This paper directing on Wireless E-Notice Board Using Wi-Fi and Bluetooth Technology. This paper put forth a new idea of communicating the message to the people working on wireless electronic board which was integrated with the assistance of the Wi-Fi technology. this is often getting utilized in conveying any message almost

instantaneously with none delay just by sending an SMS that's better and reliable than the old regular method of communicating the message on bulletin board. This advanced modern method is often utilized in huge institutions, several busy places, malls or in construction areas to extend the reliability of the safety system and also alert the general public just in caseof any emergency breaks out and avoid any devastating accidents.

Abhishek Gupta et.al [4]: The foremost purpose of this paper being published is to showcase the event of a wireless electronic notice board that shows the message sent from the user and to style a simplistic, easy thanks to install, user-friendly system, which may receive and show the notice during a correct method keeping the aspect of date and time in mind, which assists the user to effortlessly keep the track of the notice board a day and each time the system is employed by the user. GSM and Wi-Fi module for data transmission. In this, paper they used Wi-Fi module for data transmission. during this project, the most drawback of using Wi-Fi is network failure.

R.G.Gupta et al. [5]: In this paper it's primarily being focused on designing an electronic bulletin board for various sectors like schools. The notice is often sent wirelessly within a second. These creative techniques are often wont to display the newest information. The contents of notice are often changed anytime. the thought was to style an SMS based automatic display panel which may reconstruct the present used programmable electronic display. it's been proposed to style a display panel that has been programmed via a licensed mobile. The message to be displayed was transferred through an SMS from a transmitter. The microcontroller collects the SMS and certifies the sent Mobile Identification.

Neenu Ann George et.al [6]: This paper shares out with the implementation of the voice- based system by using Bluetooth with the assistance of the android application. It uses a Raspberry pi. It needs an android application for voice recognition. The communication is formed feasible by using Bluetooth module. the main output of this work being done was to make a sensible bulletin board that worked during a well-organized method that kept track of date and time which helped the user to effortlessly keep in contact of the bulletin board a day and every time he operate the system and convey the knowledge more effectively.

Prof. Leena H. Patil et.al [7]: In this paper it's mainly focused on displaying any message soon with no hold up just by sending voice through SMS display on the LCD. The short messages are displaying on the bulletin board. The developed system will therefore aim’s in wirelessly sending the short information with intended users and also helps in saving the time

and thus the value for paper work. It is user friendly system, which may display notice about information during a particular way .so that the user can help keep track of the knowledge easily a day and each time. Android may be a set of software for mobile devices including Operation System.

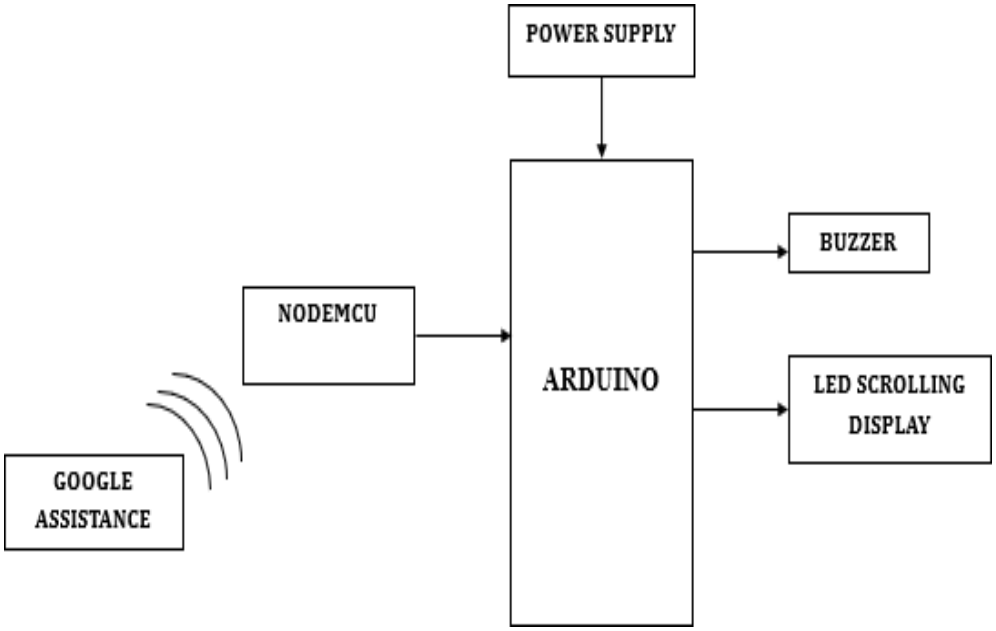
Prachee U. Ketkar et.al [8]: This paper mainly specializes in the difficulties of wiring that we'd like to beat by reducing the complexness within the system design. Majority of the companies are manufacturing audio / video systems like public announcement system, CCTV, programmable sign boards etc. But of these systems are generally hardwired, complex in nature and difficult to expand. So, by including the feature of wireless communication interface like GSM to those systems, we will overcome their limitations.

Smt. M. Baby et.al [9]: In this practical paper sms based wireless electronic bulletin board explains the explanation for establishing an efficient and reliable communication between a mobile and a microcontroller using GSM modem. This GSM based electronic bulletin board has several applications which are very useful altogether domains including banks, stoke exchanges, control public advertisements, educational sector i.e., in schools and colleges etc. altogether the above mentioned applications we'll use a GSM MODEM, but with slightly change in hardware also in conjunction with this we are getting able to explain you ways this applications are mostly utilized in low time-to-market and thus due to development of the software resulting low NRE (Non -recurring Engineering).This technical paper plays a prominent role within the state-of-the-art scenario to develop authentic and pocket friendly products where the important time market is relentlessly shrinking.

III. EXISTING METHOD

This was an implementation to the idea of the google voice communication between a mobile phone and a nodemcu. And that Data is sent to Arduino and this data is displayed on led scrolling display with the help of Arduino.

Block Diagram:



IV. PROPOSED METHOD

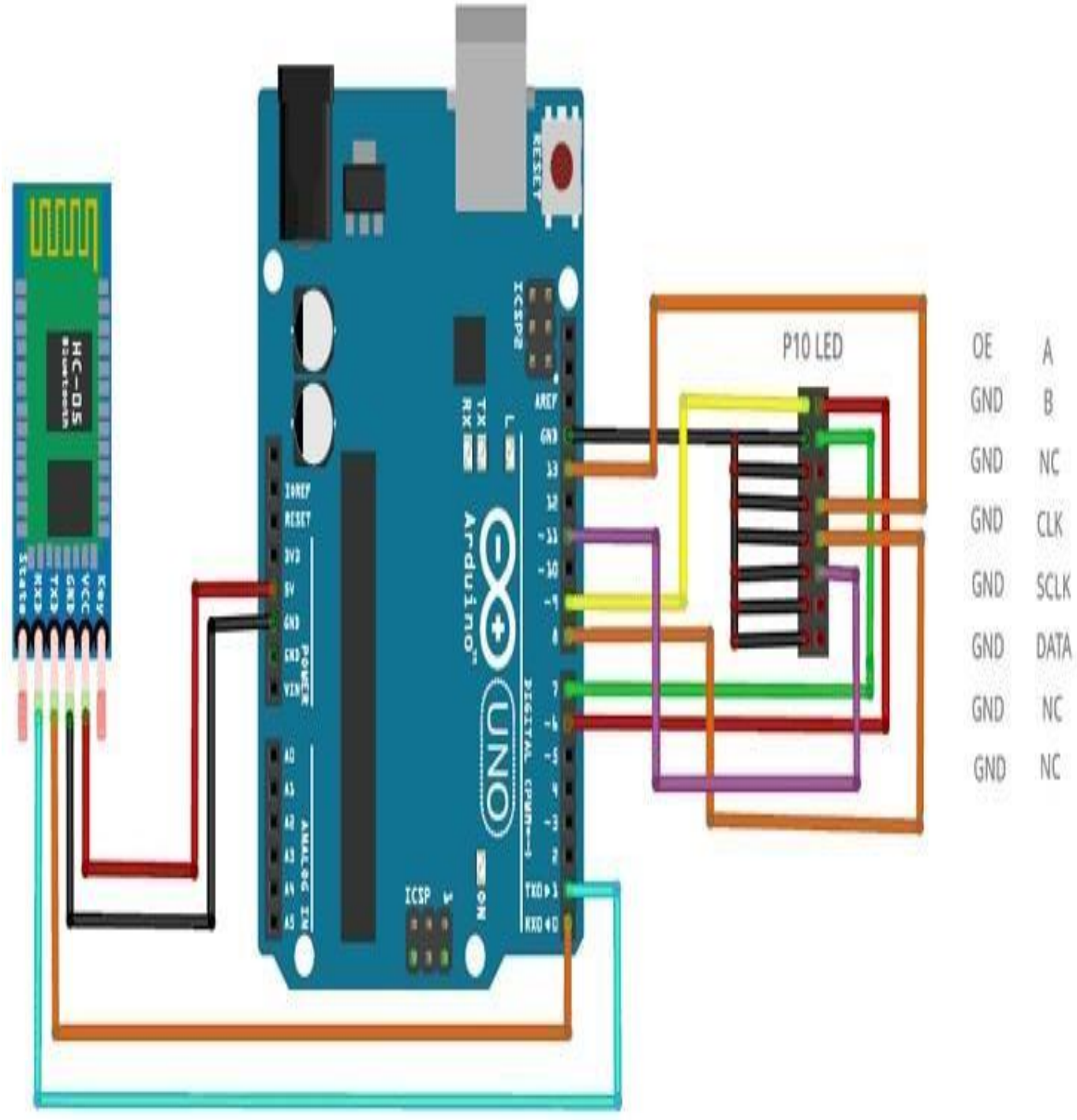
This project is an implementation to the idea of the Bluetooth communication between a mobile phone and Arduino. And that Data is sent to Arduino and this data is displayed on ledscrolling display with the help of Arduino.

A. Operating environment.

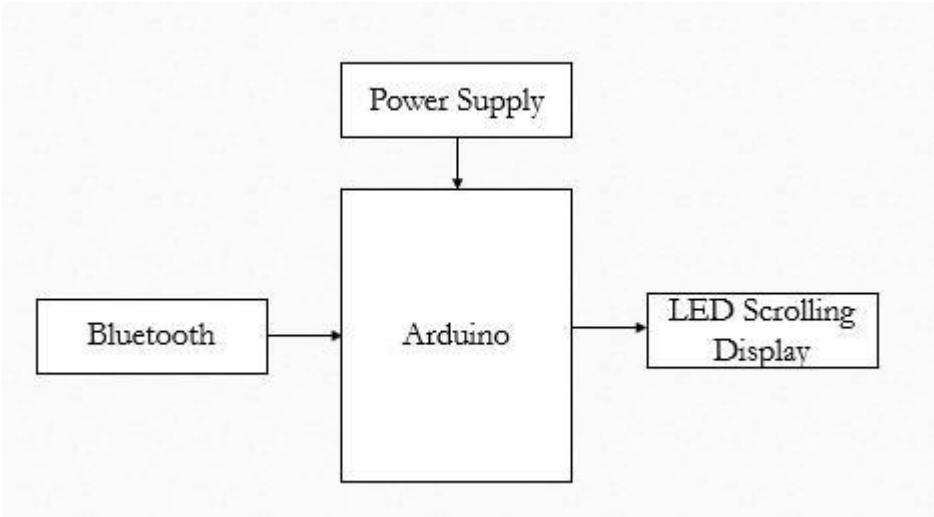
The objective is to be able to stand near the Arduino and casually acquire live data. The equipment is claimed to work over 10m. I have used it over 15m with clear line of sight. One wall of lightweight domestic construction will cut the range to about 5m maximum, and a single layer of foil building insulation can kill it stone dead. This last can mean that indoor to outdoor communication could be pretty risky.

B. Equipment used: 1) A standard Arduino Uno or Mega. Any 5volt Arduino should suffice. 2) An HC- 05 or HC-06 bluetooth module is used. The HC-06 operates as a slave only but is entirely suitable for this exercise. The HC-05 can operate as a master and thus has more commands. I don't think there is

much difference in the price, and its extra versatility may be of value in the future. 3) A means of connection. I use a four-conductor cable to a header on a proto shield. A breadboard lashup would suffice, or female-male leads direct into the Arduino headers. You could solder the module directly into a proto shield. In this event, it would be wise to have a jumper in the 5v line so that Bluetooth can be isolated while the code is uploaded. This may be as simple as running 1k and 2k between Tx and ground. The picture shows an example, Connecting Arduino with Bluetooth.



BLOCK DIAGRAM:



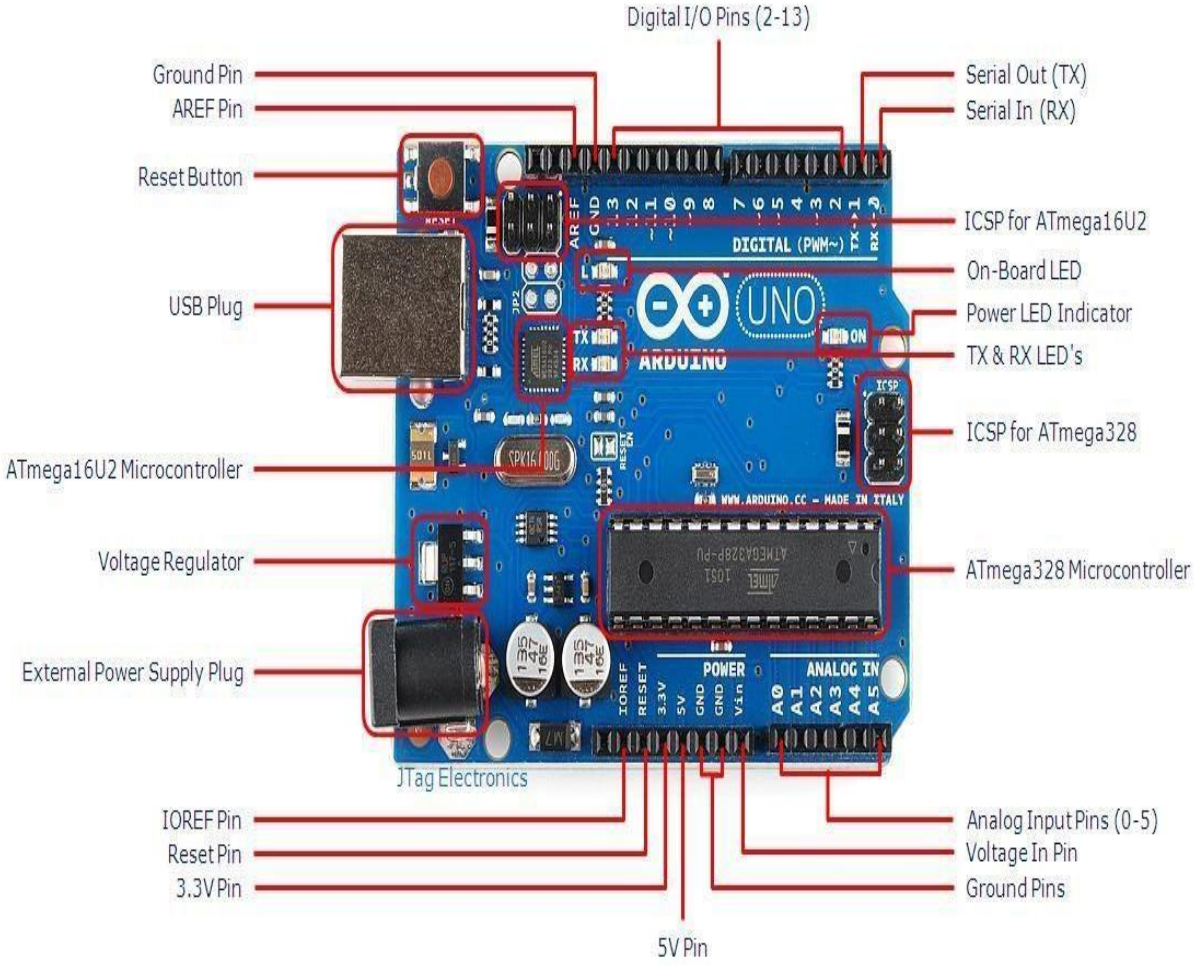
V. NUMBER OF MODULES

LED:

Light-emitting diodes (LEDs) are promising lighting sources for general lighting applications with the promise of being more than ten times as efficient as incandescent lighting. Such characteristic combined with their long operating life and reliability has made them becoming a potential choice for next generation of lighting systems including automotive, emergency, backlight, indoor, and outdoor. To ensure proper operation and to control the light intensity, LEDs need an efficient driver, normally implemented by power electronics-based conversion stages, to match the LED characteristics with the AC grid voltage and to generate a controllable, high quality light.

ARDUINO:

The Arduino Uno is an open-source microcontroller board based on the Microchip ATmega328P microcontroller and developed by Arduino.cc. The board is equipped with sets of digital and analog input/output pins that may be interfaced to various expansion boards andother circuits.



BLUETOOTH:

HC-05 is a Bluetooth module which is designed for wireless comunication. This modulecan be used in a master or slave configuration.

Bluetooth serial modules allow all serial enabled devices to communicate with each otherusing Bluetooth.It has 6 pins,

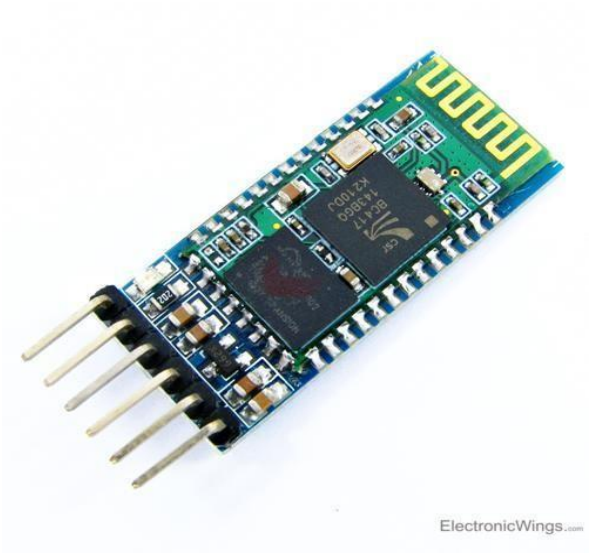
VCC: Connect 5 V or 3.3 V to this Pin.GND: Ground Pin of module.

TXD: Transmit Serial data (wirelessly received data by Bluetooth module transmitted outserially on TXD pin)

RXD: Receive data serially (received data will be transmitted wirelessly by Bluetoothmodule).

State: It tells whether module is connected or not.

It is used to bring Bluetooth module in AT commands mode. If Key/EN pin is set to high, then this module will work in command mode. Otherwise by default it is in data mode. The default baud rate of HC-05 in command mode is 38400bps and 9600 in data mode.



VI. RESULTS

VII. 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.

VIII. REFERENCES

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