

Digital Notice Board Using GSM Module

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Abstract- Nowadays the digitalization has increased a lot, so we have proposed a system of wireless technology. Digital Notice Board using GSM that has been proposed by using this technique reduction of paper work and time is our main aim of the project. In this paper we are trying to implement a system in such a way that it can display the message in form of messages from authorized user sends to GSM module which is located on notice board. This module receives message and display it on LCD display. So important message or notice will be takes place within very short span of time. So in short, the authorized user situated at different location and sends message or notice to GSM module. Only authorized registered person can able to send message from anywhere and this message and is displayed on the LCD screen.

Keywords- UWB, Keyboard driven, Visual basic, Remote Controlled, Bluetooth, Zigbee.

I. INTRODUCTION

The main objective of digital notice board is to the reduction of the paper work, lot of papers has been used and which are later wasted by the organizations, hospitals, schools, colleges. The aim of this paper is to design the SMS driven automatic display board which can replace the currently used electronic display and conventional notice boards in the world. Small innovative steps in making the use of technology for regular purposes would have a more positive effect on environment issues which we are presently facing. Also, in trains and buses the information like platform number, ticket information is displayed in digital notice boards. People are now adapted to the idea of the world at its finger-tips. The use of mobile phones have increased drastically over years. Control and communication has become important in all parts of the world.

This gave us idea to use the mobile phones to receive the message and then display it on an electronic board. The GSM technology is used by us due to this international roaming capability of GSM, we can send the message to receiver from any part of the world. It is has system for the SMS (Short Message Service).

This project is remote notice board with GSM modem at the receivers end. So if user wants to display any

message, he/she can send the information by the SMS and thus update the LCD display accordingly.

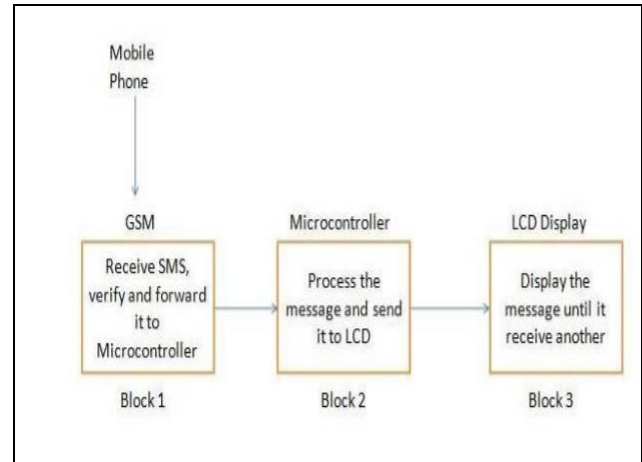


Fig 1:Block diagram

Regulated supply is to power up the whole circuit components. GSM modem stores any msg received by the user, any operation performed by the GSM is due to the AT commands initiated by the microcontroller. Microcontroller forwards the msg to the LCD. LCD receives the message and can display only 16*2 characters at a time. Mobile is the end user that starts the interaction with GSM by sending a message.

Arduino UNO is microcontroller board based on the ATmega328p. It has 14 digital input/output pins, 6 analog inputs, USB connection, power jack and reset button.

In graphic LCD contains 128x64 dots of characters, LCD type is STN negative, Transmissive, blue. We use GSM 900 model, control via AT commands. It is use for receiving message from the mobile. The Arduino use as an interface between the GSM model and graphic LCD display. Arduino takes input from the GSM model. The input is in form of the binary. The messages to Arduino are received that are sent by the mobile phones. Arduino converts binary format to digital formats. The Arduino send digital format message to the graphic LCD display notice board.

II. PROPOSED SYSTEM

Technology is influencing every aspect of society and such is the case of an institution. A Digital Notice board is

very innovative System for any organization or institution. In our proposed System, the digital notice board enables the user to display the notices wirelessly.

The system uses a GSM module for the transmission purpose that is connected to a raspberry pi and LCD display. The System consists of a simple voltage regulator circuit for the purpose of power supply to GSM. All the programming related to the Systems had been done using c programming. The Notice board also sends an acknowledgement to the user after display of notice. At the start of the programs fed are run. After successful execution of the programs followed by entering the correct password the notice board is ready to display the notice. For displaying the notice the user need to send the text via SMS. The sent message is received at GSM module, which then transmits it serially to the Arduino UNO.

III. SYSTEM ARCHITECTURE

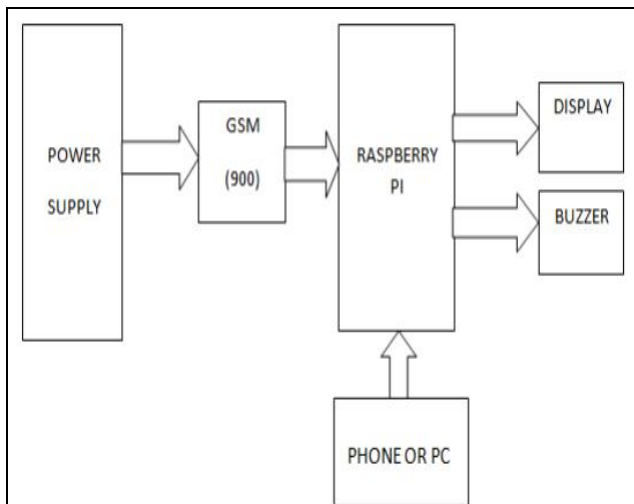


Fig 2. System Architecture

IV. IMPLEMENTATION

The diagram as shown in Figure 3 presents the block diagram of the system which shows the architecture of the system. The circuit diagram presented in Figure 3 shows the connection between the LCD displays Arduino UNO the procedure for the operation of the system is shown in a pin diagram. The pin diagram explains the step-by-step operation of the wireless-notice board. First, the incoming message is checked if valid, i.e. it's from a valid source. If this is true, the message is displayed otherwise, it is rejected and keep displaying the old message. The implementation of the design passed all the necessary design test conducted. Each stage in the development process was tested and evaluated in reference to the existing setup. This test shows that the system performs relatively well as compared to the existing system. The functionality was further confirmed by sending messages to

the display and each messages having authenticated to be valid was displayed.

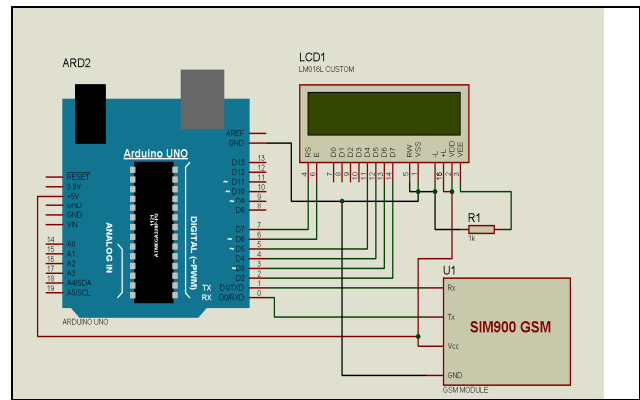


Fig 3. Pin Diagram

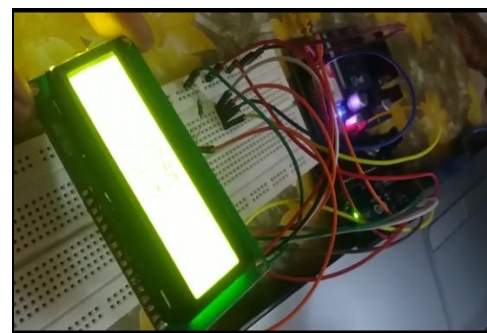


Fig 4: Circuit Diagram

V. CONCLUSION

This project saves time, energy and hence environment by reducing the cost of printing and photo copying. Information can be given to large number of people from our fingertips through the SMS. Thus we can conclude that this project is just a start, an idea to make use of GSM in communications to a next level. This proposed system has many upcoming applications in educational institutions and organizations, railways, traffic management, advertisements

VI. ACKNOWLEDGEMENT

This project was made possible by the support of Dr.Vinayak Bharadi, HOD, It department FAMT; Prof. Priyanka Bandagale, Prof.Santosh Jadhav project guide we should like to express our great gratitude to Ms.Priyanka Bandagale for her kind advice on the project and precious information.

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