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Wireless Noticeboard And Announcement System

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Under the Guidance

Abstract: ***This project is based on RF transmission and reception in which we use visual basic application software for encoding the data to be sent. RF module is used to transmit the data.***

It has main transmission circuit at one end and reception section at another end. Specified frequency is set at both control circuits. After setting these frequencies we can transmit and receive data via RF signal.

At receiver end data is received and displayed on LCD display.

An announcement system is a two way communication system. In which we can deliver as well as announce notices to the people.

Keywords: RF module, LCD display, RASPBERRY PI, speaker, MIC, Switches, AVR, amplifier, wireless communication

I. INTRODUCTION

Many new communication technologies have been developed in the last couple of decades. Sharing information is the main motto of any communication technology. Apart from sharing information, technology has evolved in such a way that, the desktops and electronic appliances are accessed remotely. In our day-today life, we are using many notice boards in home, office and public places like airport, bus stands, hospitals etc. for our comfort and convenience. Communication technology helps us to exchange information and also allows monitoring and controlling the machines from remote locations. This controlling is possible with wired or wireless communication. In this world everyone needs a comfort living life. In today's world of connectedness, people are becoming accustomed to easy access to information. Whether it's through the internet, television, people want to be informed and up-to date with the latest events happening around the world. Wired network connection such as Ethernet has many limitations depending on the need and type of connection.

Now a day's people prefer wireless connection because they can interact with people easily and it require less time. Notice Board is used in various institutes to display notices and these boards are managed manually. It is a long process to put up notices on the notice board. This wastes a lot of resources like paper, printer ink, man power and also loss of time. In this paper we have proposed a system which will enable people to wirelessly transmit notices on notice board using Wi-Fi. Here we have proposed a system by which only authorized person can accesses the notice board. It require less time due to fast data transmission through Wi-Fi. Less cost and save the resources like paper. The table 1summarizes the key differences between the three short range wireless technologies. Wi-Fi provides higher data rates for multimedia access as compared to both Zigbee and Bluetooth which provides lower data transfer rates. Zigbee and Bluetooth are

intended for communication (about 10m), while Wi-Fi and Zigbee is designed for WLAN about 100m

II. OBJECTIVE

- ✓ The main objective of this 'Wireless Notice Board and Announcement System' is to give more Efficiency for Staff of any Organization, College or Company who wants to deliver an Important Announcement.
- ✓ Efficiently inform regular schedule such as todays task or time table.
- ✓ To become the most useful media for Announcement Notification

A. SCOPE OF PROJECT

We can use this project on railway stations, bus stations, restaurants for display various notifications as well as announcements

In Future we can use this project various companies to order and display the instruction to workers.

B. LITERATURE SURVEY

a. INTERNATIONAL JOURNAL OF TECHNICAL RESEARCH AND APPLICATIONS E-ISSN: 2320-8163, WWW.IJTRA.COM SPECIAL ISSUE 39 (KCCEMSR) (MARCH 2016), PP. 81-83

Abstract: The notice board is a flat solid object placed at strategic positions makes it an object which notices and posters are being placed on it. In K.C. College of engineering and management studies and research, notices spring up from different officers bringing reminders, warnings, advice, results, and appointments to be placed on the notice board. As these notices are being placed on the boards, some of the old notices are not removed and with time the notice boards get filled up with relevant and irrelevant notice messages, as a result of this, a person might not take caution of any new notice being displayed as the person feels he cannot go through the stress of browsing through the whole notice board searching for relevant notices. Digital notice board is a common device that is used to display information.

b. INTERNATIONAL JOURNAL OF ADVANCED SCIENCE AND RESEARCH ISSN: 2455-4227, IMPACT FACTOR: RJIF 5.12. "DIGITAL NOTICE BOARD" VARINDER SINGH BANSAL, ASHWIN AYARE, RICHA BHATIA, SIDDHITA GHOSALKAR

Abstract: "GSM based Control System" implements the emerging applications of the GSM technology. Using GSM networks, a control system has been proposed that will act as an embedded system which can monitor and control appliances and other devices locally using built-in input and output peripherals. We propose to make the system which is designed to display the message received by the cell or a modem. Then microcontroller will control the system by using the programming commands and the messages will be displayed on the LCD.

c. VOLUME 5 ISSUE VI, JUNE 2017 IC VALUE: 45.98 ISSN: 2321-9653 INTERNATIONAL JOURNAL FOR RESEARCH IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY (IJRASET) ©IJRASET.411

Abstract: Wireless Electronic Notice Board Using Raspberry Pi 3- Notice boards can change the way communication with each other, using notice boards is a constructive method of promoting important information to a large number of people. Notice board is ideally useful tool for organizing and displaying information, these are used in multitude of businesses such as schools, colleges, hospitals, railway station, bus station, hotels, shopping malls etc. As they can be used over and over again to display important notices or advertise forthcoming events or meeting. In this paper, we proposed an advanced wireless notice board in which at any time we can add or remove or alter the message according to our requirement. The main aim of this proposed project is to drastically reduce the cost involved, consume smaller amount of power and help in achieving quality of service. For this we need a computer/laptop as a transmitter, Raspberry PI 3 model B as a receiver, Wi-Fi for data transmission and a LED/LCD screen as a display

III. PROPOSED WORK

The project is about the wireless notice board and announcement System, it means the alternating way of notifying to the members of other organization.

This System is mainly introduced to get efficiency that occurs in posting the Announcement that is post on the notice board. It is hard to inform to the staff may also forget to deliver the announcement that will inconvenient for itself. All users that want to use this system can be member of system. By using the MIC the staff member will announced the information and by using the keypad the staff can switch between the different classes or different organizations. In receiving section there is a speaker through which the information will announce.

A. BLOCK DIAGRAM

a. TRANSMITTER

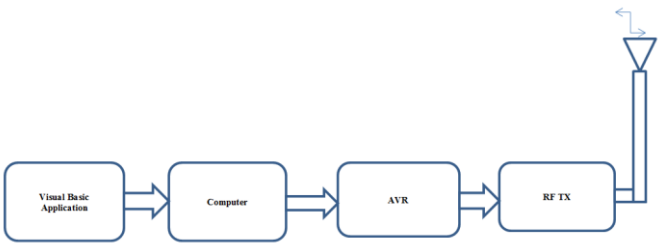

Figure 1

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b. RECEIVER

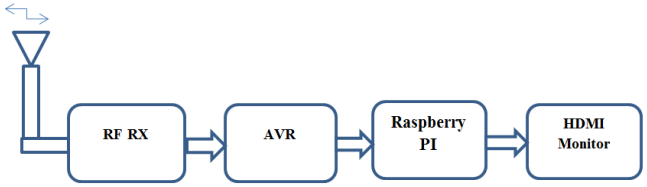


Figure 2

c. MULTIROOM ANNOUNCEMENT SYSTEM

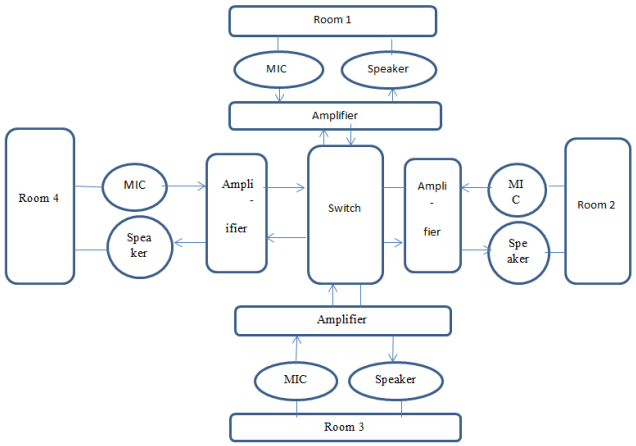


Figure 3

B. BLOCK DIAGRAM DESCRIPTION

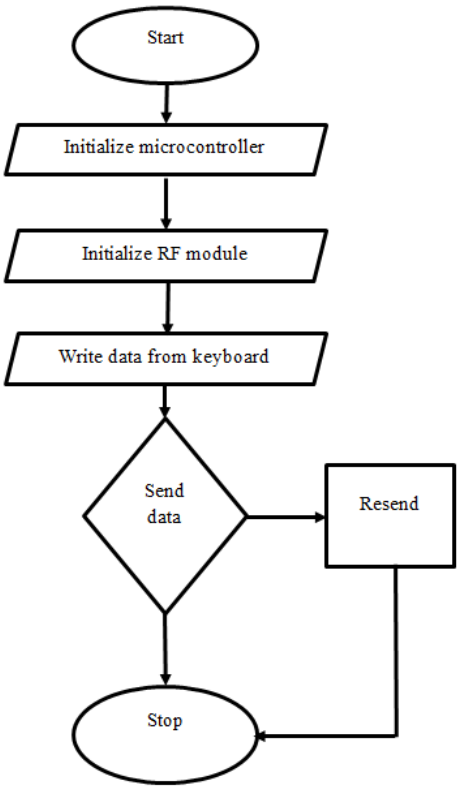
At transmitter unit, we have installed Visual Basic Application on which we enter the data to be sent to display. This data is send to AVR through computer serially. AVR converts this data into radio frequencies. RF module will transmit the signals to receiver.

At the receiver end RF module receive the transmitted radio frequencies. Then AVR will convert those signals. Python software install on Raspberry Pi. This will decode the data and then send to HDMI display.

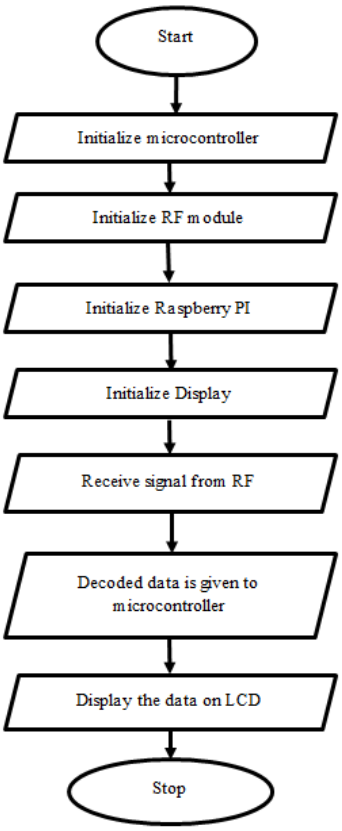
In multi-room announcement system, if we want to announce any notice or information with the help of MIC we can send voice signals to amplifier it will amplify the signals then send to switch it will decide the destination and by using speaker we will get the output. The process will be same at every room.

IV. FLOW CHART

TRANSMITTER



RECEIVER



A. ALGORITHM

- ✓ Start.
- ✓ Initialise RF module, AVR.
- ✓ Data entered from keyboard by authorised user.
- ✓ Send the data to RF module.
- ✓ Read the data signals from microcontroller.
- ✓ Receive these signals from RF module
- ✓ Decode the data through Raspberry Pi.
- ✓ Decoded data display on LCD

V. FUTURE SCOPE

Now the world is moving towards automation, so in this world, if we want to do some changes in the previously used system, we have to use the new techniques. B. Wireless operation provides fast transmission over long range communication. C. It saves resources and time. Data can be sent from remote location. User authentication is provided. Previously the notice board using GSM was used in that there was the limit of messages but in our system Multimedia data can be stored on chip or on SD card. Text messages and multimedia data can be seen whenever we want to see. D. The proposed system can further be extended to provide the notices from longer distances by providing the internet connectivity which will allow the system to update notices anywhere in the world

VI. CONCLUSION

Hence conclude that we developed a wireless digital notice board that displays message sent from the authorized user and Announcement of that message to everyone who is available in the area. Complexity reduces also raspberry Pi automatically boots and displays the screen which avoids any configuration when there is power cut.

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