

Digital Notice Board

¹Modi Tejal Prakash, ²Kureshi Noshin Ayaz, ³Ostwal Pratiksha Sumtilal

¹Student, ²Student, ³Student

¹Computer Engineering,

¹SNJB's Kantabai Bhavarlalji Jain College of Engineering, Chandwad, Dist. Nashik, India

Abstract—Notice Board is basic concern in any organization or institution and also it is use in many public places including bus stations, railway stations and malls etc. The Traditional way of displaying notices is sticking print of notices on notice board which is difficult task. This project is mainly about digital notice board with raspberry pie in which there is an android application that is connected with LCD display via Raspberry pie in these systems the main feature is scheduling of notices on the basis of priority and also backup facility and notification facility for the user is also provided.

Index Terms — Liquid Crystal Display (LCD), Android, Raspberry Pie.

I. INTRODUCTION

In educational institutions, the organization use circulars and notice boards for conveying information to the students. This methodology takes additional time for updating also many students may not be aware of the information displayed on notice boards due to non-eye catching notices. Digital Notice board is one of the ways of displaying notices in which the notices are display on a LCD Display Screen. These notices are changed dynamically .We have to only type the notices and send that notice for displaying on display screen. The Display screen and the System are connected with the help of the different mechanisms. Also another advantage is that more than one notice is visible on the screen as the notices scroll across.

II. LITERATURE SURVEY

1. Display Message on Notice Board using GSM.[1]

Author: ForamKamdar, AnubhavMalhotra and Pritish Mahadik.

This paper deals with an SMS based notice board incorporating the widely used GSM to facilitate the communication of displaying message on notice board via user's mobile phone. Its operation is based on microcontroller ATMEGA32 programmed in assembly language. ASIM300 GSM modem with a SIM card is interfaced to the ports of the microcontroller with the help of AT commands. When the user sends a SMS via a registered number from his mobile phone, it is received by SIM300 GSM modem at the receiver send.

Limitations:

- ✓ SMS Based system.
- ✓ Unable to display Audio and Video.
- ✓ No Scheduling.

2. WIRELESS ELECTRONIC DISPLAY BOARD USING GSM TECHNOLOGY.[2]

Author: N.JA GAN MOHAN REDDY, G.VENKARESHWARLU.

This paper discusses the design of SMS driven automatic display Board which can replace the currently used programmable electronic display and conventional notice boards. It is proposed to design receive cum display toolkit which can be programmed and later be used from an authorized mobile phone.

Limitations:

- ✓ Uses LED Board.
- ✓ Unable to display Audio and Video.
- ✓ Limited number of Character.

3. Design and Implementation of Digital Notice Board Using Power Line Communication. [3]

Author: R.Pudumai Nayagi, R Seethalakshmi.

The paper proposes one such application for automating an educational institution by replacing manual notice boards or circulars by digital notice boards. With a centralized database, frequent updating is easily possible. The system uses existing power lines to send the data to a special node or to broadcast to various power line nodes. The address is assigned to each receiver and it response based on their appropriate commands.

Limitations:

- ✓ Limited number of Character.
- ✓ Unable to display Audio and Video.
- ✓ Need Power Line Communication.

III. SCOPE

1. Using multiple screens for displaying the big size advertising
2. The content on the screen is made up of several images files and broadcasting display information and also remotely control it.
3. The broadcasting information such as subways, buses and bus station, train and train station, shopping malls, schools, conference hall, road highways, colleges and hospital for displaying all useful institutional information for visitors and this application are also used in industry for displaying notices or useful information are giving to employees.

IV. OBJECTIVE

Observing the current technology trend a need of digital notice board that is smart enough is essential. The main objective of the system will be,

1. To develop a wireless technology for user.
2. To design simple user friendly system.
3. To easily keep track of notice board by the user with respect to date and time.
4. To develop a dynamic notice structure/model.

V. SYSTEM SPECIFICATION

- Software Requirement
 - 1) Python
 - 2) Android
- Hardware Requirement
 - 1) Raspberry pie
 - Model B
 - 512 MB RAM
 - USB 2.0 socket
 - SD card Socket
 - 10/100 BaseT Ethernet socket
 - HDMI socket
 - Micro USB Socket
 - 2) Personal Computer
 - Pentium Processor 3 and above
 - 4 GB RAM
 - 3) Wi-Fi Module

Wi-Fi module acts as a receiver. Wi-Fi uses the latest 802.11n wireless Technology, and can support data rates up to 150Mb/s, compared with the older 54 Mb/s 11g products.
 - 4) LCD Monitor

It is used to display the notice. User will post the text after the authentication. Notice will display through the raspberry pie.

VI. DESIGN CONSTRAINT

1. Smart phone must have android operating system 4.1 Jellybean onwards.
2. Desktop system having operating system Pentium III onward.

VII. IMPLEMENTATION CONSTRAINTS

1. Only authenticate user is able to add notices.
2. Password of user must be 8 characters long with digits, alphabets and special symbol.
3. Date and time of notices must be valid.

VIII. ASSUMPTIONS

1. Internet connection is necessary and must be on.
2. Server and client connected with LAN/ Wi-Fi.
3. To Add notices user must be registered first.
4. User should have smart phone.

IX. MODULE DESCRIPTION

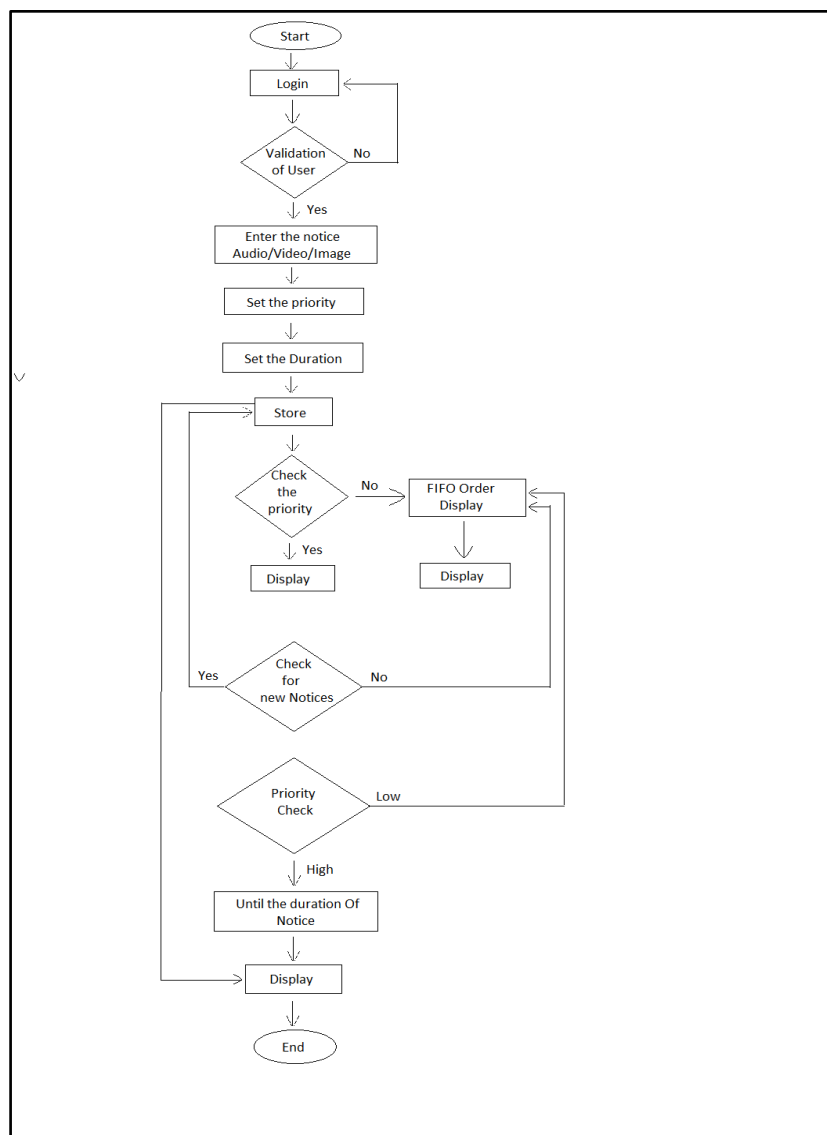
- Add Notice

In this module user is going to add the notices. For adding notices, only the authenticate user will add the notices. For adding notices user must be login into the system. Before login user should have to register. While adding notice User has to enter the notice, its title and also priority. Priority is mainly use to send notices for display. If the priority is important, then that notice is immediately displayed on the notice board. User also have to set date and time for particular notice.

- **Update Notice**
In this module user will update the notices. Updating of notice will be performing on the basis of search by title and date.
- **Delete Notice**
In this module user will delete notice. Notices will get deleted on the basis of search by title and date.
- **Send Notice**
Raspberry pie is mainly use for the sending notice to display on the notice board also scheduling will be performed using raspberry pie on the basis of date and time. Raspberry pie will be periodic check for any new notice which needs to be schedule.

X. WORKING MODEL

Digital notice board is system user has to login first. If the user is valid then software shows the page in which user can add the notices. Notice can be a text, audio, video. While inserting the notices user has to set priority of the notice as well as the duration for which notice will be display on to the notice board. For the purpose of scheduling we are going to use FIFO and Priority Scheduling algorithm. As per the scheduling the notices are displayed on the board. Raspberry pie Model B is using for connecting the software system and the LCD Board. Following is the flowchart which shows the flow of working of system.



XI. CONCLUSION

As the technology is getting advanced day by day the digital notice board are moving from manual based to display board. We have developed the model of wireless digital notice board system through Raspberry Pie connected to it, which display the desired message of the user through a notification on the mobile. Thus Raspberry being a small yet powerful device and work efficiently in digital notice board connected with software. This proposed system has much upcoming application in educational, institution, railways, malls, advertisement etc.

XII. ACKNOWLEDGMENT

We gratefully acknowledge our indebtedness towards the department of Computer Engineering, SNJB'S Kantabai Bhavarlalji Jain College Engineering, Chandwad, Dist: Nashik for allowing us to pursue our project on this domain. First of all we would like to thank our respected guide Prof. K.M.Sanghavi, Associate Professor and Head in Department of Computer Engineering for introducing us throughout features needed. The time-to-time guidance, encouragement, and valuable suggestions received from her are unforgettable in our life. This work would not have been possible without the enthusiastic response, insight, and new ideas from her. We are also grateful to all the faculty members of SNJB's College of Engineering for their support and cooperation. We would like to thank our lovely parents for time-to-time support and encouragement and valuable suggestions, and thank our friends for their valuable support and encouragement. The acknowledgement would be incomplete without mention of the blessings of the Almighty, which helped us in keeping high moral during most difficult period.

REFERENCES

- [1] ForamKamdar, AnubhavMalhotra and PrithishMahadik Display Message on Notice Board using GSM ISSN 2231-1297, Volume 3, Number 7(2013),pp. 827- 832 Research India Publications
- [2] N. Jagan Mohan Reddy and G.Venkeshwaralu Wireless Electronics Display Board Using GSM Technology, International Journal of Electrical, Electronics and Data Communication, ISSN: 2320-2084.
- [3] Design and Implementation of Digital Notice Board Using Power Line Communication
- [4] GuifenGu and GuiliPengthe Survey of GSM Wireless Communication System,International Conference on Computer and Information Application (ICCIA 2010).

