WIRELESS DIGITAL NOTICE BOARD USING RASPBERRY PI

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Abstract- In early days the universities were having the practice of hanging wooden Notice boards. This method of passing on the information was having various problems. We consider the case study of professional Colleges, where information is a vital key for knowing the updates of the campus. The objective of this paper is to provide the access to notices, articles, images and videos quickly within the college premises and organization, also wherever and whenever they necessitate knowing. This Notice Board work without internet connection, hence it is a reliable one. The major strength of the Electronic Notice Board developed, is an application that its usability is fully capable of passing relevant notices, announcements and keeping the users updated from time to time. The user is kept updated each time the E-Notice Board is uploaded based on their preferences with respect to the departments and categories. From this we can overcome the problems associated with the GSM Technology used.

Keywords- Notice Board, Administration, User, Application.

I. INTRODUCTION

A Notice Board is a place where colleges notify the students about the Events, Meetings, Campus interviews, Time table [1] etc. Notice Boards are often made of a material such as wooden boards to facilitate addition and removal of paper messages or it can be placed on digital devices such as computers, phones [2]. The old wooden Notice Boards need manual monitoring continuously. So the colleges leave and erase messages for students to get the information. The main aim of this paper is to make information dissemination much easier in an updated community as the world tends to graduate into that line of interaction to develop the Notice Board facility as an application, for use in college administration. The professional colleges include various departmental Notice Boards as well as other related notice boards. This paper generally intends to act as a support system for the existing method by which notices are being posted in the Notice Board using an application.

Generally innovation has come as a key factor to help to make administrative work much easier; campus executives are using new and improved versions of existing technologies to get better control of administrative activities. Campus technology leaders are dramatically enhancing data, wired/ wireless network, device security and are borrowing formalized quality assurance models from the corporate world in order to end the practice of purchasing and implementing technology that just doesn't deliver as promised.

The problems faced by wooden notice board could be well resolved by the implementation of our E-Notice Board application that brings an advanced means of passing notices in the college in a much easier and efficient way. In this system the authorized user can upload the notices, Images and Videos to different departments and categories that are recommended and approved by the higher authorities. Respective viewer will make best use of it.

Digital Notice board is an application which is affianced in providing up-to-date articles & notices and other information's for all the users associated with the particular campus or organization. From the Digital Notice board students can get information more proficiently than that of wooden Notice Board. Digital Notice Board is one of the applications to improve the usage of Notice Board of the college. This application involves almost all the features of online Notice Board [3]. The Digital Notice Board system will take care of the current details of the information at any point of time. All the updates like add, delete, view are

done by administrator, so that user will get the updated current information through alerts.

II. PROPOSED DIGITAL NOTICE BOARD

The block diagram of proposed Digital Notice Board is as shown in Fig. 1.
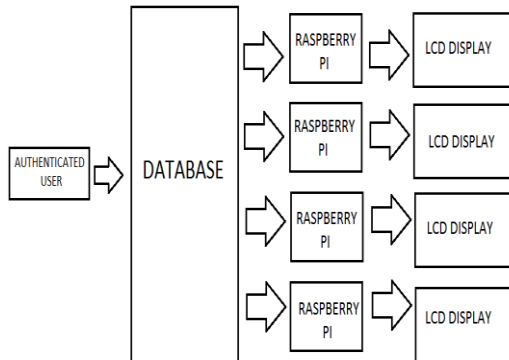

Fig.1: Block diagram of Digital Notice Board.

Architectural diagram provides a high level graphical view of the application architecture and helps to identify applications, components, databases and services. It is described as strategic design. The architectural design of Digital Notice Board consists of administrator, who has the privilege to create an account, update notices and delete an account while the recommender/approver recommend the notice of authorized user and approves the notice of authorized user. Authorized user creates the notice and publishes the notice after getting approval from the recommender/approver. Viewer has privileges to view notices from the authorized user. The viewer (Actor) is anybody who intends to read notice on the Digital Notice Board.

As shown in the Block diagram, the authenticated user has a full right to send information (such as Notices, Images, Videos etc.) to the database. The Raspberry Pi fetches the relevant information in the database and displays it on the respective LCD displays or monitors.

II.   IMPLEMENTATION

The proposed system is implemented according to the architectural diagram shown in Fig.1. It consists of 3 parts namely the graphical user interface, functionalities and the database management systems. We intend to run the Digital Notice Board as a program that can be viewed strictly without any specific locations. For the fact that the notice board program runs on personal computers connected by a local area network or wired or wireless networks, information dissemination is efficient. The procedure for working of Digital Notice Board includes the following steps.

Step 1: Administrator will login by giving his user name and password.

Step 2: Only the Administrator has the privilege to modify the departments and categories.

Step 3: User need to register by giving details such as: full name, login name, mobile no, password, confirm password, email id, department and category.

Step 4: As soon as the registration is done a mail will be sent to the respective user which includes the user name and password.

Step 5: User needs to subscribe by selecting their interested categories and departments.

Step 6: Administrator has the authority to insert, update and delete the notices.

Step 7: Once the notice is uploaded by the a administrator, registered users will receive the information.

Applications

•It is used in colleges to display the placement news, circulars, daily events, schedules etc.

•Used in hotels to display the food items and menu offers etc.

•It is used in railway stations scheduling time to be displayed.

•To display the Room Rents, Available rooms and to AC or NON-AC rooms details in hotels

•To display the nursing homes using the staff attendance availability of the doctors, list of the specialized doctors and no of patients etc.

III.   CONCLUSION

By using the concept of this technology in the field of wireless communication we can make our communication well-organized and faster. We can display the messages with less errors and better efficiency. Time consumption & paper wastage is reduced. This method can be used very efficiently in establishments like high-tech restaurants to give the order, in shops offer discounts can be displayed, at all branches in colleges the students and staffs can be informed simultaneously at the same time. Also it can be set up at public transport places like railways, bus station, airport and also at road side for traffic control and in emergency situations like hospitals, temples etc. Its cost is low and it can be handled very easily. Using this application we can avoid the usage of papers hence cutting of trees for the purpose of papers is greatly reduced.

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