

ONLINE NOTICE BOARD SYSTEM

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Abstract- Notice board is used in institution or organization or public utility places like College campus, railway stations, But sending various notices day to day is a heavy process. This paper deals with advanced notice board. Our proposed system will enable people to wireless transmit notices on a notice board using Blue tooth with smart phone and users get auto notification using parse cloud. Its operation is based on micro controller ATMEGA 328P Programmed in C language. When the user sends notice via registered smart phone simultaneously that message will get display on the notice board and also through the parse cloud other users get auto notification on their smart phone. We can also make the system compatible with more than one wireless technology.

Keywords: Blue tooth, Authentication, Ardiuno board, Parse cloud, Android.

INTRODUCTION

To realize the proposed digital notice board on cloud platform, we have developed following prototype model. It consists of Arduino board, controller AT mega 328P, Blue tooth .mobile phone and LCD display board. LCD display board is used for testing the proposed model. The interfacing of a Arduino board with mobile phone is quite easy with help of the terminal pin, read/write pin .Hence we employ Atmel ATmega328p microcontroller. The complexity of coding of our proposed system is less as compared with PC, but once programmed the micro controller works at its best. The design procedure involves identifying the different components and assembling all of them and it makes proper communication. Then coding process has to be done, which has to take care of the difference between two successive communications and most important of authentication of the senders number.

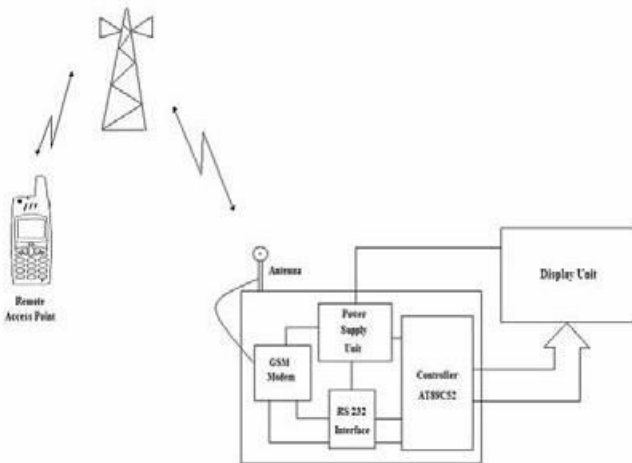
The registered mobile numbers can be more than one. And we are using parse cloud for storing the notices on cloud and it user can get auto. Notification. This enables the multiple users can operate the digital notice board.

I. Literature survey

Sr No.	Paper Name	Year	Technique
1.	Display Notice On notice board	2013	GSM
2.	Wireless notice board	2011	GSM
3.	SMS based wireless notice board	2013	GSM

2. Existing system

In the current scenario the notice/advertisement boards are being managed manually. This is a time consuming task to put up notices on the notice board. This wastes a lot of resources like paper, printer ink, man power and also brings about loss of time. The existing system is based on GSM technology so it's required SIM card to send the messages on notice board. But existing notice board is only supported MOTOROLLA C-16 mobile phone. In the existing system is also supported international roaming capability of GSM, so we can send message to receiver from any part of the world that's why extra charges are required.



3. Proposed system

Notice board is used in institution or organization or public utility places like College campus, railway stations, But sending various notices day to day is a heavy process. This paper deals with advanced notice board. Our proposed system will enable people to wirelessly transmit notices on a notice board using Bluetooth with smart phone and users get auto notification using parse cloud. Its operation is based on microcontroller ATMEGA 328P Programmed in C language. When the user sends notice via registered smart phone simultaneously that message will get display on the notice board and also through the parse cloud other users get auto notification on their smart phone. We can also make the system compatible with more than one wireless technology.

Steps for Proposed System

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

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

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

Step 4: As soon as the registration is done a will be sent Notification 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: Admin has the authority to insert, update and delete the notices.

Step 7: Once the notice is uploaded by the admin, registered users will receive the notification.

Step 8: In order to view the detailed description of the notice user need to see on notice board.

4. Proposed Technique

1. Parse Cloud

Parse cloud is used to provide a back-end for an Android application. Parse is one of the most popular Back-end as Service platforms for android application. The service offers three products in one package: 1) Parse Core, 2) Parse Push and 3) Parse Analytics .Parse Core generally handles the saving of data and social media integration. Parse Push cloud is used to send push notifications on smart phone. It enables the developer to customize, schedule and send push notifications to all registered users or either a selected group of user's .Parse Analytics enables you to track your application data. You can track usage data such as installations and active users, user retention, push notification open rate etc. Parse API classes used for cloud-storing and manipulating users, data objects, and files for your mobile applications.

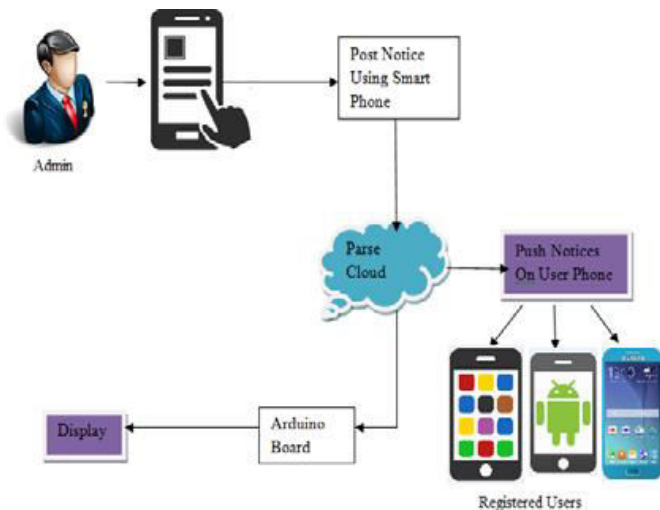
The Parse mobile SDK provides cloud-based APIs services and services for iOS, Android, and Windows applications .Parse SDK also provides REST APIs. And JavaScript

2. Bluetooth

Bluetooth device a wireless technology standard its used for exchanging data over short range distances (its used short-wavelength UHF radio waves technique in the ISM band from 2.4 to 2.485 GHz from fixed and mobile devices, and building personal area network (PANs). It has originally conceived as a wireless alternative to RS 232 data cables. It should connect several wireless devices, overcoming the problems of synchronization .To use Bluetooth wireless technology, the device must be able to interpret certain Bluetooth profiles of user, which are definitions of possible applications and its specify general behaviors that Bluetooth enabled devices used to communicate with other Bluetooth devices and we can connect more than 8

devices to each other. These profiles include settings to parameterize and to control the communication from start to end. Adherence to profiles saves the time for transmitting the parameters before the bi-directional link becomes effective.

5. System Architecture



The system consists of main 5 units, which coordinates with each other and make sure that the information is delivered on time. Thus our system is divided into following four units:

1. Arduinouno board:

For making the notice boards easy to use and more technically advance, we have use this prototype of wireless notice board. We can display the message on LCD board by simply sending the message through our smart phone. These display systems are very accurate, easy to control, cheaply available and the most important thing is that they can be operated on low Voltage (Up to 12 Voltage).

A Bluetooth is used here for the wireless notice board to send the information or message to display on board. The main aim of this project is to save time and provide information as early as possible by displaying the message. It can be used for multiple can

Purposes like we can share live share market news, we can display trains' time table, we can even show

time table of college and important information for students and for teacher in school and college etc.

2. Controller ATMEGA 328P:

The Arduino Uno is a ATmega328p microcontroller board. This board has 14 digital input/output pins (6 as a PWM outputs), 6 analog inputs, a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button.

3. LCD 16*2:

LCD stands for Liquid Crystal Display which is used to display text or Characters. We are using 14 pins LCD which are given below:

- Pin 7 to Pin 14 All 8 pins are responsible for the transfer of data.
- Pin 4 this is RS i.e. register select pin. 5 This is R/W i.e. Read/Write pin.
- Pin 6 this is E i.e. Enable pin.
- Pin 2 this is VDD i.e. power supply pin.
- Pin 1 this is VSS i.e. source pin.
- Pin 3 this is short pin.

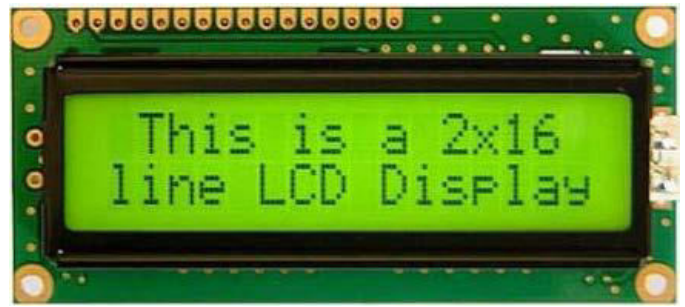
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6. Working

1. User Login:

This login module is similar to what's app login screen. So the unique identifier for each user will be their phone numbers. Name This will accept and store the user's first name. Last Name This will accept and store the user's last name. Phone Number This will accept and store the user's phone number. Branch Name-This will accept and store the user's Branch Year-This will accept and store the current year.



2. Notice Post:

Here the administrator types the notice which is to be displayed on Notice Board. He then selects the Branch, Year and posts the notice. This message is typed through his/her android phone; the message is then transferred wirelessly and displayed on the screen. We also use a Bluetooth receiver to get the android transmitted messages, decode them and send them to the controller for further processing. The microcontroller then displays the message on the LCD screen.

3. Notification:

A push notification is used when a message is forced to transmit at the time of sending. User needs to pull that message from the server. For example, if you get notified when someone tweets you then that is a push notification. If you have to refresh from within the application then your pulling the notification. Push method works by receiving a notification on the servers where the program is running, and then forcing that notification to appear on your Android device. This process done via Hyper Text Transfer Protocol as basic text notifications. If your phone is connected to the data connection then it will instantly receive the notification.

4. Notice display on notice board:

The message is fetched by the microcontroller is further displayed on an digital notice board. The digital notice board is equipped with LCD display.

7. Conclusion

The proposed system accepts the message, stores it, validates and displays it on the LCD board. LCD boards are used to display messages in Railway stations, shopping malls for displaying advertisement, Educational institution and organizations, managing traffic in smart cities and other public utility places. Cost of printing and photocopying is also reduced because the information can be delivered to a large number of people in a very short time. It provides faster transfer of information and is easy to install and maintain. This paper provides an efficient way of displaying messages on Notice Board and also get auto notifications using Wireless Technology. It also provides user to easily receive the important information or message.

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