



INTERNATIONAL JOURNAL OF PURE AND APPLIED RESEARCH IN ENGINEERING AND TECHNOLOGY

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A REVIEW ON SMART COLLEGE BUS WITH GPS TRACKING OVER INTERNET

PUNAM S. DANGE, PUJA I. KUMBHALKAR, VAIBHAVI V. BANDWAL, RAJANI R. GAIKWAD

DHANASHREE M. PATIL, PROF. PRANJALI P. ULHE

Dept. of Computer Engg. Wardha-442001

Accepted Date: 15/03/2016; Published Date: 01/05/2016

Abstract: Now a days with the advancement of the crime rate security is having its alarming significance for school children's. Millions of children travels daily from their home to school & vice versa. For parents, security is very big issue for their children. In this system, we use the latest technology like GPS and RFID. By using RFID (Radio Frequency Identification) we are able to trace the exact location of bus. RFID tags are very useful and stable for tracking and monitoring the bus with student. The proposed system will control the entry and exit of student to and from bus using RFID card. In this system, we do not require any additional action by their students, driver, Conductor. This application is used to track the exact location of bus by parents and school authorities. The tracker tracking the exact geographical area and RFID (Radio Frequency Identification) helps to track the unique child with their location. In this system we will use the database to store the information about bus number, bus routes, student details, attendance. This system we can also use for public/private transportation.

Keywords: GSM, RFID, Transportation, Bus System, Database.



PAPER-QR CODE

Corresponding Author: MS. PUNAM S. DANGE

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How to Cite This Article:

Punam S. Dange, IJPRET, 2016; Volume 4 (9): 1276-1280

INTRODUCTION

School children safety is the most significant component encouraged to process. Now a days most of parents are working. So for the parents it is very difficult to pick and drop to their child every day. For this purpose the bus transportation in school is comes in picture. This system provide the better solution in reducing the parent work load and show the current location of bus. This paper intended in introducing access safety in respect of school buses through the bus tracking system that will help the school childrens transportation in secure and safer manner. In this paper while entering to the bus first check that the student is valid or not if the student is valid then the attendance of the student will be recorded. This attendance is stored in a database. Here we use the MYSQL database and Apache server. In database we recorded all the information by using Atmega 328 microcontroller which reads all the input perform all transaction on it and stored it in database. In this paper we using GSM for tracing the current location.

II. LITERATURE REVIEW

Sr No	Name Of Author	Name Of Paper	Purpose
1	Shruti kametkar, priyanka deshमुख	School bus tracking system	In that uses the RFID card
2	Jayavrinda vrindavanam, ali-al muhulaqui	Bus safety system for school children	Here uses gsm 900 sim
3	k. vidyasagar, J. Balaji	RFID-GSM imparted school children security system	In that uses various sensors

Table 1: Overview of previous system

The main aim for introducing this system is that, it uses various technologies for providing better safety to the student but after that also some problems are exist in this system. So to avoid this problem we introduced this new technology which provides better solution regarding to the safety of student and parent are free for their own work. In the first paper they use the RFID card but they are unable to find the exact location of the bus. In the next paper they are find the exact location but parents not receive the information of bus. Now in the third paper they use the RFID card GSM for providing better safety to student. For prove the better advancement in this technology we emerged this technology and overcome this all problems.

III. PROBLEM STATEMENT

Now a day's student security is very big problem. Various systems are developed before that. This all are do their work properly but not more efficient to provide the more security. So more emphasized on the student security we will developed this project. Which is enhanced version of all the system. We studied the previous paper it having some drawback. In first paper they only more concentrate on the bus transportation. In second used the GPS but parents not able to get the exact location properly. In the third paper they use the various sensor for sensing the exact location of bus but in this system also they are not much more able to trace exact location. So to avoid such problem or to overcome such a problems we will develop this system in that we will provide the better safer transportation to student than the previous. In this system we will use the various latest components like GPS, GPRS, GSM which is very helpful for providing the details of exact location of bus.

IV. PROPOSED METHODOLOGY

In this system to resolve the the above problem and provide the better security to student , we will use this latest technology and help to improve the performance.

1] RFID: It stands for radio frequency identification. It uses electromagnetic field to automatically identify the track tags attached to object. The tag contains electronically stored information. RFID tags are used in many industries. The advantage over the manual system or use of barcodes. It provides the way of identity. Rfid cards are useful for access control to public transportation.



Figure1: RFID card

2] GPS:

It stands for Global Positioning System.. GPS are a satellite data to calculate an accurate position on the earth. These calculation can be relates to the user position. It provides the accuracy to search the exact location. In GPs it is important that the receiver giving the data which is required.

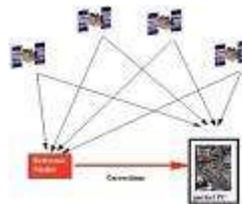


Figure2: GPS system

3] GPRS:

It stands for Generate Packet radio Service. It is a packet based data barrier service for wireless communication. GPRS gives almost instantaneous connection set-up and continuous connection to internet. GPRS speed range from 14.4 kbps/s. This makes efficient use of available radio frequency. Gprs enables any existing ip



Figure3: GPRS system

4] ATmega Microcontroller

It is an single chip microcontroller. Created by atmel and belongs to megaAvr series. Today the Atmega 328 is commonly used in many projects. And autonomous system where a simple, low-powered, low-cost, low-powered controller is needed. In that various capacitors, resistor, serial ports are connected.

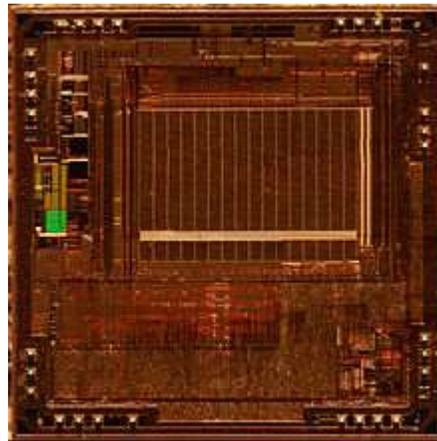


Figure4: Atmega microcontroller

V CONCLUSION

The combination of GSM and RFID for safety and security purpose is very important today.

This system provide various advantages to student as well as management. Because the message is send to both parent as well as school authorities after entering in bus. So safety point of view this system resolve the all problems which are present in previous because here we use the various latest technology like GPS , RFID which gives the exact position of bus.

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