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Bus Portal & GPS Tracker System

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Abstract - *Increasing vulnerability, making parents very possessive and insecure regarding the safety of their children. One of its major aspects is the college/school bus. College bus has big responsibility of playing students to collage and back home safety and on time. They are also responsible for updating parents about any delay or reschedule that make prevent their children from returning home on time. In this work we are going to design a system that will help student to get the exact location of their bus by using GPS tracking system and also empowering the bus authority to inform about reschedules if any using collage bus portal. Will also provide various information like, bus route, driver information into routes and update time scheduled and will also avail the live route tracking by using GPS tracking system. This project will help student to save time and provide better facility digitally.*

Keyword: Web Development, GPS, Car accident detection, GPRS.

1. INTRODUCTION

A GPS-GPRS tracking system provide all information about the tracking be live exact location of a college buss vehicle. The tracking system uses geographic position and time information from the GPS. In order to track the movement of the college bus Google Maps used for mapping the location. The GSM modem locate the GPS location and sends it to the server using GPRS. The integration of GPS and GSM first established using SMS as a method of circulating GPS coordinates. The GPRS technology will transmit location and will facilities using computer connected to website.

PROJECT BACKGROUND

The web based college bus vehicle tracking system is a system designed using a combination of several modern information and communications technologies. The system comprises of vehicle-mounted tracking devices, a central server system and a web-based portal. Through the system or portal, users i.e. student will have the facility of monitoring the location graphically and other relevant information of college bus vehicle. This system is designed to serve enterprises and colleges with an unlimited number of vehicles and complex usage requirements. The web based portal enables user to browse location track on map through developed web portal embed Google Map and interact with database server for vehicles track details. Using the web based portal enables users with different operating system platforms to easily reach the demanded details by the existence of internet access

PROBLEM STATEMENT

- Our college is lagging with to provide us distance which will track and give exact position of college bus.
- All time we use to be with college bus timing should but which sometimes not followed by college bus driver.
- Provide an ease of access to track the location or get updated information of travelling vehicles used for transportation.

PURPOSE OF STUDY

- Real time exact bus root information should be provided student with the help of GPS tracking system The GPS bus system is used to track of buses by college also this system can be used to give information to students by display on website.
- To ease access of bus facility.
- To ease and save time by tracking bus route.
- To develop on online portal of bus facility via designing website, this online portal will help the administrative access easy.
- To help people get the tracking record of the bus route that will help them for travelling on time.

2. LITERATURE REVIEWS:

We have carried a survey for five research papers.

Vehicle Tracking Using GPS. [1]

GPS Based Vehicle Tracking System and Analytics to Improve The Performance. [2]

Vehicle tracking system using GPS and GSM Technologies. [3]

Vehicle Tracking Monitoring and Alerting System: Review. [4]

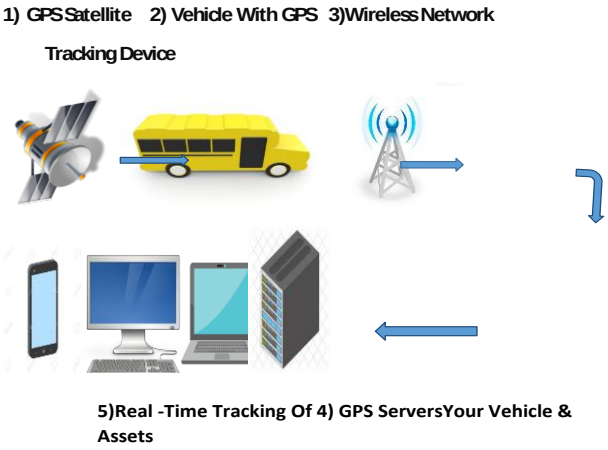
We have also done a real time survey in which we have asked few questions:

- About route?
- Have you ever experienced a breakdown during a journey?
- About bus maintenance.
- Bus availability on stop?
- About Camera system in bus and route tracing?

These questions were asked to random people and got their views on our application. Their views were positive.

3. METHODOLOGY:

GPS tracking is accomplished using the Global GPS System, a digital and to provide the cellular Network and the internet. The GPS system is a network of 24 satellites to be provide circling the earth. These satellites transfer location data back to earth onto continuous basis. The devices are setup to receive this location information. Once received the data is transmitted via a digital cellular network via the internet to our cloud servers where the information can be viewed anywhere in the world. As technical as the GPS tracking system is, the data is delivered to you instantaneously. So you can track any vehicle, person or asset anytime, in real time.



The web based tracking system combination of several modern information and communications technologies. The system comprises of vehicle-mounted tracking devices, a central server system and a web-based application. Through the website, users will have the facility of monitoring the location other similar information of vehicle. This system is designed to serve college student and administrative with an unlimited number of college bus vehicles. The based system enables student to browse location track on map through developed web website which is with Google Map and interact with database server for vehicles tracking information. Using the web based system enables users with different operating system platforms to easily reach the demand details by the exact of internet access.

4. HARDWARE &SOFTWARE:

A GPS-GPRS based tracking system gives all the information's about the location of a vehicle. The system utilizes geographic position and time information from the GPS. In order to track the movement of Google Maps for the vehicle used for mapping the location. The GSM modem latching the GPS location and send it to the information server using GPRS. The integration of GPS and GSM first established using SMS as a method of transmit GPS coordinates. The GPS is a space-device satellite navigation system to provide location and real time information.

FOR HARDWARE INTERFACE

Embedded C

Use of embedded processors in college bus include such device. Because most embedded projects have severe cost restriction, they tend to use low-cost processors like the 8051 family of devices considered in this book.

These same as chips have has very limited resources available most such devices have around 256 bytes (not megabytes!) of RAM, and the available processor power is around 1000 times less than that of a computer processor. As a result, developing embedded software presents significant new challenges, even for experienced computer programmers. If you programming experience is needed- in C, C++ or Java.

5. IMPLEMENTATION :

The User will access college bus portal and will search for their specific bus live location and it will show the facilities. Also user can have all recent update of time bus information with respect to requirement. Admin will add information about all updates. The system will be connected to the server and data is stored in database which is stored by admin.

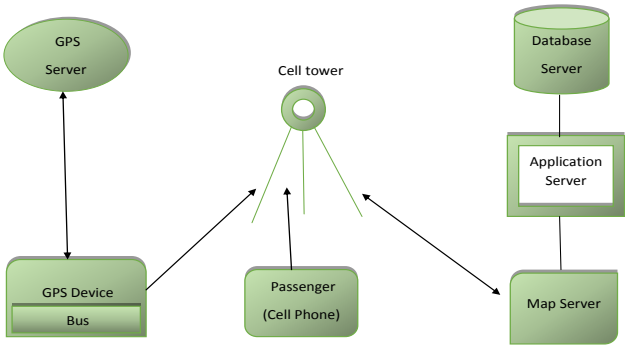


Fig .Real Time Bus Monitoring System

6. CONCLUSION

With implementation of the project a complete track can be kept of the buses of the college. The display at the student end acts as a time saver. Due to this an ideal system of bus transport is established by us for college purpose. By implementing our system passenger or students can plan their journey more effectively before time as the waiting time at the bus stops is reduced. Project will ease bus facility, save time by tracking bus route and the online portal of bus facility via designing website this portal will help the administrative access easy, real time location will be provided.

7. REFERENCES

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