**LITERATURE SURVEY**

**TITLE:** ”Mobile Application for College Bus Tracking”

**ABSTRACT:** This paper proposes an Android mobile phone application that gives information about buses, bus numbers as well as bus routes both online and offline. Reason for Android platform Android requires an open source development which is probably the most feasible and a present user friendly approach. This paper also deals with Location Based Services, which are used to track the current location of the bus as well as give an estimate remaining time for the tracked bus to reach its destination using the client –server technology. Also It display the required maps with the help of GPS.

**TITLE:** Child - Children Tracking Android Application March 2015

**ABSTRACT:** Android operating system is at the top in market because of its features like portability, platform independence, and low memory consumption. As android operating System is used in mobile phones, tablets and laptops it has covered more than 80% of the market. Now everyone is using android phone. As android is an open source operating system many developers are developing various applications every day, Millions of applications are available for use free of cost. These applications are helpful for Ticket booking, Banking services, Online shopping, Tracking our family members etc. The SecureChild Application is designed for School and Parent to track the children while they are travelling through School Van.The days are Gone when one of the two parents will sit at home to take care of the children and one earns. Now time has come for both the parents to work; in such scenario the security of children is very important. The numbers of users have Android phone equipped with Global Positioning System which can be used efficiently for security and protection purpose. This Application is mainly developed for toddler going to school to make sure that at what exact time child has reached school and at what time he/she left school. Also gives the van location and information about van drivers and Babysitter which will be in van to take care of toddlers. This also gives the expected time of the van while pick up and drop. This “SecureChild” is a multipurpose children safety application which will work on android platform.

**TITLE:** Children Safety and School Bus Tracking Solution. International Journal of Electrical, Electronics and Computer Systems (IJEECS)

**ABSTRACT:** Despite the strict majors taken for children safety by the authorities the crimes over children are increasing on significant amount. To restrict these crimes it is important to enhance security for children. Mishaps and missing of children are causing parent to worry about their children. School authorities may be penalized heavily for these mishaps, So school bus monitoring is an effective major to restrict these mishaps. This paper proposes an embedded system which focues on children safety, tracking of school bus and exact location of school bus with the help of longitude and altitude positioning of GPS and sending information through SMS. Each student possesses an RFID tag on his own smartcard which is useful for identifying the student. Two IR sensors are used to check whethera student is arriving or leaving bus.We also provide speedometer which checks speed of bus. Hence,we have proposed " LPC 2148 " based embedded system which provides a complete solution to children safety and school bus tracking.

**TITLE:** Smart School Bus for Children Transportation Safety Enhancement with IOT

**ABSTRACT:** School is the second best place for kids to inculcate education and ethical values next to home. Providing safety for the students throughout transportation to and from the school plays a vital role. The school will scale back the range of accidents during the transportation. This project helps both parents and therefore the school administration to manage and monitor numerous factors like number of students aboard, details of each student, pickup and drop timings, location, attendance system etc. parents can monitor the situation of the school bus together with the pickup and drop timings of the student through an android application. In our project, a GPS unit and a fingerprint sensing element that is connected to the Node MCU over Wi-Fi through an Arduino Uno. The geographic coordinates of the school bus within which the SKG13 GPS is located updates the location within the database unit. The fingerprint scanner detects the identification of the student once the student boards the bus. The bus unit uses Node MCU to push the data into the database i.e. the school unit. the school unit will add range of students' information in the web application created. solely the admins will manage and access the database unit. By taking these necessary steps, the child's safety throughout the fleet is achieved.

**TITLE:** RFID based school bus tracking and security system.

**ABSTRACT:** In present time due to increase in number of kidnapping and road accident cases, parents always worry about their children. This paper recommends a SMS based solution which assists parents to track their children location in real time. To track the location GPS module is used and to identify the identity of the child a RFID card is used which is in built in the system. Whenever a child boards a bus, the RFID tag located in his identity card will be detected by the reader present in the bus and the system will identify the child and will send a text message to the parents consisting the current location and time. In this way the parents will be able to keep record of their kid's whereabouts. The paper also proposes security system such as drunk and drive prevention system and speed control mechanism.

**TITLE:** . Development of School Bus Security System Based on RFID and GSM Technonologies for Klang Valley Area

**ABSTRACT:** At present, school bus services play a vital role to transport students in every country region from home to schools. Many of parents are relying very much on the school bus services although they are worried about their children safety. Realizing of that problem, this paper proposed a SMS based solution to assist most of parents to identify their kid's movement (in/out) of the school bus. SMS will be sent to parents once their children ride on the bus and reached the destination. The project aims to develop a school bus security system using RFID and GSM technologies. RFID is used to identify the student's identity with the parent's contact number and also head count whereas GSM is used as a platform to notify parent on their kid's movement via SMS. Tests has been conducted on the overall performance of the developed prototype. From the results, it was found that the developed project is capable to provide a real-time messaging system to parents on their children whereabouts; with an additional feature of student attendance checker. In brief, this developed prototype system could give the peace of mind for most of parents who are entrusting their children traveling with the school bus transportation.

**TITLE:** Vehicle Tracking, Monitoring and Alerting System: A Review. International Journal of Computer Applications

**ABSTRACT:** The goal of this paper is to review the past work of vehicle tracking, monitoring and alerting system, to categorize various methodologies and identify new trends. Vehicle tracking, monitoring and alerting system is challenging problem. There are various challenges encounter in vehicle tracking, monitoring and alerting due to deficiency in proper real time vehicle location and problem of alerting system. GPS (Global Positioning System) is most widely used technology for vehicle tracking and keep regular monitoring of vehicle. The objective of tracking system is to manage and control the transport using GPS transreceiver to know the current location of vehicle. In number of system, RFID (Radio Frequency Identification) is chosen as one of technology implemented for bus monitoring system. GSM (Global System for Mobile Communication) is most widely used for alerting system. Alerting system is essential for providing the location and information about vehicle to passenger, owner or user.

**TITLE:** Intelligent Transport System for Real Time School Bus Tracking For Safety and Security of Child Using GPS”

**ABSTRACT:** Schools are obliged to provide a safe transport system for kids so they can focus on their studies. Parents are as concerned about the safety measures a school has in place as they are about the level of education they expect the school to impart on their child. One way schools can ensure protection for their students is by using a Bus GPS tracking system. A high end GPS system is installed in the school vehicle all the signals from the vehicle are routed to an integrated central server for real time monitoring Information from the server can be transmitted via message alerts and Emails, or can be checked on the web or using mobile apps. What are the features of School Bus GPS Tracking System? The parent is informed estimated arrival time of their child’s bus before it reaches the stop before/after school. Guardians can track the area of the transport progressively utilizing the application. Parents without smart phones can use the know your bus feature to receive a text message which informs them of the current location of their child’s bus. In case there is a traffic jam, natural calamity or any other problem, an text message is immediately dispatched to the parent informing the reason for delay Benefits of GPS Tracking for School Buses. The advantages of using GPS tracking systems in school buses are plenty. The most important benefit is the peace of mind it provides parents as they are continually updated of their child’s where abouts. School management will have access to detailed reports such as distance moved by each vehicle, time of arrival at each stop etc which can prove to be in valuable. The school admin can review routes to ensure that the drivers are sticking to planned routes and aren’t missing any stops. The transport manager is also informed via alerts if the drivers over speed or if the vehicle has been in an accident.

**TITLE:** ”SCHOOL BUS TRACKING AND SECURITY SYSTEM”

**ABSTRACT:** In current point in time, due to more in number of kidnap and accident cases, parents always worry about their children, even their children using school bus for transportation. The proposed system recommends a SMS based application which consists parents to track their children location in real time. Initially the details of the students are collected and stored in the database. The details are converted into QR code and embedded with children's identity card. When the children enters the bus, the QR code is scanned by the mobile application and the timing, stop details will be sent to the parents as notification. Later on, when the bus gets started, the GPS in the mobile phone is turned on and send the location updates to the parents to easily track the bus location. Thus our proposed system is capable of notifying parents through SMS once the child enters/leaves the school, enabling parents to trace the bus, helping smooth and safer rides to the school.

**TITLE:** A Smart Bus Tracking System Based on Location-Aware Services and QR Codes.

**ABSTRACT:** When it comes to taking the public transportation, time and patience are of essence. In other words, many people using public transport buses have experienced time loss because of waiting at the bus stops. In this paper, we proposed smart bus tracking system that any passenger with a smart phone or mobile device with the QR (Quick Response) code reader can scan QR codes placed at bus stops to view estimated bus arrival times, buses' current locations, and bus routes on a map. Anyone can access these maps and have the option to sign up to receive free alerts about expected bus arrival times for the interested buses and related routes via SMS and e-mails. We used C4.5 (a statistical classifier) algorithm for the estimation of bus arrival times to minimize the passengers waiting time. GPS (Global Positioning System) and Google Maps are used for navigation and display services, respectively.