School Attendance & Vehicle Tracking System

SCHOOL BUS

Introduction, Objective

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School attendance and vehicle tracking system provides a comprehensive security solution to the school authorities. This technology is used to determine the location of a vehicle carrying students with the help of Global Positioning System and other navigation systems. Keeping an eye on the exact location and status of the school transportation is vital for both school officials and parents. Our system permits monitoring and controlling of the vehicle carrying school kids via mobile phone, tablet or an online computer through a GPS system. The vehicle will be installed with our RFID or Biometric reader to get the onboarding data of the students. Then the captured data will be sent to the authorities and parents.

This real-time technology enables school authorities to ascertain that the drivers are driving school's vehicle safely, tracking the speed of a vehicle and monitoring its route. Our GPS system also sends an alert notification to the parents about student's estimated arrival and departure time. Besides, an alert notification is sent to the school official providing details about location of the school bus. Along with this, it also offers report generation on the vehicles' condition. It also imparts an additional feature of live tracking and providing data on vehicle's statistics through a graphical map. Our school attendance and vehicle tracking system sends the vehicle's information using GPRS connectivity and GSM-based signals.

Objective

The goal of our school attendance and vehicle tracking system is to offer such a technology that would benefit the schools in enhancing the operational performance of the school transport facilities, ensuring student safety, and identifying misuse of school-owned vehicle and much more. Global positioning is remarkably applicable to the school transport industry and its management, as tracking the vehicle carrying school kids and monitoring student's attendance are becoming an essential part of a safer, productive and practical school management system.

Scope of Work

To produce a GPS based school attendance and vehicle tracking management system using a GPS & GSM technology that keeps a track of both - the school transportation and the students' attendance. Student attendance and vehicle tracking system is the apparent way for any school administration to advance its transport services, increase the efficiency of a vehicle, controlling its route and student-teachers' class attendance. Our system streamlines communication and accountability of school authorities with the parents by notifying them about their child's estimated arrival and departure time, a child's class attendance and more.

Our Attendance & Vehicle Tracking System Offer

School Transport Management Solution:-

The GPS-based school attendance and vehicle tracking system is designed keeping in mind the security of the students and vehicle carrying the school kids. Our solution enables an end-to-end tracking of the school-owned vehicle. It will assist the school authorities:-

1. To track, examine and manage their fleet more efficiently.
2. It provides information on route mapping, pick & drop of the students and shows availability of the school transport vehicles.

Our school transport management solution is designed aiming the safety of school children, offering easy management of the vehicles used for the students' transportation and tracking the vehicle.

Our solution provides transparency to the school authorities as well as parents through instant alert notification services. Parents can monitor the route of a vehicle carrying their kids after they head back from the drop point. Next, when the vehicle will enter the school gate, the reader installed in a vehicle will get auto-captured, sending an alert notification to school authorities. Later on, when kids leave the school premises, parents will receive an alert notification providing their estimated arrival time on the drop location. Thus, the whole process offers sheer clarity. Some of the features of our solution are:

1. Generating a report that contains data of the total distance traveled by the school-owned vehicle, its speed and route of the vehicle.
2. Decreases the risk of theft as alert notification will be sent promptly when any unauthorized use of a school's vehicle is observed.
3. Provides the status report for the operation of school-owned vehicles like fuel usage, maintenance date and km covered.
4. Allows up to the minute tracking of the school transportation installed with our system i.e. live tracking of the vehicle carrying students.
5. Provide vehicle's door open/close detection status.

School Attendance Solution

Maintaining attendance of the students with roaster is often regarded as a cumbersome task by the school authorities. Nevertheless, our school attendance and vehicle management system provides an efficient solution for managing attendance of every student conveniently.

Our solution presents class wise attendance system to the schools. Once the student enters the class, his/her attendance can be incorporated based on our Biometric or RFID solution. Thus, our solution provides instant information on any student's weekly or monthly attendance in no time.

Integrated Application for monitoring

With the support of the integrated Android application, our school attendance and vehicle tracking management system will provide the status report on activities of the student and school-owned vehicle to the parents as well as school authorities respectively, through a separate App. The application meant for parents will notify them about the route of the school's vehicle carrying their kid, estimated arrival & departure time of their child, their travel time and class attendance. While the application meant for school authorities will notify them about the clock-in and clock-out time of the teachers, students & staff, mapping route of the school transport vehicles, and its status.

Features

Our school attendance and vehicle tracking system comes with a bundle of features and attributes. Every detail of a the vehicle as well as student from the boarding on a school transport vehicle, route of the vehicle, vehicle entering the school's main gate, a student's class-wise biometric attendance to leaving the school premises gets recorded with the help of our fully featured solution. Listed underneath are some of the ultra-modern features coupled with our system:-

GPS Installation

All the school-owned vehicles installed with GPS device provides exact location, route and time/data of the vehicle in any weather conditions. Our GPS based school attendance and vehicle tracking system can provide an ultimate control over your school's vehicle.

GPS technology fulfills the basic tracking needs ranging from stop and start times, location addresses, and length of stops to more sophisticated mapping capabilities. So, a GPS tracking system can potentially give both real-time and historic navigation data on any kind of journey.

GPRS (General Packet Radio Service)

GPRS communication methodology plays a vital role in connecting a GPS tracking system with the server. GPRS technology is best fitted for transferring the data between a mobile device and the central server location. Hence, centralized data acts as an icing on the cake as the data of the driver and vehicles can be monitored, updated and managed from anywhere and at anytime.

We provide a complete visibility platform for school attendance & vehicle tracking system which offers real-time location information of the school bus.

Data Analysis

Data analysis becomes easier through alert notifications and report generations. Reports can be generated on school bus such as whereabouts of the vehicle carrying school children, route of the school bus, it's condition and in case of any unauthorized access to the school bus. Analysis of the data also plays a key role in students' security and keeping a track of their attendance. The custom reports are also possible on each student's attendance, absenteeism, etc.

GSM-based technology

Taking into consideration the expansion of mobile communication system in past few years, GSM network offers constructive solutions that include:-

1. Alert notification functionality on students' attendance and estimated pick-drop time.
2. Sending the location of school-owned vehicle through alert notifications.

Benefits

Every school needs a good system to keep a track of the school transportation as well as the students' attendance. At present, GPS has been widely used for locating position of any object via satellites. Our GPS based school attendance and vehicle tracking system makes use of this elementary yet reliable technology, in real-time tracking and monitoring of vehicles carrying school kids.
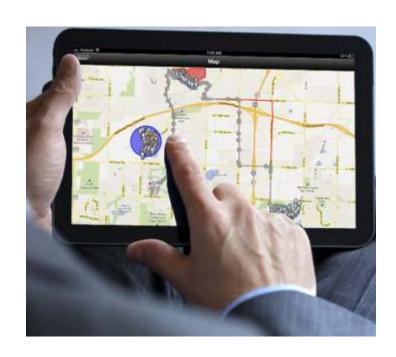
Here are few benefits that can be achieved using our School Attendance and Vehicle Tracking Management System

Precise Routing

Our system helps to get a precise location of the school's transport facilities that is significant for the student's safety. Identifying the exact location of a school bus is quite essential for both the school authorities and the parents, hence our solution is designed to determine:

1. How far is the vehicle from its pick and drop location?
2. Is the vehicle currently on the way or stopped?
3. Is the vehicle stuck in the heavy traffic?
4. At what time the school transport vehicle will arrive?
5. Is there any need to change the route, owing to bad weather or any obstacle or traffic jams ahead?
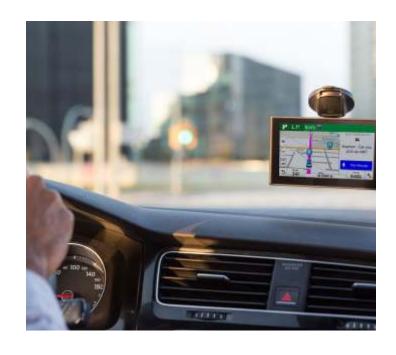

Security and Safety

Our system provides a comprehensive security solution to the school authorities enhancing the safety of the students and tracking the school bus as follows:

1. School authorities will get immediate alert in case of medical emergency or break down.
2. A students' pick-up and drop-in alert will be sent to the parents.

Time Saving Student Attendance

Logging each entry manually is time-consuming and the records take up valuable space. Our system offers an easy-to-use GPS based biometric solution that makes the process of tracking students' attendance and absentees much simpler. Our system enables:

1. Checking students in and out with no more than a click.
2. Beyond its student attendance tracking abilities, it can also track records of students.

Note :

MANTRA

B203, Shapath Hexa,
Opp. Gujarat High Court,
S.G. Highway, Sola,
Ahmedabad - 380060, Gujarat.
✉ sales@mantratec.com   ☎ +91-079-49068000 Ext-2