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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



ABSTRACT

SMART TRACKING SYSTEM FOR SCHOOL BUSES

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SMART TRACKING SYSTEM FOR SCHOOL BUSES

Abstract:

This system enables parents to find out the location of the bus using GPS from the starting point and also notify to parents when bus reaches to the nearest location, So parents won't get late or arrive too early at stop. As it is real time system we can get updated information of bus location in the form of latitude and longitude. This system contains three modules Administrator, Driver and Parents. It gives live location of bus on Google Maps and furthermore gives information about bus, drivers and route as per the changing location of bus.

PURPOSE AND SCOPE:

Many of students require school bus for pick up and drop to the school on an everyday basis. A safe transport for these children is one of the main concerns that need to be taken care of by the school management. Hence, the need for reliable management system of school bus in today's world has increased to a greater extent. We propose a Smart tracking system for School buses, which is an android based application designed and implemented to provide remote tracking and SMS mode of alert mechanism. The application is user friendly, interactive and secure, which uses Google API's to fetch the current location and GPS to track the school bus in real time. In order to show the feasibility and effectiveness of the system.

EXISTING SYSTEM:

Currently, most of the schools do not have a digitally monitored school bus. An attendant is appointed to look after the children for their safe pickup/drop. The school authorities and parents have no means to track the bus or even communicate with the attendant a few times. Hence, there arise concerns for the safety of the child. In some sophisticated schools, there exists a tracking system that use techniques of virtual fence known as Geofencing which do not allow full coverage of the course, making difficult to determine if the bus is travelling in a planned path.

PROPOSED SYSTEM:

In this system the driver ,administrator and parent will utilize this Android application. This application is intended for drivers who are driving the school bus. System permits the administrator to include another driver where driver id and password is generated and stored into the system. The part of the administrator is to enroll another student by entering his own details with parent points of interest where parent gets a mail which comprise login id and password, so parent can get to the web interface to track their children via GPS and SMS when reached school. Administrator can see transport points of interest and

furthermore can edit and update elements.

ADVANTAGES:

1. This System helps the parent to keep track of their children travelling in the school bus.
2. Since GPS location of the school bus is tracked, so driver will not attempt to re-route the school anywhere else .

SOFTWARE REQUIREMENTS:

- Programming Language : JAVA
- Operating system : Windows 10
- Tools : Android Studio
- Database : Firebase
- Required API : Google Location Services API