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Smart SMS System for MNC Transport

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Abstract:
Global positioning system find nearby location street address, city, country and zip code. Also show you are way to reach the place with speed of travelling. The application is used for students to find the location of their buses while waiting for the bus .It provides automatically emergence call to the particular location .Application is finding nearby bus stop location using GPS to send message to the student of the next stop location before the reaches there. According to the project when a vehicle meets with an accident immediately vibration sensor will detect the signals or the rolls over and the alert message is send through the GSM modem including the location to police control room or a recues team.

Key words: *smart SMS, GPS, SQLite, Eclipse, Android, location finder, distance matching*

1. Introduction

- The main objective of SMART SMS is to make reduce the waiting time for bus. In today's busy world people spend more time for bus.
- By using this application to reduce the waiting time for bus. The user can also map the location of the bus where it is located.
- It provides automatic call to the particular location. Google map finds distance of two places. An accelerometer can be used in our application so the dangerous driving can be detected and alert message is sent to the police station.
- So the police can immediately track the location through the GPS MODEM, after receiving the information.
- The Project is developed in Android programming language by using the Eclipse. We use the Android4.3 tool kit which includes a variety of customer tools that help us to develop the mobile application on the android platform.

2. Existing System

- Analysis of external sensors data for vehicle performance is a large area of study. Some work has been done in the form of theoretical research and development in a practical design.
- The main ideas of our work focus on mapping anomalies of a road's surface and classifying different driving behaviors.
- Nericell is a system researched and developed by Microsoft that detects traffic honking, bumps, and vehicle braking using external sensor. For Detection, it uses multiple external sensors such as microphone, GPS, accelerometer, and global system for mobile communication radio for traffic localization.
- The system was deployed for testing in taxis using a convenient method to identify surface of a road.

3. Proposed System

- The rapid growth of technology and infrastructure has made our lives much easier. The advent of technology has also increased the traffic hazards and the road accident take place frequently which causes huge loss of life and property because of poor emergency facilities.
- Our project will provide an optimum solution to this draw back. In order to reduce waiting time at a bus stop, passengers would have to obtain live time table for any bus stop.

- To achieve this complicated task, we proposed a new bus location and route navigation system by using ICT (Information and Communication Technology).
- The system relays data about the current location of a bus to the bus user through SMS.

4. Module Description

The project contains four modules.

- SMS Alert
- Location Finder
- Path Module
- Accidental Alert

4.1. SMS Alert

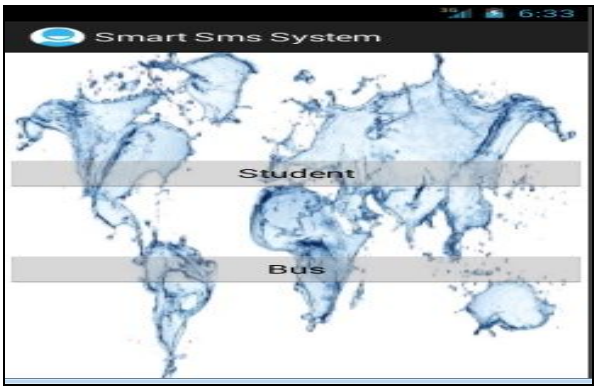

Figure 1

- This module is for the mobile which is located in the bus. In this module the admin/bus driver will select the bus number and start the application if the bus routes are already added.
- Else if the bus routes were not added then the admin/bus driver can add the bus root and then start the application.
- After the application is started the application will request for the bus root and their latitude and longitude stored in the database.
- If the Student are located in that location then a SMS alert will be send to student mobile number that the bus has enter the location.
- Else the application moves on and waits for next proximity alert to happen and this process carries on till the bus is the move.

4.2. Location Finder

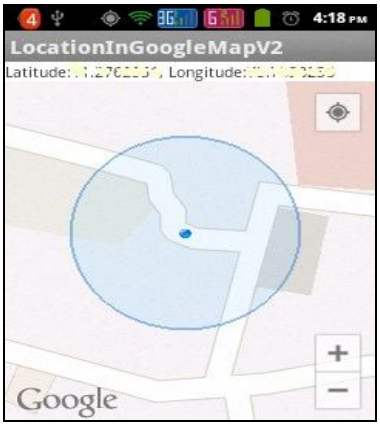

Figure 2

- This module is used to find the current location of the student/bus by using GPS.
- And also the location updates will be maintained for future use when the user's location is changed.

4.3. Path Module

Figure 3

This module intern consists of two modules.

- Path
- Distance Matching

Path

- In this module the bus location is retrieved from the centralized database which will has been stored for every 2 minute when the bus location changes.
- And with that also the path which the path is travelling is retrieved from the database which will be stored for every bus.

Distance Matching

- In this module also bus location is retrieved from the centralized database which will be stored for every 2 minute when the bus location changes. Then the current user's location is found using GPS.
- And then by using Google Maps API the URL is loaded and the path, distance and duration between the current user's location and the bus current location is found.

4.4. Accidental Alert Module

- In this module the speed which the bus travelling is found by using the accelerometer in the android mobile placed in the bus.
- And then if the bus exceeds the average speed or if the bus is met with an accident (which is found by the student change in the speed) a SMS alert will be send to the police station and the specific authorities that the bus is in danger.

5. Conclusion

- The project to create smart SMS system global positioning system find nearby location, street address, city, country and zip code.
- Also shows you're way to reach the place with speed of travelling. This application is used for employee to find the location of their company busses while waiting for the bus.
- Application is finding nearby bus stops location using GPS to send message to the employee of the next stop's before the bus reaches there.
- An accelerometer can be used in our application so that dangerous driving can be detected.

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