Glimpse: Real Time Transport Tracking System

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Abstract – *Travel has always been a man's best pass time, a method to renew from the daily stress, a break from the monotonous life and to experience the thrill of adventure. Until the last decade, a camera was a traveler's best friend but little did we know things are going to change a lot better. In today's world, life is always on the move. With the advancement of technology, smart-phones today have immense capabilities to provide rich user experience with interactive facilities. Glimpse: Real-time transport tracking is an Android-based application for travelers to obtain the geo-location and tag it with multimedia features. This system will track the real time location of the bus in Mumbai cities which will reduce the waiting time of the people. With the help of this system we can monitor the buses on Google maps and can also provide a great user experience for the passenger of Mumbai with this system passenger can purchase the e-ticket through their android device for the ease of passenger, this will not only help the passenger but also boost the BEST funding and enhance the BEST rather than ongoing loses which BEST are facing.*

Key Words: GPS , Google map, E-Ticket.

1. INTRODUCTION

The Automation of tracking the real-time location of the vehicle is used in every field. The tracking of the location of the vehicle can be used in many application such as taxi booking, food delivery etc. The public transport had been used by the normal people to go to work, college, school, etc. The people used to wait for the public transport and they don't have the knowledge at what time the bus going to arrive. Many corporations are trying to provide information to the public ,the schedule of the public transport. The user gets the static information of the transport but unable to get real-time information on the bus. Due to this people try to get a private mode of transport. The real-time information will help the people to get the idea how to plan a daily schedule. One of the approaches is to get real-time information by messages. In these GPRS is used to transfer information through a message. In these, the user requests the central administration for getting the information of the bus. After getting the request the admin panel gets the real-time information of the bus and then send to the user via GPRS or SMS. The best approach is to use GPS (Global Positioning System) to identify the current location of the buses. The location calculated by the GPS is in the form of latitude and longitude.

2. LITERATURE SURVEY

During our literature survey we found out the following existing systems that are already being deployed at the places inside and outside India[3]. Real Time bus Tracking (RTBT) system, is implemented by installing GPS devices on city buses which will transmit the current location on GPS Receiver. Now the GPS Receiver will be interfaced with computer and interface driver will auto save data in dot text (.txt) file which will continue till GPS module is working. From here our application will retrieve data and store it in web server from where we will display real time information of bus[1]. In cities outside India due to their economy advantage use this system by using cameras and other types of sensors on almost every light or signal poles. These devices inform the location to the centralized server and notify the passenger about the bus ETA. Some of the places in India like Bangalore the system exists with applications that run on either only on web or in high configuration smart phones with high data rate also Karnataka State Road Transport Corporation (KSRTC)[4] uses Real Time Bus Position and Time Monitoring System. All rights reserved by 81 system that exists for the passengers to check the displayed bus timings on bus depot not on any web or mobile based application. Real time passenger information system uses variety of technologies to track the location of bus in real time and generate the prediction of bus arrival at stops along the routes[5]. V. Yamuna, G. Rupavani, et al. proposed GNSS based bus monitoring system. The main objective of this system is to reduce the waiting time of passenger in bus stop by sending information about the location of buses to the passenger through SMS. GNSS based web application is developed which provide which provide real time location of bus on Google Maps along with speed [6].Madhu Kumar, K. Rajashekhar, et al. proposed, Design of punctuality enhanced bus transportation system using GSM and zigbee. In this way service quality of operational efficiency is improved and passenger is also able to get the information about the respective bus [7].Manini Kumbhar, Meghana Survase, et al. proposed a Real Time Web Based Bus Tracking System[2].

3. PROPOSED SYSTEM

We are going to use GPS for locating the position of vehicle.We can track buses through application using GPS to find out location of a bus.In these application which requires login of administrator for Vehicle Details. We use the Vehicle details From Vehicle Registration Form i.e. (Vehicle Name, Vehicle No. Driver Name, Driver Mobile).This is the

Administrative Activity. From that detail we can track the location of Vehicle, only registered vehicles location can track.In order to overcome the above drawbacks, a system is proposed. This is an android based system which will provide all required information about BUSES travelling in MUMBAI. The reason behind selecting android as a platform for developing this system is that android based mobile phones are used on a very large scale among people. Android is easy to handle and is user friendly, and hence the application will be used by maximum number of citizens. Android is an open source operating system for mobile phones. The application will be based on user friendly environment and hence any one can access it free of charge.
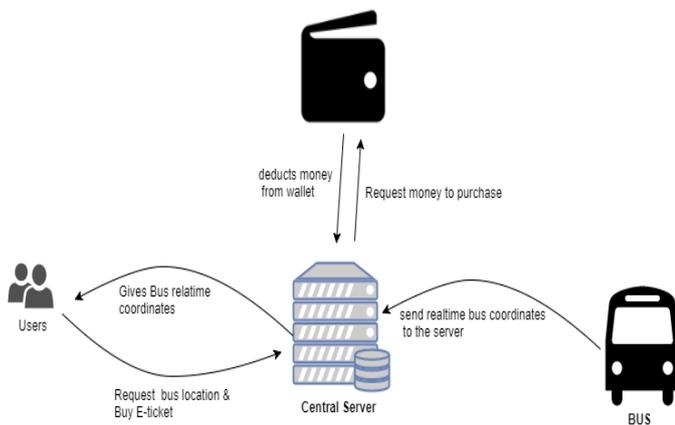
System Architecture

The primary idea here is to provide routes and bus timings to the users in real time. The system will get the input from the conductor or bus driver at the start of the journey. The input provided by the bus conductor/Driver is only a bus no. And start the GPS of the bus at start of the journey. The bus no is mapped with the GPS location of the bus. In every 30 seconds the GPS location of the bus is stored in database. When user search with respect to bus no the bus no is searched in a database. With the help of the database the location of the bus is mapped on the map and the real time location of the bus is display to the user. The further idea is to make the payments of the tickets and passes of the bus E-payments. The ticket and the passes are in the form of QR code. These will help the government buses to increase the profit and save ticket papers which will indirectly save tree. The features that we plan to include in our system are as follows: The details of buses will be stored in the database and be retrieved whenever needed. Information of all routes in MUMBAI will be included in the application. As the application is based on android, it will be easy enough for the user to understand. The application will be updated from time to time, so that all changes in the bus timings and the routes are recorded. The Mobile phone GPS will track the location of the passenger as well as the bus so that approximate time required by the bus to reach the stop will be calculated. The tracker will also guide the passenger the route to his/her destination. The log of the tickets and passes

are stored in the databases and also displayed to the user. The payment will be from wallet such as Paytm, etc.

4. CONCLUSION

With the usage of the project, an entire track can be kept of the buses. The show at the traveler's end goes about as a help. Because of this, a perfect arrangement of transport is built up by us. By actualizing our project, a traveler can design their excursion all the more proficiently before time as the holding up time at the transport stops is decreased. The primary highlights of this project are the effective utilization of time, real time data on the accessibility of transports, activity affirmation, and suburbanite fulfillment. A general query emerges as a primary concern that is if the transport is stuck in a traffic or rush hour gridlock or it separated some place in the center how our project will indicate the passenger. The response to this query is that when a traveler wants to see the location of the bus, the server will show an undefined zone and Assessed time of landing of the transport from past so by this methodology, it is self-explanatory that the vehicle almost certainly slowed down out in a surge hour gridlock or there might be a dark issue with it. Thus in this query, we will show that movement information accumulated logically can be showed up on the server for passenger who are in search of buses which are stuck in traffic. Internet empowered cell phones can get continuous travel data and will help the traveler to screen their chance all the more viably and correctly.

5. FUTURE SCOPE

We can use machine learning to predict the nearest bus stop from the user current location and provide the details to the user. We can implement display panel with the help of real time map of all the available buses to nearby bus stop. We can predict number of passenger in the individual bus by using the image recognition system. The system can be used by the private companies such as food ordering ,Courier companies, Car rental companies, etc. The system can be used by the parents for monitoring the children in the school bus that they reach the school or not

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