

Smart Assistance for Public Transport System

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Abstract- *This paper deals with the implementation of an intelligent bus monitoring system based on current challenges and problems. In this system, integrated sensing technologies such as global positioning system (GPS) and Global Mobile Communication system (GSM) are used to monitor the movement of a bus.*

A new theoretical framework and ruled based decision algorithms are developed for the system. An experimental setup is developed for the prototype implementation. The results show that the choice of integrated technologies used in the system is suitable to monitor and manage a vehicle transportation system.

In bus also contain the feature such as women security and alcohol detection which will reduce the accident happening in normal life.

Keywords- Global System for Mobile(GSM), Global Positioning System(GSM), IR Sensor, MQ3 Sensor, ADXL335 Sensor, switches.

I. INTRODUCTION

In day to day life we generally face problem of public transport system. It's like somebody is waiting for some bus for an hour, but when bus arrives at his stop, it could be fully loaded and he will not even get a chance to enter into it. Sometimes driver would not bother to stop the bus. So that hour is wasted that he waited. There is also a woman security problem we have to face in today's life. Women's security is a critical issue in today's world and it's very much needed for every individual to be acting over such an issue. Sometime bus was fail and also accident happens at that time there is no emergency option in bus to help. In our system, if that person would know about where his bus is in advance, may be he could look for another option. It saves time and frustration.

Here we developed a system which have android application. The main objective of our project is to trace the bus by using GPS and GSM system. We used GPS module in our prototype to track particular bus. Bus unit have GSM module. If any person want to know the information about the bus he can give a missed call to GSM module which situated in the bus and GSM module send information about the bus only that person who gives a missed call. In this system position of bus is send to smartphone by SMS with the help of

GSM system. The information contain seat count along with the location of the bus. We used obstacle sensor for checking seat count at entry door and exit door. We also adding some other applications which include women safety, safe driving and alcohol detection.

II. LITERATURE SURVEY

M.A.Hannan developed an Intelligent Bus Monitoring and management system on communication in which he proposed that, they have deals with the implementation of an intelligent bus monitoring system based on current challenges and problems. In this system, radio frequency identification (RFID) and integrated sensing technologies such as global positioning system (GPS), general packet radio service (GPRS) and geographic information system (GIS) are used to monitor the movement of a bus. A new theoretical framework and ruled based decision algorithms are developed for the system. An experimental setup is developed for the prototype implementation. The results show that the choice of integrated technologies used in the system is suitable to monitor and manage a vehicle transportation system.

The intelligence implemented in the bus monitoring system can be achieved by compiling and feeding all the proposed theories and algorithms for RFID and other sensing technologies into the system. The ability of the system to act on its own can reduce the manpower required at the monitoring center. Bus drivers will also be more punctual to the bus schedules that have been established, resulting in a more efficient bus circulation system. The experimental results show that the system is intelligent enough and able to provide important information to the authorities for monitoring and management of the bus system. But in our project we are not using RFID tag.

Poonam Bhilarel developed a Women Employee Security System using GPS and GSM based Vehicle Tracking international journal in January 2015. In this paper she proposed that they describes a "GPS and GSM based vehicle tracking and women employee security system" that provides the combination of GPS device and Specialized software to track the vehicle's location as well as provide alerts and messages with an emergency button trigger. Now days due to recently happened cases such as rape by drivers or

colleagues, burglary etc. Employee security, especially women employee security has become the foremost priority of the companies.

System uses the Global Positioning System technology to find out the location of vehicle. The information of vehicle position provided by the device can be viewed on Google maps using Internet or specialized software. The IT companies are looking forward to the Security problem and require a system that will efficiently evaluate the problem of women employee's security working in night Shifts. This paper focuses on the proposed model that can be used to deal with the problem of security issue of women employees using GPS and GSM based vehicle tracking.

Block Diagram-

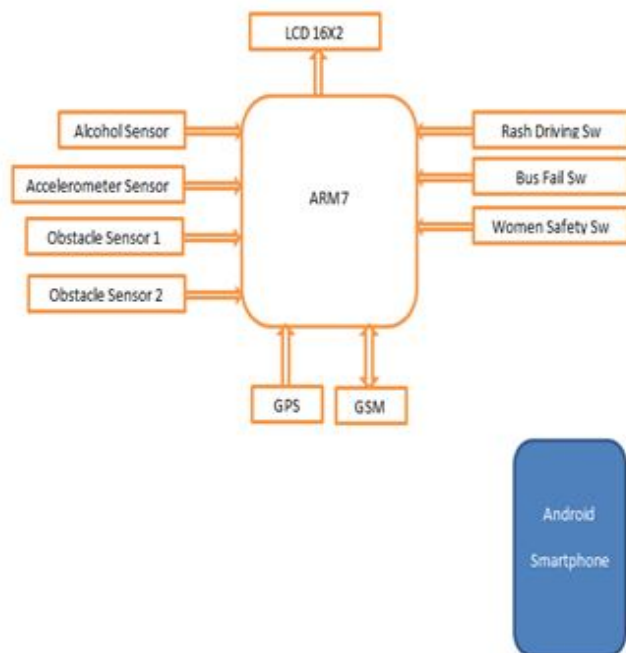


Fig. Block Diagram of Public Transport System

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