International Journal of Scientific Research & Engineering Trends
Volume 6, Issue 1, Jan-Feb-2020, ISSN (Online): 2395-566X

Smart Ambulance with Traffic Control

Mr.Prashanth H S , Sandhya D, Shalini V, Sheela, Vydehi Bhat
Visvesvaraya Technological University
K. S. Institute of Technology, Bangalore, India

Abstract **- Road traffic jam becomes a serious issue for extremely huddled metropolitan cities. Ambulance service is one in all the main services that gets delayed by traffic jams. An ambulance or any emergency vehicle stuck in traffic is unable to cross the signal due to poor traffic signal controller. This project aims at providing a solution by alerting the traffic controller before the ambulance reaches the traffic pole using the concept of Internet of Things (IoT).**

Keywords- **IoT, Traffic Signal Controller, Ambulance.**

I. INTRODUCTION

The main thought behind the paper is to supply a sleek flow for the ambulance to succeed to the hospitals in time and thereby reducing the delay caused by traffic jam. The traffic in cities has been exponentially increased due to a large number of vehicles plying on the road. Due to this significant traffic, often traffic jams occur on roads because of which the emergency vehicles like ambulance and fire engines get stuck in traffic which may be the cause for losing humanlives.

Current traffic control systems are a static case wherein vehicles got to wait for a fixed amount of time until the microcontroller switches the green light for that lane. If a vehicle is stuck around the traffic pole, then the traffic police can give priority to the ambulance by giving necessary symbol or signs to the vehicles sothat the ambulance can get out of the traffic as quickly as possible.

Moreover, if the emergency vehicles are stuck in alane distant from the traffic pole, the siren of the ambulance is unable to reach the traffic police, in this case the emergency vehicles have to wait until the traffic gets cleared or they have to depend on other vehicles to move aside which is not an easy task in traffic situations.
The project proposes a system where, ambulance driver uses an android application to request the traffic controller to make the signal green for the lane in which the ambulance ispresent.

II. LITERATURE REVIEW

Mr. Bhushan Anant Ramani, Prof. Amutha Jeyakumar [1], developed Smart Ambulance guidance system, which uses a central server to control the traffic controllers with the help of the webapplication.

Madhav Mishra, Seema Singh, Dr.Jayalekshmi.K.R, Dr. Taskeen Nadkar [2] developed an advance alert mechanism for ambulance pass by for Indian scenarios. This analysis essentially uses the prevailing technologies along with the concept of Internet of things (IoT). The architecture used is server-client architecture. The client is a user using an android application.

B. Janani Saradha,[3] et al. proposed the microcontrollerbasedRFID system that is used to alter the traffic lights upon arrival at traffic light junction. The system creates an android app that connects both the ambulance and therefore traffic signal station using cloud network. This system makes use of Radio frequency identification technology to implement the intelligent traffic signal control. The essential plan behind the projected system is, if the Ambulance halts on the way due to a traffic signal, RFID installed at the traffic signal tracks the RFID tagged ambulance and sends the info to the cloud.

Tammishetty, Sneha,[4] et al. have proposed the utilization of GSM, Arduino, Android mobile system. The proposed method enables the emergency vehicles to signal the traffic signal controller placed within the traffic junction regarding their arrival in order that the traffic goes to be regulated. This technique needs the users traveling within the emergency vehicle to signal the traffic controller hardware through the appliance deployed in their mobilephones.

Amrapali Dabhade, Dr.K.V.Kale, Yogesh Gedam[5]. In this study, they have tried to solve problem by representing the shortest path facility for finding the nearest location of the hospitals from user's location. They have used the ArcGISsoftware and the Dijkstra's algorithm to provide the shortest path from one location to another.

G.Jemilda, R.Balakrishnan, B.Johnson, G.Linga Sangeeth[6].They proposed an Android application that provides information about buses, bus numbers as well as bus routes both online and offline.

III. CONCLUSION

Death due to ambulance delay is one among important issues which is faced by most of the countries in the world. This paper implements the design of a new concept of Smart ambulance with Traffic Control System. During the emergency situation, the Traffic signal switches to green and allows the ambulance to pass through the road intersections. This method can help the ambulance to succeed in the hospitals with lesser time consumption.

REFERENCES

[1]. Mr. Bhushan Anant Ramani, Prof. AmuthaJeyakumar "Smart Ambulance Guidance System" International Journal of Advanced Research in Computer Science and Electronics Engineering, Volume 7, Issue 7, July2018.
[2]. Madhav Mishra, Seema Singh, Dr. Jayalekshmi. K.R, Dr. Taskeen Nadkar "Advance Alert for Ambulance Pass by using IOT for Smart City" International Journal of Engineering Science and Computing, June2017.
[3]. Saradha, B. Janani, G. Vijayshri, andT. Subha. "Intelligent stoplight system for car mistreatment RFID and cloud." Computing and Communications Technologies (ICCCT), 2017 2nd International Conference on. IEEE, 2017.
[4]. Tammishetty, Sneha, et al. "IOT- Based stoplight management Technique for serving to Emergency Vehicles." Proceedings of the first International Conference onprocess IntelligenceandInformatics". Springer Singapore, 2017.
[5]. Amrapali Dabhade, Dr.K.V.Kale, Yogesh Gedam. Network analysis for locating shortest path in hospital data system. International journal of advanced research in computer science and software engineering, 2015.
[6]. G.Jemilda, R.Balakrishnan, B.Johnson, G.Linga Sangeeth. Mobile Application for College Bus Tracking. International journal of computer science and mobile computing, 2017.