A SURVEY PAPER ON SMART TRAFFIC SIGNAL FOR AMBULANCE

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ABSTRACT

The improved of industrialization and urbanization has conduct to an immense increase in the population invariably leading to rise in the number of vehicles on road. The output of traffic congestion and traffic jams are the major hurdles for emergency vehicles such as ambulance carrying difficults patients as these emergency motor vehicles are not able to reach their target in time, resulting into a loss of people life. To solve this problem to some expanse we have apparently come up with Intelligent Traffic Control System(TCS) for ambulance vehicle ". The proposed system clears the traffic crowd by all and converting red signal light to green signal light on the route of the ambulance, hence helping in clearing the traffic and given way towards its end point. The system consists of an software application which registers on the ambulance in their network. In case of emergency circumstance, if the ambulance stoped on its way, the application sends an emergency instruction to the traffic signal server and also the direction where they wants to travel along with patient from their exact location with the help of map. The upcoming signal is identified based upon the current location of the ambulance. And through this system esaliy across the ambulance from traffic because of the there are have police man and they also control from there traffic control room and from its easy to save life and save time.

Keywords: Arduino, IR Sensor, Traffic Light (LED).

I.   INTRODUCTION

The pace at which the world is growing is very high today. Reformations in technology every day is evolving and upgrading efficiency in healthcare sector is one of the most critical and challenging jobs also with the advent of Industrialization and Urbanization, as the population increases day by day the number of motor vehicles also expand on the roads. This leads to many traffic jams in big cities. Traffic crowding causes many adversary effects on countries transportation. One of the widely effected service due to many traffic jams is that of an ambulance. Many a times, ambulance consist of difficulty or critical patients which needs to be taken to the hospital in minimum amount of time on condition that proper treatment to the patient so that chances of carry on increases in difficult condition. A Patient may droping his life if there is slow-down in reaching of ambulance to the hospital. According to the surveys 95% of the heart attacks becases can be proper treatment, if the ambulance can reach the hospital at current time without strucking into the traffic. For this, it is needed that the motor vehicles on the road to made road for the ambulance. But sometimes, the ambulance gets run through in the traffic which in turn wastes of a time waiting for the traffic road to clear all. We can overcome these controls by the make an appearance technology such as IoT i.e. Internet of Things. Several software implementations and hardware devices can be connected with the help of wireless networking tools or wired tools. In Internet Of Thing the components are connected to each other and managed by the internet. Thus the impact of Internet Of Thing in today's era is noteworthy as it helps to represent the object digitally and makes itself something greater than the object by itself.

In this paper, we are along with this paper 'Intelligent Traffic Control System for Smart Ambulance'. The main agenda is of this system make it to efficient for the ambulance to reach end point a different location without having it to stop anywhere until the destination is reached of end point. This paper proposes managing of traffic lights and its handled by the driver of the ambulance. Basic information of the patient is taken along with the status of the patient such as serious or non-critical. This information is extra used to send it to the hospital. Depending upon the emergency and situation , the driver sends the current location to nearest hospital . there are Depending on situation, that signal is made green to gives the way to the ambulance to reach end point and

concurrently the others are changed to red. Using this method, way is provided to the ambulance output it to reach the destination in less time.

II.   LITERATURE REVIEW

Table -1: Literature Review

Sr.no	Author name	Paper Title	Paper content to be observed
1	Bhandari Prachi, Dalvi Kasturi, Chopade Priyanka	Intelligent Accident-Detection And Ambulance-Rescue System [2014]	Provide variable time slots as per traffic density.
2	Pooja Kadam, Nivedita Patil, Pooja Patil, Snehal Shitole	Survey on Smart Ambulance with Traffic Management [2021]	In this paper we are studying about how to manage the ambulance meanwhile in traffic area and crud area
3	Sudhakara H M, Girish H. R, Kumara Swamy N. R J. Vinay Kumar	A Review: Smart Ambulance and Traffic Controlling System [2020]	Wireless communication between server and traffic signals, also between server and ambulance
4	Prof. .Manjiri M. Kokate , Madhuri S. Dabade, Shivani S. Shete, Jeevan G. Shitre, Gunjankumar H. Singh	Intelligent Traffic Signal Control System For Ambulance [2018]	Once the ambulance is spotted then it will verify and provide a green corridor.

2.1: Intelligent Accident-Detection And Ambulance-Rescue System [2014]: in this paper we studied how to reach patient through the smart ambulance. in this paper they are used some required component like a main server unit houses the database of all hospitals in the city. A GPS and GSM module in the concerned motor vehicle will send the location of the accident to the main server which will rush an ambulance from a nearest hospital to the accident spot. Along with this there would be manage of traffic light signals in the track of the ambulance using RF communication. This will decrease the time of ambulance to reach the time in hospital. A patient monitoring system in the ambulance will send the vital framework of the patient to the concerned hospital.

2.2: Survey on Smart Ambulance with Traffic Management [2021]: The growing of industrialization and urbanization has result in associate huge increase within the population invariably leading to rise within the variety of vehicles on road. The ensuing traffic congestion and traffic jams are the most important hurdles for emergency vehicles like ambulance carrying important patients as these emergency vehicles are not able to reach their destination in time, ensuing into a loss of human life. To solve this drawback to some extent we've got apparently come back up with Smart ambulance using IR sensors for ambulance. The proposed system clears the tie up by turning all the red lights to green on the trail of the ambulance, hence helping in clearing the traffic and providing means towards its destination. The system consists of associate android application which registers the ambulance on its network. In case of emergency scenario, if the car halts on its means, the application sends associate emergency command to the traffic signal server and additionally the direction wherever it needs to move with this position with the assistance of world Positioning System (GPS). The closest signal is known based upon this position of the ambulance. And that particular signal is formed green until the ambulance passes by and later it regains its original flow of management. During this way it acts sort of a lifesaver project because it saves time throughout emergency by dominant the traffic lights.

2.3: A Review: Smart Ambulance and Traffic Controlling System [2020]: Abstract— India is a developing country, population of India is memorably growing. India stands within the second place in the world in terms of population. As there will be increase in population gradationally there will be increase in number of vehicles, due to which the business traffic increases and because of which the exigency vehicles like ambulance, fire machineetc. face delicate to reach the destination in time. Under these circumstances, a promising system that can clear the business signal especially i n peak hours and therefore give a safe route for exigency vehicles is extremely important. In being literature there is lower focus show on the exigency vehicles to clear the trail, to

overcome this issue a RFID grounded system is proposed by using this fashion we will manage and regulate the business signals at junction which exigency vehicle approaches. therefore there'll be easy passing out for the exigency vehicles in business traffic. The proposed frame work is modeled by the means of an experimental setup using Arduino and LED displays which simulates a true time business script. This simulation results illustrate the terms of discovery still as is furnishing passing for the exigency vehicle to of holdback in peak hours.

2.4:Intelligent Traffic Signal Control System For Ambulance [2018]: Road business traffic becomes a major issue for largely crowded metropolitan metropolises. India is the alternate most populated country in the world and is a fast growing frugality. It's facing terrible road traffic in the metropolises. According to Times of India about 30 percent of deaths are caused due to delayed ambulance to reach at sanitarium. In proposed system we're trying to reduce the detention for the ambulance. To smoothen the ambulance movement we come up with " Intelligent Traffic Signals Control System for Ambulance ". We're developing a website " HealthCard " for doing enrollment about medical history of all citizens. This data will help to save the time in sanitarium to come ready for treatment. This data can be recaptured by using unique id and point authentication. This generated data will shoot to the particular sanitarium before the reaching of ambulance over there. In alternate phase, we're trying to give the green signals for ambulance by switching the signals. We're going to use the technologies like GPS and RFID. Whenever signal detects the ambulance near to signal, also signal switches to green. As this system is completely automated, it fete the ambulance and control business signals. This system controls business light and saves the time in exigency period. therefore it act as a life redeemer design.

III.   SUMMARY

In this survey paper we are studying so many paper in all those paper main motive are same but in every paper they used different methodology**.** Intelligent accident-detection and ambulance-rescue system in this paper we are studying so many things. In there are paper they used to GSM method and in there paper they tries to manage time in less of time how to reached nearest hospital. In second paper we studie how to reach from urban area as per as possible soon at hospital because of in urban area didn't have good facility that's why used this technique in this paper. In third paper we are studies they are used to wireless method through the wireless network connect to the application and through this application sends the message to nearest hospital ambulance. In forth paper we are studies if ambulance should came and there in area get traffic then from control room mange the signal and from control room they can change the signal into green.

IV.   CONCLUSION

An algorithmic rule is style to cover control system to avoid the business collision. So that they will save the continuance of a case during exigency time. Considering the real time state of affairs the system is bettered by bedding GPS navigation system and adding an fresh light- weight in control system and putting an alert inside 100m distance throughout ambulance appearance. So we can gauge back the possibility of death rate throughout extremities. The work presents review of the present analysis done in field and tries to develop a system applicable for developing countries.

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V.   REFERENCES

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