Conference Proceeding Issue Published in International Journal of Trend in Research and Development (IJTRD), ISSN: 2394-9333, www.ijtrd.com

Traffic Disobeying Control System

¹Yuvaraajan.E, ²Dr.M. Rajeswari ¹UG Scholar, ²Associate Professor, ^{1,2}Department of CSE, Karunya Institute of Technology and Sciences, Coimbatore, India

Abstract: In recent times, IOT plays a major role in connecting physical devices that are accessible through the internet. Here in our model, we make use of an RFID tag, Reader, and GSM module for making an Intelligent Traffic Disobeying Control System. Here the tag stores the related information about the vehicle i.e., owner name, address, phone number, license number, road tax, Fc, etc. The reader is fixed at the stop line of the Traffic Signal. The GSM module is also used to send SMS to the rule's violators. If the vehicle crosses the red signal first, the warning message will be sent to the user of the vehicle. If the vehicle crosses the red signal a second time also then the warning message will be sent to the user of the vehicle. If the vehicle crosses the red signal a third time, then the penalty payment message will be sent to the user of the vehicle.

I. INTRODUCTION

Traffic Control and Management System is important nowadays to have a safer and much more reliable system. However, the existing system needs manual monitoring of traffic rule violations and the proposed system includes tracing vehicles automatically without manual help. It is done with the help of an active RFID tag and reader. An RFID tag also called a transponder receives a radio signal and in turn responds to it by producing a radio signal. Here the tag stores the related information about the vehicle i.e license number, road tax, Fc, and expiration details reader reads all the details and sends those details to the RTO unit with the help of GSM using UART. Messages are sent to the user and RTO, and vice-versa when the traffic rules are violated by the user. All the user details are stored in RTO PC which is easy to verify all the documents and examine them then and there accordingly. If the vehicle crosses the red signal first, the warning message will be sent to the user of the vehicle. If the vehicle crosses the red signal a second time also then the warning message will be sent to the user of the vehicle. If the vehicle crosses the red signal a third time then the penalty payment message will be sent to the user of the vehicle. The penalty should be paid within the specified due date or else the vehicle will be blocked by the RTO unit.

The main motivation behind this project is to reduce the traffic disobeying activities in our country. Our project will make perfect in our traffic while they wait for the signal. This will ensure the safety of those waiting in the signal. Traffic disobeying is very common and we see violations in many places across our county. Therefore the motive of this project is to ensure that they all stand or retain their vehicle before the stop line and to ensure a safe ride for all people and controlled traffic though. This can be further developed into a huge commercial traffic disobeying control system for the betterment of our community.

II. MOTIVATION

Traffic control signals provide for an orderly movement of traffic. They help in reducing the frequency of an accident of some special nature i.e. of right angles accidents. They intercept heavy traffic to allow other traffic to cross the road intersection safely. Modern societies can rely on the traffic management system to minimize traffic congestion and its negative effects. Traffic management systems are composed of a set of applications and management tools to improve the overall traffic efficiency and safety of transportation systems. Our project will immensely help in traffic control if it has been implemented all over our country.

III. PROPOSED SYSTEM



We use an RFID tag in our model which contains details of the vehicle owner like Vehicle number, Mobile number, etc. We have an RFID reader which will be installed near the stop line and it gets powered on when Red Signal comes into play. When a person crosses the stop line for the first time when in Red Signal, then a message is sent to the violator like "Your vehicle has violated rules for 1 time sent from GSM". When a person crosses the stop line for the second time when in Red Signal, then a message is sent to the violator like "Your vehicle has violated rules for 1 time sent from GSM". When a person crosses the stop line for the second time when in Red Signal, then a message is sent to the violator like "Your vehicle has violated rules for 2 times sent from GSM".

When a person crosses the stop line for the third time when in Red Signal, then a message is sent to the violator like "Your vehicle has violated rules for 3 times sent from GSM Fine Amount Rs.400 Pay using this link: https//www.xyz.com/pay". 2 times warning message is alone sent but the third time, it also asks the violator for a Fine Amount with the payment link.

Non-Functional Requirements :



International Conference on Ubiquitous Computing and Pervasive Intelligence (ICUCPI–2023), Organized By PG & Research Department of Computer Science, Joseph Arts And Science College, 10th & 11th March, 2023 7 | P a g e Conference Proceeding Issue Published in International Journal of Trend in Research and Development (IJTRD), ISSN: 2394-9333, www.ijtrd.com

GSM Module

[5] Engineering, Sathyabama University, Solinganallur, Chennai, India



Arduino Uno







CONCLUSION

This project is based on a very effective way of optimizing traffic, by implementing this in Real Time we can surely see a better improvement in our traffic system which makes the Traffic good to see and ensure safety. When every person stands before the Stop line of the Traffic Signal then it will also be easy for the peoples to use the pedestrian crossing in an efficient and in safer manner. Accidents happening in traffic signals will be reduced by implementing this all over our country.

References

- R Hegde, RR Sali, et al. RFID and GPS based automatic lane clearance system for ambulance, Int. J. Adv. Elect. Electron. Eng., 2013; 2:102–107.
- [2] V.Ramya, B.Palaniappan and K.Karthick, "Embedded controller for vehicle In-Front obstacle detection and cabin safety alert system", International Journal of Computer Science & Information Technology, vol.4, No.2, April 2012.
- [3] Zhang Qishan, Wu Jinpei, Yang Dongkai, "Intelligent Vehicle Location and Navigation System and Application, BeiJing: "Science Press, 2002298.
- [4] Review on Detecting and Handling Traffic Violation M.Yogavalli, E.Arulmozhi, M.Rajeswari and Mr.V. VijayaKumar, Department of Electronics and Communication

International Conference on Ubiquitous Computing and Pervasive Intelligence (ICUCPI–2023), Organized By PG & Research Department of Computer Science, Joseph Arts And Science College, 10th & 11th March, 2023 8 | P a g e