

# Integrated E-Challan for Traffic System Using QR-Code

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**ABSTRACT**—QR code is the type of matrix barcode, which was first designed for the automotive industry by Denso Wave in Japan. The QR Code system has become admired outside the automotive industry due to its fast readability and greater storage capacity compared to standard UPC barcodes. With the technology of mobile phones constantly emerging, especially in the area of mobile internet access, QR codes seem to be an adequate tool to quickly and efficiently converse URLs to users. QR code being so versatile because of its structural flexibility that it leads to so many diverse field for research such as increasing data capacity, security applications such as different kinds of watermarking and steganography as well. Some experiments have also been done for better recognition of the QR code image that includes scratch removal techniques. The existing system is tedious and time consuming, it requires stopping the vehicle, collecting the owner information, checking his license and collecting Fine, giving the acknowledgment and then allowing the vehicle to pass by. The Challan System for vehicle verification is a new system which is designed to enhance the convenience for officers and vehicle owners.

**Keywords** – QR code, Universal Product Code, Watermarking

## I. INTRODUCTION

Due to traffic congestion and increasing number of user on road it is difficult to identify every vehicle uniquely. To monitor the vehicle manually is very difficult task. The aim of this research is to automate the identification of the vehicle. In today's time there are so many people breaking traffic rules without any fear. In today's world there are lots of junctions and crossings of road where traffic lights are fitted, but at only few places the duty of traffic police is assigned where they monitor traffic. With the ever increasing vehicles on road and the number of users on road, limited resources are available to monitor the vehicle uniquely. Hence, an intelligent monitoring of vehicle uniquely is an important issue to be considered. The traffic monitoring authorities need to find new methods of overcoming this difficulty. In

our research, we are designing a System which will tell about the incident that will happen by culprit vehicle. It will help to find information related to vehicle.

## II. LITERATURE REVIEW

Kinjal H. Pandya, et al., proposes the mechanism useful for the public who are facing problems with the currently existing manual system wherein the user of the vehicle should carry all the required documents. The proposed system would make it easier for the public as it becomes an automated process. Thereby, relieving the stress imposed on the public. As the documents need not be carried, it wouldn't be misplaced and also misused. Hence ensuring the safety of the documents. The proposed system also provides an additional feature to the user of the vehicle, the alert message feature, if his/her vehicle is stolen. It provides the means to retrieve the stolen vehicle. There are more than 67 Million users in India. Apart from that the use of Internet on the smart-phones has also increased. And therefore considering the future the reach of smart-phones will have no limit. This system can be beneficial in many ways. Firstly, this will generate a transparency between the government and the public. Secondly, it will reduce the efforts of the traffic police and the public user. It is helpful for quick reaction to emergency situations such as accidents. Thirdly, it will save valuable time of the traffic policemen and the public. This work will be useful for both public and the government.

## III. EXISTING SYSTEM

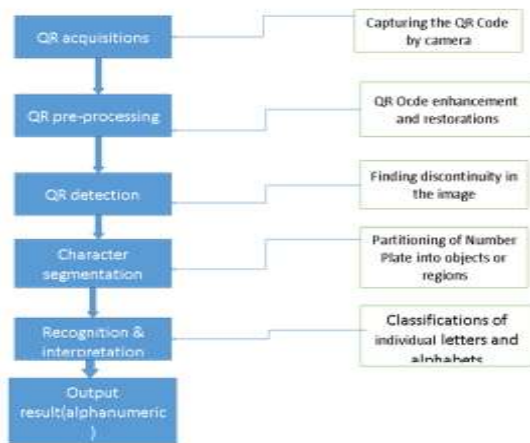
Automatic Intelligent system to identify culprit vehicle.

By our system we can track culprit vehicle which breaks the traffic rules even if it is fitted with a fake registration number plate. By our system we can track culprit vehicle by which accident has happened. We can reduce fake calls for ambulance. Our system is cost effective system as compared to installing cameras at every junction of road. In this work, embedded system for automatic traffic violation

monitoring, the traffic frequency is measured as a function of number of vehicles which comes under the contact of sensing unit. We have implemented a microcontroller-based system that automatically performs the functions of monitoring traffic violation. This system is easy to install, strong function head and easy to promote and implement. In future we planned to extend this project in such a way that the system can monitor more number of vehicles and to send message about the traffic violation to the respective people like check post and police station through GSM.

offline, the paper work is reduced.

#### IV. PROPOSED APPROACH



The given figure shows the flow of the work in which we performing the task by scanning the QR code. The work is therefore to propose an experience mentally evaluate and automated system called E challan system and vehicle verification. In this we create an application for 1traffic police officer for scanning the QR code.QR acquisitions is use for capturing the vehicle number plate and generate QR code with the help of camera .Here the all information are hidden in the form of QR code.QR preprocessing is QR for enhancement and provided some restoration for the stored in the database. Where already the data are stored and it is secured. The data is handled only the database admin.The QR detection is finding the discontinuity in the image and they be detected and continue. It helps to generate the accurate rate of the incident done and occur in the city.The character segmentation the partitioning of number plates into object or regions.Recognition and interpretation is classification of individual letters and alphabets. The is the output results is provided (alphanumeric) generated by quick response code.The output and the result is so quick, hence it reduce the time and reduce the corruption. The fine is based on the act so that the extra money is not wasted.As the system is online and

#### V. RESULT



Fig 1: Main Page



Fig 2: Add Information



Fig 3: Officer Registration



Fig 4: Police Setup



Fig 5: Analysis



## VI. CONCLUSION

This paper concludes that there are so many possibilities for QR code's use in different areas that is yet to be explored. The technology has a firm ground for research aspects. More and more experiments are done with QR codes in different aspects like enhancing the security, better recognition, reducing redundancy in order to save space, possibility of encoding different kind of data like audio, etc. As QR code provides the structural flexibility, it opens up the huge platform for researchers to explore the possibilities to enhance the performance of QR code or to merge QR code with different technologies, like -Experiments can be done to improve data capacity of QR codes. □ To find out the possibility of the use of coding techniques other than RS coding. Use encryption to encode data first,

and then encode it to QR code for better security solutions.

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