

# Study on Digitize RTO Document Verification System

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**Abstract**— Nowadays most of the people are using their own vehicles. Due to that road traffic has been increased tremendously. So, workload of police man has been increased to verifying the documents. Firstly, if the vehicle owner sometimes forgets to carry the documents and face the problem at the time of enquiry by police. Secondly, now a day's automobile theft crime has increased, it is very difficult for police to find out the stolen vehicle. This system will be the approach to solve such problems that replaces the current manual process for checking the vehicle document and owner detail by using QR code. Android app with which traffic police can scan the QR code on his phone and all the details (Vehicle Details, Pollution Unit Control, Insurance) about the owner will be verified. The stolen vehicle will be detected when the inspector scans the QR code. Alert message will be shown to police. The owner is in a need to maintain the entire document and update them regularly by keeping track of renewal/expiry date, in this case notification will be sent to owner of vehicle.

**Keywords**— QR (Quick Response), PUC (Pollution Under Control), RTO (Regional Transport Office).

## I. INTRODUCTION

RTO management has lots of work related to registration of vehicle documentation. Regularly we observe that people have to stop their vehicles on the road or toll booth to show their documents for their vehicles. Sometimes the driver forgot to carry the vehicle related documents due to some reason and therefore he/she have to pay fine. To solve such problems if we keep those all document in One unique QR code, So the driver only needs to keep that QR code in their mobile app or also smart card.

The proposed system is of RTO Administrator, user and traffic police android application. The database of users is stored on central database of the RTO system. The administrator can register the new users for service by verifying all documents. Administrator can view and manage the database of user as well as traffic police. The lost vehicle database is also registered by the administrator. The registered user can retrieve the driving license in the form of QR code. The traffic police can login to the android application and scan the QR code of the user from his mobile application and the driving license will be fetched from the server.

If the traffic police want to check the driver's vehicle documents, RC book, insurance then he/she have to insert the vehicle number of the driver then all the documents are viewed here. Also, after inserting the vehicle number it will show that whether the vehicle is registered for lost vehicle case or not. Traffic police can apply the challan is driver has violated some rules and the amount of the challan will be pay by user. The traffic police can see the history of fine individual driver. The overall database is updated to the central database server.

### 1.1 Research Gap and Problem Definition

In existing system, they only show vehicle documents to the user and also using this system user can upload fake documents and it's not verified or authenticate by RTO System. Regularly we observe that people have to stop their vehicle on the road to show their documents for their vehicles. This is waste of time for the driver and also for the police who take time in checking the documents and return them back. If the vehicle is stolen illegal documents can be created. And some of the Inspecting Authority do corruption. To avoid such problems, In our System only admin can upload these documents and user can't change the documents itself. Using this security for the documents will be more secure and safe.

### 1.2 Scope of the Project

In future, this system can be implemented to see the sensitive areas where most of the rule violations occur. The speed violation can be implemented in such a way that if the driver exceeds the speed limit of particular road then automatically the fine will be applied to him. This system can be integrated with Aadhar Card.

## II. PROJECT DESCRIPTION

### 2.1 Proposed System

In proposed system, we will have introduced system for RTO which contains two parallel android application for user & traffic police, web application for Admin. QR Code used for authentication of vehicle documents. User login will be provided by RTO during the registration of vehicle. In user's application shows the QR Code, Rule Book and Vehicle Documents. Traffic Police login will be provided by the RTO, after login police need to scan the QR Code of user to check vehicle documents. If any of the documents are expired, then our system will automatically generate fine. RTO (admin) will upload the documents of vehicle registration details. RTO can be analysed the Users, Traffic Police, PUC Agents & Insurance data. Admin can do analysis location based fine, can also track the particular traffic police report (for particular day, week, month). RTO will provide login details to PUC & Insurance Agents to update the PUC & Insurance Documents in RTO database.

## III. RELATED WORK

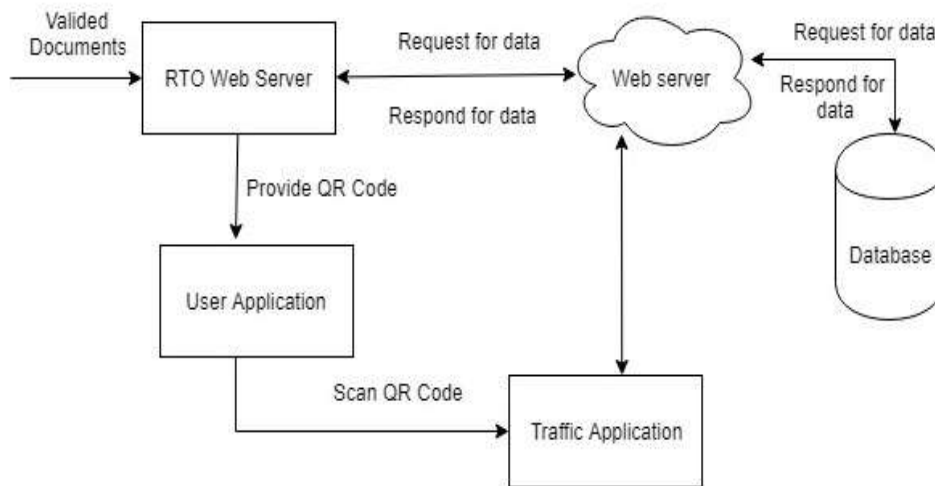


FIG.1: System Block Diagram

### 3.1 User Role

1. User get the login id and password & physical card. On this card QR code will be given from the RTO, user can login to application from the id & password. The QR code will be used to show to traffic police to show documents to him.
2. User can see its RC book, Insurance, PUC details but user cannot change the documents because the documents can be added but administrator.
3. From the application the user can view its previous fine history & can able to pay fine on his/her application also.
4. User will get notification of the expiry of the documents before 15 day of expiry date.
5. If the user vehicle has been stolen, then user can immediately block its documents so that if the traffic police scan the QR Code then it will Show him documents Block.

### 3.2 Traffic Police Role

1. Traffic police login to the android application.
2. If any user caught by traffic police, then police will Scan the QR code using android phone.
3. After Scanning, police can view the previous records, can placed a new complaint.
4. After placing a new complaint, the fine amount will get deduct from a total balance of the user.

#### **IV. CONCLUSIONS**

Using this system most of the manual work of RTO system is being reduced. The user doesn't have to carry the documents with him/her. He/she has to keep mobile phone installed with this application to show the documents. The QR code provides the faster way to retrieve documents. Traffic police also have to just scan QR code to see the license. By entering the vehicle number, the traffic police will get the vehicle documents and he can determine whether there is any missing complains of the respective vehicle and if any rule is violated then fine is applied. The admin portal can manage both traffic police and user. Hence the overall system simplifies the RTO work and optimizes work efficiency.

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