



TOLL RESERVATION SYSTEM TO DETECT STOLEN VEHICLE

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Abstract — Now a day's Vehicle security is an important issue in our society. for improving methods of vehicle security in public and private places. When the license plate number is missing or unknown then how to find the vehicle information is really a big challenge. To overcome this issue, we are proposing Vehicle Identification System which is a QR code based system that will help in identifying the vehicle in public or private places like Traffic signal and Society, buildings, parking respectively. This quick and robust system will propose to detect and describe features of a vehicle image, specifically in an android application using QR code mounted on vehicles. After description of QR code it fires the query on database for searching information in the database. Real time android applications are the real challenges for this system. By using this system vehicle tracking and tracing is going to become comparatively easy task for the people who may or may not be technically competent.

Keywords: QR Code, Vehicle, Encryption

I. INTRODUCTION

In today's world with increasing numbers of automobiles and vehicles, vehicle theft has become one of the most easy and common type of robbery. To report any robbery or theft we follow the traditional approach of registering complain in police station. Police lodge an FIR and then in turn start the investigation. But it's very easy in our system to manipulate the stolen vehicle and change its original identity. Thus its becomes difficult to identify the stolen vehicle. Moreover we do not have ant device or sensors in our automobiles which can help us track the live location in case vehicle is stolen. Thus it becomes very easy to carry out this type of theft.

Hence we have come up with idea of using QR code which is lately famous and helps uniquely identify any product or automobile or vehicle. We can use types of QR code i.e. either matrix or dimensional depending upon the requirement. QR codes have proven accuracy and till date we have very few failure rate or we can say negligible. The main goal to use QR code is for unique vehicle identification. This is going to help in situations where burglar has fabricated or modified vehicle number plate or GPS tracking system if present any.

II. LITURATURE SURVEY

1.Liu, Y., Yang, J., & Liu, M. (2008, July). Recognition of QR Code with mobile phones. In Control and Decision Conference, 2008. CCDC2008. Chinese(pp. 203-206). IEEE.

In this paper author surveyed problem of RTO, RTO employee having lot of work burden of making registration ,license issue, transfer etc., which requires lots of paper work. As a result people cannot get things done in right time this system helpful for RTO officials to maintain record systematically and reduces lots of paper work and manual effort.

2.Apurva Ekhar, Sakshi Sarode, “A Review:challen system with vehicle verification” , issue 6-ICRTEST January 2017 p-ISSN: 2394-8280

In this paper, technique has been discussed for challan system. here user provide details to RTO database. by scanning QR code which contains overall information of the vehicle we get vehicle owner details. This system also detect culprit vehicle.

3.Shobha M.S, Akash S, Aswin J.M, “A Survey on Vehicle Document Check System,” Vol. 4, Issue 2, February 2016

This paper introduces system would make it easier for the public as it becomes an automated process. As the documents no need be carried, it wouldn't be misplaced and also misused. Hence for the safety of the documents. This system Make one unique identity as a driver license

4.Amruta bakale,spoorti awate,"Cross verification of vehicle and driver for RTO (IJETCSE) volume 14,Issue 2 april 2015, ISSN: 0976- 1353.

This system proposes, "cross verification of driver and license for RTO", effectively verifies documents related to vehicle and license. This system introduces facility for RTO officials to maintain records systematically and reduces lots of paper work and manual effort.

III. PROPOSED SYSTEM

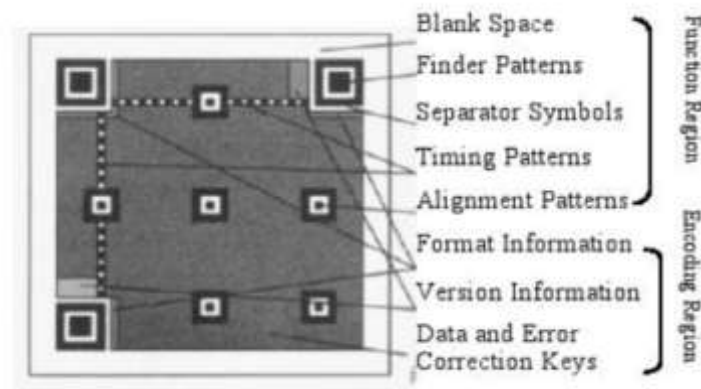
In proposed system our aim is to define, design and implement such a system which helps in easy identification of stolen vehicle. It helps and reduce manual mundane work and guarantees more success rate as compared to current existing system. This system is going to be implemented using QR code. QR code use unique identification method. Each and every vehicle will be associated with unique QR code. The data behind QR code is in encrypted format using encryption algorithm. Data behind this QR code will be users vehicle related documents digitally. Thus users will not face unnecessary questions during inquiry to detect stolen vehicle. Two modules basically the front end and back end will have two most important functionality. Front end will collect data, location information using tracking and positioning technologies from both users i.e. traffic police and citizen. Data warehouse and data analysis center components would be used at backend.

Reasons of using QR Code in Proposed System:

1. High capacity encoding. High capacity encoding of data; maximum symbol of QR Code can encode 7089 characters.
2. High-speed reading.
3. Adapted with CCD reading, it can recognize more QR Code symbol per second.
4. Doesn't matter Orientation: Readable from any direction from 360 degree QR Code is a matrix two-dimensional barcode; it can be readable from any direction from 360 degrees. But the stack two-dimensional barcode, It is very difficult to realize the readable from 360 degrees.

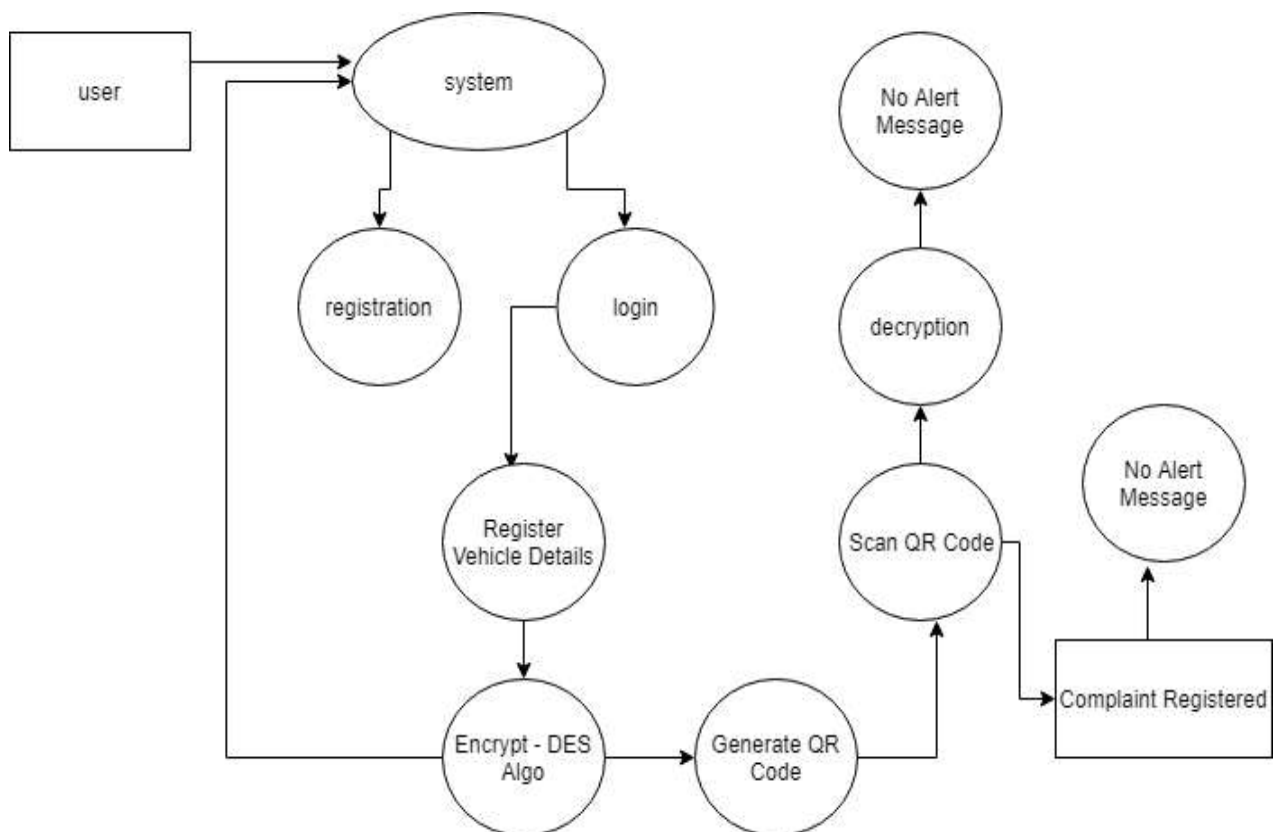
Structure of QR Code:





As shown in above fig. QR code symbol is square array which consists of some square modules. It comprises an encoding region and a function region shall not be used for the encoding data. The background region of a QR code symbol there is blank space. Three corners of the symbol are called as finder patterns (includes three probing patterns) intend to assist in easy location of its position, Size and inclination. There are separator symbols width as module between each probing pattern and the encoding region. All of them consist of light modules. The Coordinates of modules are sued as the function of timing patterns and it is determining the density and version of QR code symbol, and proving the reference position.

IV. ARCHITECTURE - PROPOSED SYSTEM



Advantages:

- Find stolen vehicle in easy way suing QR code.
- Need not to carry hard copy of documents.
- Data would be stored in encrypted format.
- More accurate as compared to current method being used.

V. HARDWARE REQUIREMENTS

- System : Intel I3.
- Hard Disk : 40 GB.
- Monitor : 15 VGA Colour.
- Mouse : Logitech.
- Ram : 3 GB.

VI. SOFTWARE REQUIREMENT

- Operating system : Windows XP Professional/7LINUX.
- Coding language : JAVA, ANDROID
- IDE : Android Studio.
- Database : MYSQL/XAMPP DATABASE

VII. CONCLUSION

In this paper, we have successfully explained that the Smartphone's with camera device is getting more advanced. Thus recognition of QR code based on Smartphone is getting more important and practical and real life. It's handy and easy to use. Here we have reduced manual intervention. The technology used here provides high speed accuracy and does automatic recognition using QR code for stolen vehicle identification. Moreover it also reduces paper work by providing a means to carry documents and data digitally behind QR code in our Smartphone. Thus this system is dual beneficial to the users and consumers.

VIII. REFERENCES

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