

# An Approach To, a Smart System to Avoid Vehicle Theft and Corruption Using RFID Technology

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**ABSTRACT:** Like we see and experience issues regarding traffic police corruption, vehicle theft, traffic congestion, allow the emergency vehicle to pass smoothly and so on, we are proposing solutions to avoid traffic police corruption and vehicle theft using RFID technology. All the data regarding the vehicles that violate the rule will be stored in the server. Whenever a vehicle violates a rule, the issues regarding the violations will be updated in the server. Every user will have a username and password using which user can login to that webpage and can check about the status of the vehicle and the penalty raised for the violations done by that vehicle and also the stolen vehicle can be tracked using RFID.

**KEYWORDS:** RFID, webpage, Corruption avoidance, User assistance.

## I. INTRODUCTION

India stands second in overall population. People travel from one place to another place where vehicles play a major role. The automobile industry in India is world's fourth largest, with the country currently being the world's seventh largest commercial vehicle manufacturer.

Corruption is one of the major problems India is facing today. Since corruption is associated with the share of private investment, it negatively impacts on the rate of economic growth. India ranks 81<sup>st</sup> in global corruption out of which 25% is of surveillance corruption. While corruption continues to be a rampant problem across the region, improvements will only be made if there is a strong political will for change and if a comprehensive strategy is adopted. Hence, in this paper, we are proposing idea to minimize the corruption done by traffic police by collecting unbilled amount and to identify stolen vehicle.

As we all know, now a day's website users are increasing in number, and websites are helping in such a way that people can know information within a minute in which they are not aware of. In this paper, people can view the status of their vehicle in the website that we proposed.

## II. LITERATURE SURVEY

The paper [1] indicates about the location of theft vehicle by sending message to the microcontroller by then, the engine of the vehicles get locks. In [2] penalty is paid only in specific zone if vehicle is violated the traffic rules. In [3] theft vehicles are identified but, no owner intimation. Here we are trying to give the more efficient solution in avoiding the traffic police corruption using RFID technology and making easy for the people to know the status of their vehicle by creating web pages. Also, owner gets information and location of their vehicle, in case, their vehicle is stolen by someone.

### III. METHODOLOGY

The system consists of ARM7 microcontroller, RFID tag, RFID reader, GPS, GSM, and LCD.

The ARM7 microcontroller (LPC 2148) is of 32 bit and has 624 pins. It is the main control unit which is used to control and co-ordinate all the devices in the system. Radio Frequency Identification (RFID) identifies and track tags attached to vehicles using electromagnetic field. These tags contain information such as driving license, insurance and documents related to the vehicle owner. RFID reader will scan the details present in the tag when the vehicles violate the rule and this information will be sent to the server and gets updated in the database. Every user will have a username and password using which he can login to the webpage and can check about the status of the vehicle and the penalty raised for the violations done by the vehicle.

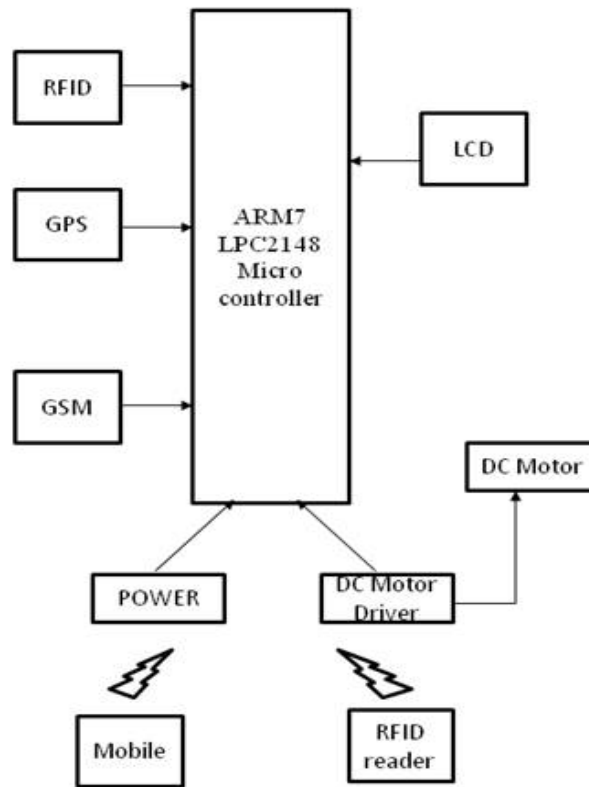


Fig1: block diagram of proposed system

Whenever a person steals a vehicle, he can change the number plate of the vehicle but the details in the tag cannot be changed. So, stolen vehicles can be easily identified. Global Positioning System (GPS) is a satellite based navigation system which will read the latitude and longitude of the location and sends it to the microcontroller thus helping in identifying the location of the stolen vehicle. Global System for Mobile communication is a digital mobile telephony system used to send and receive messages.

Whenever a person loses his vehicle he will send a message to the police department stating his unique tag number. This number will get updated in the database. The RFID reader, which will be placed in signal poles and petrol bunks, will compare the read vehicle number with the number in the database and if it matches its location will be tracked. LCD display is of 16 pins and it is used to display the status of the system.

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#### IV. FLOW DIAGRAM

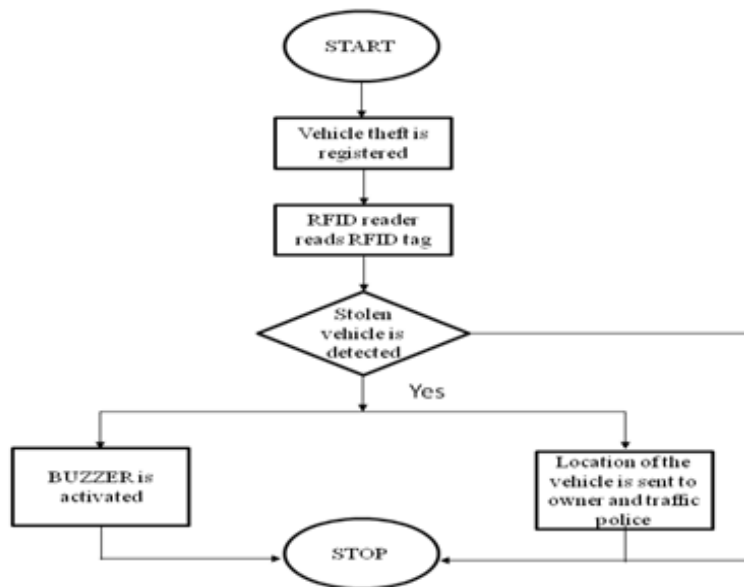


Fig 2: vehicle theft

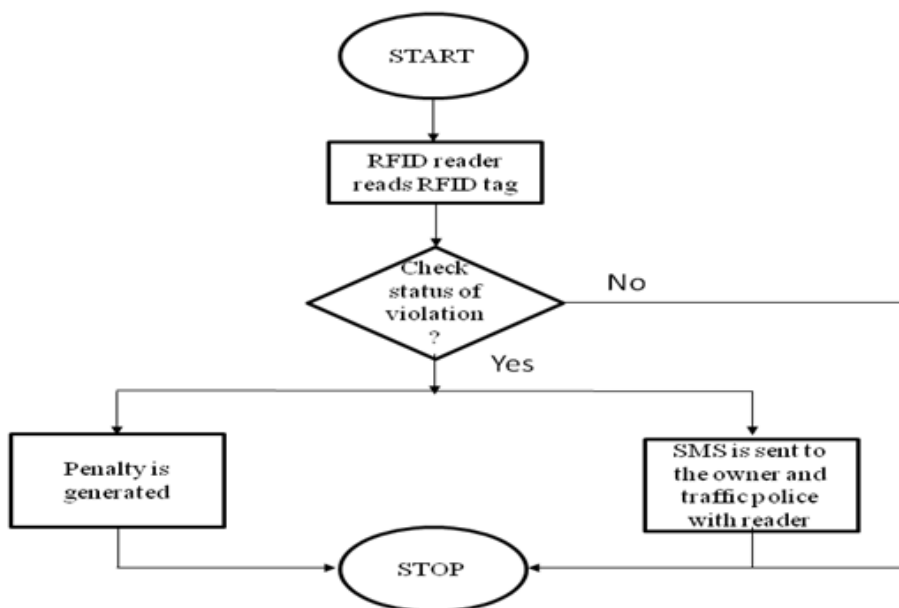


Fig3: Corruption avoidance

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## V. FUTURE ENHANCEMENT

In the proposed system, a webpage is created to view the status of the vehicle and also the penalty raised for violating the traffic rules. A web link can be created using which the person can pay the penalty through online.

## VI. CONCLUSION

Using RFID technology, a complete solution is provided to avoid corruption and helping the economic growth of the country. It is also a step towards Digital India since a person can view the status of his vehicle online through his gadgets like mobile or laptop anywhere, anytime. Also, the success rate of identifying the stolen vehicle is increased.

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