

# Transport Intelligence Using Iot In Vehicle Surveillance

M.Abdul Jaleel<sup>1</sup>, K.N.V.Raghavendra<sup>2</sup>, M.V.S.Karthik<sup>3</sup>], D.Vydeki<sup>4</sup>

<sup>1,2,3</sup> Dept of Electronics and Communication Engineering

<sup>4</sup>Associate Professor, Dept of Electronics and Communication Engineering

<sup>1,2,3,4</sup> Saveetha School of Engineering, Saveetha University ,Chennai-602105, India

**Abstract-** *The number of urban vehicles grows rapidly with the development of the economy and hence people are getting more concerned about vehicle theft prevention, which creates broader market prospects for vehicle anti- theft products. Various vehicle anti-theft devices have been developed lately, however the result is still disappointing since all kinds of devices have its drawbacks. Domestic and overseas vehicle anti-theft products are technologically classified into three categories: mechanical lock devices, car alarm system, and vehicle tracking/recovery systems, mainly aiming at preventing cars to be broken in and driven away.*

**Keywords-** Pic Microcontroller, GSM, GPS, Eclipse.

## I. INTRODUCTION

To address the limitations of existing vehicle tracking/alarming systems, we propose an anti-theft system has been proposed mainly based on GPS and GSM system, designed and realized by integration of traditional anti-theft alarm, GPS, GSM SMS system and mobile phone android applications. The owner will receive a short message sent by GSM module as soon as the car is stolen, then he can use android mobile phone application to track down the car. Compared with traditional vehicle anti-theft systems which require customers to install software and track the position of the car on computers, our system use android mobile phone as client terminal, providing customers with more immediate, convenient and cheaper service.

Additionally, since free Google Map is used for location, clients only have to pay for WAP data traffic and SMS costs. Among them, SMS module costs less than Rs.2.85/- monthly if the owner has ordered text message packages launched by mobile telecom carriers. For further development, manufacturers cooperating with mobile telecom carriers can allow customers to send and receive messages at very low cost.

## II. LITERATURE SURVEY

The commonly used vehicle tracking/recovery systems are based on radio signals such as the LoJack tracking system, the ProScout GPS Vehicle Tracking System, the TravelEyes2 Vehicle Tracking System and so on. After a vehicle has been stolen, the owner can report the problem to the police or the GPS tracking office. The wireless transmitter or the GPS device in the car will send wireless signals which can be picked up by the tracking device. The wireless signals can be used to pinpoint the location and lead police to rapid recovery. However, these systems have high cost and often come with a monthly monitoring fee.

## DISADVANTAGES

These car alarm systems do not cover large areas; the area is just less than 100m. Once the car is stolen, the owner and the police cannot track the position of it.

## III. PROPOSED METHOD

In this paper an anti-theft system mainly based on GPS and GSM modules is discussed. These modules are installed in the vehicle and connected with the google maps application in the android mobile that will give the exact location. The system can also lock both door and fuel systems.

FID (Frequency Identification) tag will continuously read with the usage of the RFID (Radio frequency identification) reader. Unless the user authentication is achieved, the proposed system is not going to be executed. For authorized usage, password is set by the user. If the entered password is mismatched then automatically we will get notification through Short message in the registered mobile. In addition, the fuel and door lock automatically.

## ADVANTAGES

The owner can simply use mobile phone to locate and monitor the car in real time

**IV. BLOCK DIAGRAM**

1. Transmitter unit

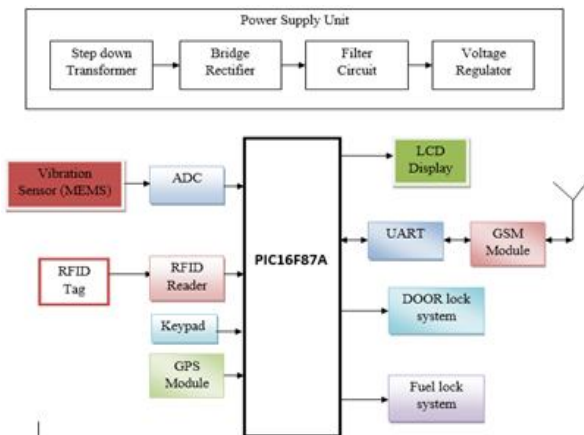


Fig.1. Transmitter unit of proposed system

**V. COMPARISON AND RESULTS**

Existing car alarm systems do not cover large areas; the area is just less than 100m. Once the car is stolen, the owner and the police cannot track the position of it. To overcome this type of problems we go for TRANSPORT INTELLIGENCE USING IOT IN VEHICLE SURVEILLANCE

In this the owner can simply use mobile phone to locate and monitor the car in real time.

Using the proposed system the vehicle can be easily tracked and the user can lock his theft vehicle’s door and fuel system with the mobile at any distance, which is done by pre-installed GPS and GSM modules in vehicle and Google Maps in mobile.

After the owner enters password, it grants the access

**A. RESULTS**

**Case 1: Owner Access**

After RFID Tag is scanned it asks the password to enter.

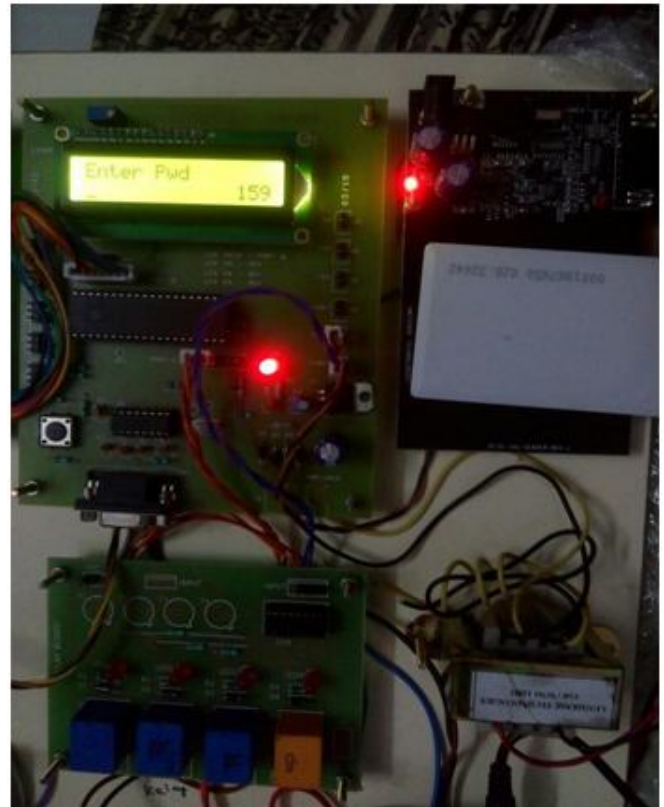


Fig.2: Displaying to enter password

Displaying to enter the password

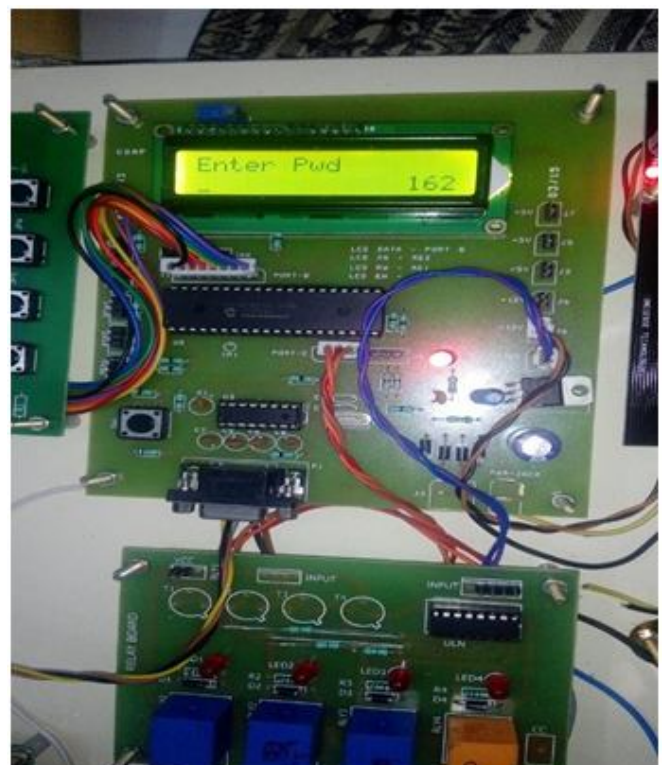


Fig.3: Password enter display



Fig.4: granting owner access

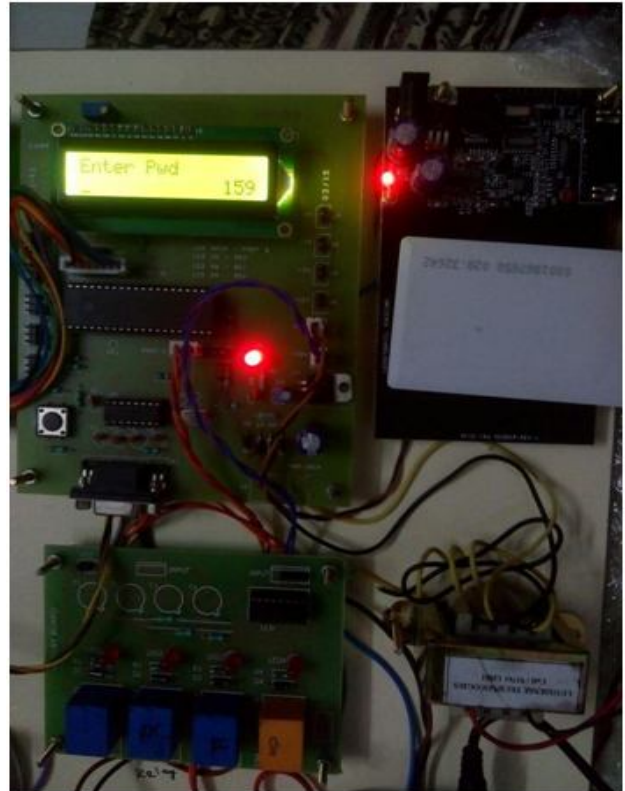


Fig.5: Displaying to enter password

Case 2: Theft

Even the RFID tag can be hacked by duplicating another tag. But here we have implemented the security which cannot be cracked or bypass, if thief tries to open the door or break the vehicle glass, then the MEMS sensor gets activated and alerts the GPS, GSM and DC motors. The location is sent to the owner's mobile and owner can trace, lock his vehicle at any distance.

Thief with duplicate RFID Tag and our system asks to enter password

Thief tries to enter random numbers as password and system shows wrong



Fig.6: displaying wrong password

If thief tries to open door or breaks the glass MEMS get activated and alerts GPS, GSM and DC motors.

After getting the message owner can trace and lock his vehicle



Fig.7: captured GPS Location

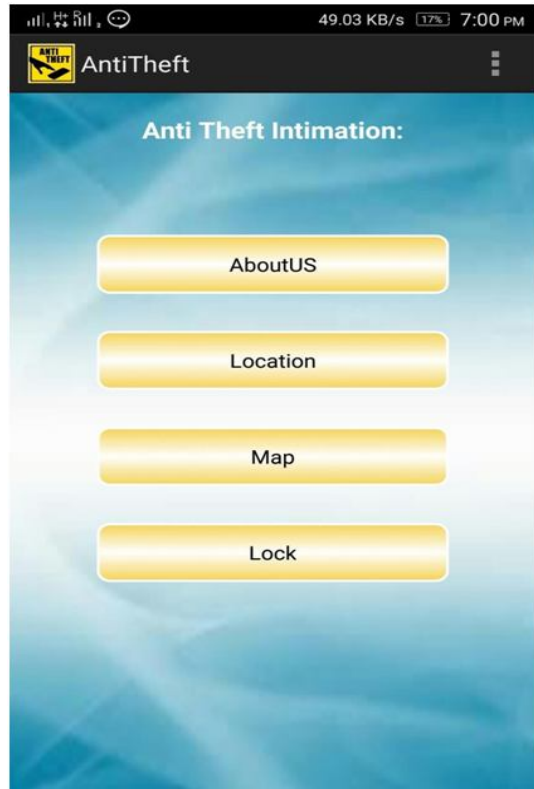


Fig.9: Options in App

Once the location is captured by GPS, the location is sent to the owner's mobile through GSM Module in our system.

Traced location in an Android App

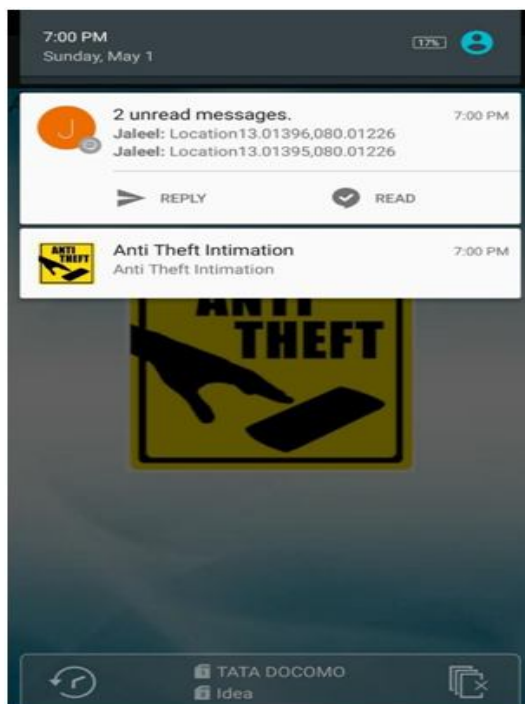


Fig.8: Message to the owner's mobile



Fig.10: Traced Location

## VI. CONCLUSION AND FUTURE WORK

Using the proposed system the vehicle can be easily tracked and the user can lock his theft vehicle's door and fuel system with the mobile at any distance, which is done by pre-installed GPS and GSM modules in vehicle and Google Maps in mobile.

This type of tracking can also be done by installing the PC setup in the vehicle and can be tracked using IP address. In this case, GPS is not required

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