STOLEN VEHICLE DETECTION AND MULTIPLE TOLL BOOTH TAX PAYMENT AT A TIME BY USING QR CODE.

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Abstract: *Developing countries like Republic of India desires a major improvement in infrastructure like Roads or Highways. Construction of those highways could be a pricey affair, that cannot be endowed by the got alone. Usually public non-public partnerships square measure created to construct such an enormous comes. the money spent on these comes is regained by grouping toll from the passengers United Nations agency use the roads. The toll assortment system, particularly in Republic of India faces some issues like long queue lines, escaping from toll plazas etc. These systems will service solely three hundred vehicles per hour, and if quite that range of vehicles hit that plaza, server traffic jams might occur.*

With the rise within the range of vehicles on road, there has been a marked increase within the range of crimes involving vehicle felony. In spite of many rigorous laws being in situ and security measures taken by automobile makers, thieves still realize the way to stay one step ahead and vehicle felony continues to be among one amongst the foremost according crimes worldwide. thanks to the expensive nature of automobiles, there's ample incentive for petty thieves to aim thefts.

To solve each drawback we have a tendency to propose QR Code base toll assortment system. QR Code is generated at the time of registration of car in our projected system. On toll assortment booth we have a tendency to collect toll still as establish vehicle is purloined or not.

I. INTRODUCTION

If you are driving a protracted distance and are attempting to urge there as quickly as potential, you may in all probability move highways and interstates that enable you to travel quicker and have fewer, if any stops. Of course, bound sorts of roads have occasional stops wherever you have got to pay cash to travel on the road. These sorts of roads area unit referred to as toll roads. generally they conjointly fade alternative names, like toll-way. To travel on a toll road, you have got to pay a fee referred to as a toll. generally you have got to prevent each therefore usually to pay further tolls to stay traveling on the toll road. Most roads area unit designed with native, state or national government cash raised from taxes. Tolls area unit sort of a tax that applies solely to the users of the toll road. Toll roads enable new roads to be designed and maintained while not raising taxes on the overall public. A toll road does not continuously keep a toll road forever, though. generally tolls area unit removed on roads once the price of construction has been recovered from the tolls collected. You'll apprehend you are on a toll road once you encounter a toll plaza. A toll plaza could be a gated space wherever you have got to bog down or stop to pay a toll to continue traveling on the road. There area unit typically several obtainable lanes with toll booths to stay traffic moving as quickly as potential. Some lanes might have individuals operating the toll booths, so you'll pay with modification or money. These lanes have gotten slower and slower day by day as a result of range of auto get increase quickly. To resolve this drawback we have a tendency to area unit about to use QR Code.

QR is brief for fast Response Codes. they're accustomed take a chunk of data from a short-lived media and place it in to your cellular phone. you'll shortly see QR Codes during a magazine advert, on an ad, an online page or perhaps on someone's tee shirt. Once it's in your cellular phone, it should offer you details that business (allowing users to go looking for near locations), or details concerning the person carrying the tee shirt, show you a URL that you'll click to envision a trailer for a picture, or it should offer you a coupon that you'll use during a native outlet. The reason why they're a lot of helpful than a customary barcode is that they'll store (and digitally present) far more information, together with URL links geo-coordinates, and text. In our project we have a tendency to area unit about to use QR Code to store all info of auto additionally as vehicle owner. QR Code can contain vehicle owner name, address, mobile range, email id, owner driving licenses range, vehicle range, vehicle sort, user sort like pass holder/ non pass holder, etc. toll gatherer can scan the QR Code to vehicle authentication and toll assortment

II. LITERATURE SURVEY

According to literature survey after studying different IEEE paper, collected some related papers and documents some of the point discussed here:

Automated toll collection system using GPS and GPRS
Author:Sudheer Kumar Nagothu

Abstract:
Developing countries like Asian country desires a major improvement in infrastructure like Roads or Highways. Construction of those highways may be a pricey affair, that cannot be invested with by the govt. alone. Commonly Public personal partnerships are created to construct such an enormous comes. the cash spent on these comes may be regained by aggregation toll from the passengers World Health Organization use the roads. The toll assortment system, particularly in Asian country faces some issues like long queue lines, escaping from toll plazas etc. These systems will service solely three hundred vehicles per hour, and if over that variety of vehicles make that plaza, server traffic jams might occur. to resolve this we have a tendency to ar proposing to make geo-fences mistreatment GPS by giving latitude and line of longitude of the corner of the parcel. By comparison the position of the vehicle and parcel, the owner of the vehicle may be charged from the account.

Automated toll collection with complex security system
Author: P. Kamalakannan; M. Balaji; A. Avinash; S. Keerthana; R. Mangayarkaras

Abstract:
The paper cares with machine-controlled toll assortment system mistreatment the active RFID tags; vehicles arcreated to go through a detector system that's embedded on the road simply before the gate. The system cannel ectronically classify the vehicle and calculate the precise quantity to be paid by the vehicle owner, guaranteeing no theft of the toll quantity. Vehicle house owners, World Health Organization oftentimes go through tollgates, arneeded to own a postpaid smartcard, which can deduce the acceptable quantity, by mistreatment an automatic positive identification reader [1]. A small controller consists of a strong electronic equipment tightly as well as memory RAM, fixed storage or EPROM), varied I /O options like Serial ports, Parallel Ports, Timer/Counters, Interrupt controller, knowledge acquisition interfaces-Analog to Digital device (ADC), Digital to Analog device(DAC), everything integrated onto one semiconductor. The Microcontroller is connected with laptop computer through RS232 knowledge adapter

Automated fault detection in violation enforcement cameras within Electronic Toll collection systems
Author: AnuragGanguli; Ajay Raghavan; Vladimir Kozitsky; Aaron burry

Abstract:
Electronic Toll assortment facilities provide travelers the power to pay toll electronically, most typically via oftenness identification (RFID) transponders placed among the vehicle. ETCs are complicated systems comprising of a mess of sensing and physics instrumentality. to forestall violation, exposure social control cameras are wont to capure registration number plate pictures of the violating vehicle. to confirm adequate image quality and integrity of those cameras, it's commonplace maintenance observe to manually review camera pictures on a periodic basis. The manual review method may be valuable, error prone and will involve solely a fraction of the pictures truly captured. to handle this downside, we have a tendency to gift recursive tools which will be wont to mechanicallyreview pictures to notice any potential camera faults, thus, scale back human employment and increase maintenance potency. where attainable, we have a tendency to use no-reference or reduced-reference approaches for fault detection

Secured short time automated toll fee collection for private group transportation
Author: Jayapriyaa CT; Y. BevishJinila

Abstract:
Automated toll fee assortment in Indian road has been wide anticipated. This has been a challenge due to value and potency of those systems. This paper presents machine-controlled toll fee assortment system in additionaleconomical, faster, low value and in terribly secure manner. traditional cameras ar wont to capture vehicle varietyplates and vehicle numbers ar retrieved. mistreatment the retrieved transport id the main points of the owner and joined bank accounts ar collected from info. The toll fee is deduced from checking account if quantity is obtainableelse manually paid. If over one vehicle happiness to a specific organization is gift near toll then these vehicles arclustered to scale back the quantity of transactions created. One vehicle is electoral as a cluster head associate degreed this vehicle represents all the cluster members and an ID based mostly multi signature theme is employed for authentication. Experimental analysis and analysis shows that the cluster based mostly theme performs higher compared for non cluster approach.

Open road tolling in india by pattern recognition
Author: DiptiJadhaManojSabnis

Abstract:
Modern amenities, quick knowledge transfer and minimum delay have currently become the fundamental necessities of all the services. This has currently are available an oversized means in transport services conjointly. One such service offered to move system is toll assortment. at the start toll assortment was manual however currently thanks to development in varied fields it's slowly moving towards automation. The system mentioned during this paper may be a full machine-controlled toll assortment system. variety plate recognition is employed more and more today for automatic toll assortment, secure parking and enforcement. Open Road Tolling uses video proof to spot vehicle usage of a toll facility while not the utilization of toll booths for toll assortment while not having to prevent or perhaps cut down to pay the toll. the applying utilizes image process and pattern recognition strategies for Open Road Tolling. This paper presents Open Road Tolling (ORT) mistreatment variety plate recognition. The projected variety Plate Recognition (NPR) techniques carries with it 2 modules: bar chart based mostly variety plate localization and variety plate recognition mistreatment templet matching. This approach has a plus of being easy . This has come back up in a very massive means in foreign countries, however not in Asian country thereto extent here it's still at the extent of plan.

III.   PROPOSED SYSTEM

In propose system we are going to use QR Code to store all the details of vehicle owner as well as vehicle. User can have pass for month or he/she can pay toll at tollbooth. User can pay the toll for one way routes or two way routes. User can pay all upcoming tolls at one time on a tollbooth. To collect toll, toll collector will simply scan user QR-Code. System will automatically collect the toll and verify vehicle is stolen or not. If any vehicle found as stole then system will notify to police station.

IV.   SYSTEM DESIGN
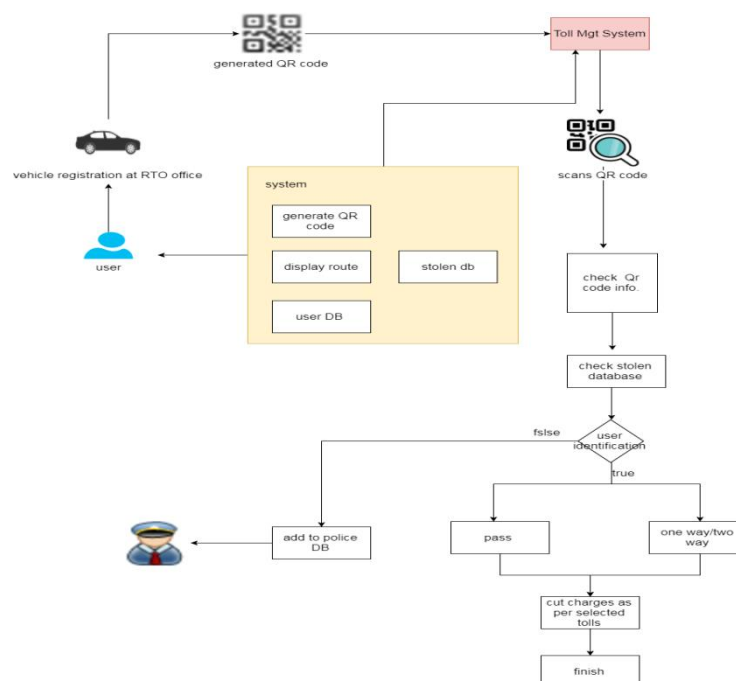
V.   ADVANTAGES

- Combination of authentication and toll collection process improve the system efficiency of existing system.
- Required time for toll collection get reduce.
- Easily authenticate vehicle by scanning qrcode.
- Automatic payment make system more transparent

VI.   CONCLUSION

QR-Code is effective thanks to store data additionally effective thanks to handle hold on information. we tend to propose effective and clear toll assortment system. employee simply have to be compelled to scan QR-Code; all different

operations ar done mechanically. Automation toll assortment scale back the time needed for toll assortment. Additionally propose system is capable of establish vehicle is taken or not. This feature can track taken vehicle.

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