TRUSTWORTHY PARKING COMMUNITY SYSTEM

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Abstract- *Now a day the number of vehicles are increases, it leads to traffic problems. Cooperation between vehicles facilitates traffic management and road safety. A parking system should provide distributed and dynamic trusted groups of vehicles. In this paper implement a parking community system with accountability and free from data injection attack. This system securely exchanging parking spot availability information. It provides a distributed and dynamic trusted group of vehicles. End –End encryption communication is used. System is protection against impersonation and Sybil attack. Utilize technologies in Geographical information systems to help vehicle owners.*

Key Words: **Trust authority, ECC, RSA, rating algorithm, Priority algorithm.**

1. INTRODUCTION

Now a days comfort and safety are more important in traffic because rapid increase in vehicles. Recently Modern vehicles have high equipments focusing for safety. In order to maximize their effect in mobile and fixed systems we use Geocast. It will gather information about their surroundings such as distance to closest objects and respond to the originator. It will more helps the drivers to find their parking location.

Parking Community System securely exchanging parking spot availability information. Mainly this system implemented for accountability and free from data injection attacks. Parking system provide dynamic and distributed trusted groups of vehicles. Trust acquired by prioritizing the incoming queries and provides rating for each queries. The sender and receiver communicate through End-End encryption standard with Geo data.

Main advantage of this parking community system is protection against impersonation and Sybil verification attack. Signature creation using Elliptic Curve Cryptography. It is a public key cryptography system and it requires smaller keys compared to other and provide equivalent security also. RSA algorithm is used for encryption and decryption. Prioritization algorithm is used for prioritizing the incoming queries and reputation algorithm is used for online communication between sender and receiver and it helps the user for creating robust data environment.
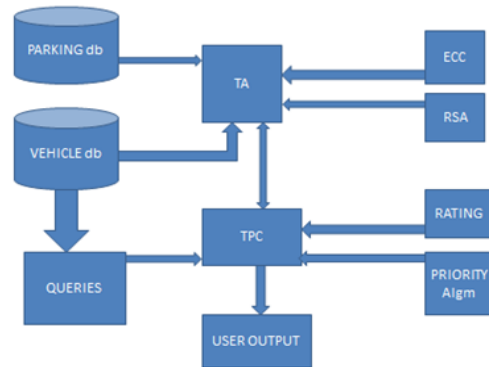

Fig: Architecture of Trustworthy Parking Community system

2. LITERATURE SURVEY

Delay Tolerant Network are class of network have selfish nodes and lack of guaranteed connectivity. Selfish nodes leads to damage in design of network and causes low frequency between DTN nodes and low propagation delay within the network. pi protocols are used for find selfish nodes. By this protocol, When send a bundle messages then attach some incentives which helps to better packet delivery and high delivery ratio and low average delay. But it cannot be used for multi copy algorithm and does not provide DTN node privacy protection.

This paper mainly focuses on exchanging real time warning messages. It can be done in two ways vehicle to infrastructure (V2I) and vehicle to vehicle (V2V).It helps to determine whether the incoming traffic message is significant or not and whether it is trustworthy to the user. This technique is an integration of entity centric and event centric mechanisms. It is more benefit for daily travellers like school drivers and employees.

This paper introduce a technique which helps to identify nodes informing the false position while keeping probability of false positions and without considering the priority of nodes verify the position of neighboring nodes. It is an integration of trust and privacy services by considering the use in vehicular environments.it provide two contributions such as consistent architecture for securing vehicular communication, Trust establishment for vehicular domain and context mix model for preserving location.

Confidence and security of incoming data are benefit of this technique. But it cannot be used in higher layer protocols.

This paper present an another method for solving Delay tolerant Network problems use Identity based cryptography system. DTN security gathering from cross real operations and efficient key management .Whenever the recipient require the network connectivity, the server can load and acquire confidentiality.

Inter vehicular networks are rich location information about vehicles. It is a pseudonymous approach to achieve privacy protection of location. It have a spatial noise prevent tracker from connecting wrong position to continuous path. To create scenarios based on different synthetic models One Simulator DTN protocols are used. It can be used for evaluating DTN routing and application protocols. It offers real world traces and a framework for implementing routing.

For reducing transmission and computer overhead use Secure Multilayer Credit based incentive scheme. It can be used for detecting selfish nodes and stimulate cooperation among DTN nodes .DTN nodes are time dependent message delivery system. Another node BSP(Bundle Security Protocol).It provides Authenticity ,Integrity and Confidentiality. For authentication exchange DTN nodes to public keys and status function. It is a time evolving two channel cryptography system. This protocol helps to tolerate high delay and reduce connectivity of space DTN.

Reducing traffic problem introduce a new technique which is Geo cast. Modern vehicles are equipped with Geo cast. It is an adhoc routing used as a core networking for car 2-X.This technique allows multi hop communication and geographical addressing.

CONCLUSION

In this paper, a secure, dynamic and distributed parking system have been presented. It helps to exchange parking spot community availability information and also secure against impersonation and Sybil verification attacks. This technique use prioritization and reputation algorithm for prioritizing and rating the incoming queries and provide a robust data environment. According to this reputation score we can find correct slot for queries from users and also a third party cannot able to attack the slot. End to end encryption methods are used for communication so its more secure. The secure parking community can be implemented in open source IBR-DTN and it is publically available**.**

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