

The Study of Scope of Reducing Queuing Delay of Packets in VANET

Anshul Rani¹ Saurabh Charaya²

¹M. Tech. Student ²Head of Dept.

^{1,2}Department of Computer Science & Engineering

^{1,2}Om Institute of Technology & Management, Hisar, India

Abstract— An ad-hoc wireless network is a collection of wireless mobile hosts forming a temporary network without the aid of any stand-alone infrastructure or centralized administration. Mobile ad-hoc networks (MANETs) are self-organizing and self-configuring multi-hop wireless networks where, the structure of the network changes dynamically. In this research to improve the quality, we have to speed up the packet transmission providing them better security. Here we have to study during packet transmission the preprocessing time, post processing time and transmission speed.

Key words: Transmission, Research, Collection, Mobile Ad-Hoc Networks, Preprocessing

I. INTRODUCTION

This is mainly due to the mobility of the nodes. Nodes on these networks utilize the same random access wireless channel, cooperating in a friendly manner to engaging themselves in multi-hop forwarding. The node in the network not only acts as hosts but also as routers that route data between the other nodes in network. In this research we have done in order to improve the quality in we have to speed up the packet transmission providing them better security. Here we have study to during packet transmission the preprocessing time, post processing time and transmission speed must be considered. We have study to improve the transmission speed & using replacement policy to reduce the packet size during transmission. We have done avoid the resending of same data again by buffering packet in temporary database.

II. LITERATURE REVIEW

A. In 2010, J.T. Isaac, S. Zeadally, & J.S. Camara published a paper on "Security attacks & solutions for vehicular ad hoc networks" [1]

They discussed some of major security attacks that had been reported on VANETs before & in 2010. They presented also corresponding security solutions that had been proposed to prevent those security attacks & vulnerabilities.

B. Performance Comparison of VANET Routing Protocols [2]

This paper compared performance of three routing protocols, namely Ad hoc On-Demand Distance Vector Routing[13] (AODV), Destination Sequenced Distance Vector (DSDV) & Dynamic Source Routing (DSR) for different parameters. Protocols are simulated on Network Simulator-2(ns-2).

C. Mohammad Jalil Piran "Vehicular Ad Hoc and Sensor Networks; Principles and Challenges", June 2011[3]

The rapid increase of vehicular traffic and congestion on the highways began hampering the safe and efficient movement of traffic. Consequently, year by year, we see the ascending rate of car accidents and casualties in most of the countries.

D. In 2012, in paper "Survey on Security Attacks in Vehicular Ad hoc Networks (VANETs)" [4]

Mohammed Saeed Al-kahtani identified different security attacks, classified them, compared their defending mechanism in VANETs & suggested some future possibilities in this area.

E. Ankita Agrawal "Security on Vehicular Ad Hoc Networks (VANET)" January 2013) [4]

Vehicular ad hoc networks (VANETs) are receiving increasing attentions from academia and deployment efforts from industry, due to the various applications and potential tremendous benefits they offer for future VANET users.

F. Md. Humayun Kabir "Research Issues on Vehicular Ad hoc Network" Dec 2013[5]

Vehicular Ad Hoc Network (VANET) is a kind of special wireless ad hoc network, which has the characteristics of high node mobility and fast topology changes.

G. W Sabih ur Rehman (2013) Vehicular Ad-Hoc Networks (VANETs) [6]

Vehicular ad-hoc networks (VANETs) technology has emerged as an important research area over the last few years. Being ad-hoc in nature, VANET is a type of networks that is created from the concept of establishing a network of cars for a specific need or situation.

H. Vinh Hoa "security attacks and solutions in vehicular ad hoc networks" April 2014 [8]

Vehicular Ad hoc Networks (VANETs) have emerged recently as one of the most attractive topics for researchers and automotive industries due to their tremendous potential to improve traffic safety, efficiency and other added services.

III. RESEARCH METHODOLOGY

End point in an interprocess communication is known as network socket for disambiguation. Most communication among computers is dependent on Internet Protocol. Data transmission among two sockets is generally managed by communications protocols that are implemented in the operating system. The application software usually writes data to these socket and read from these sockets. So it is considered that network programming is essential for socket programming.

IV. PROBLEM FORMULATION

In order to improve the quality, we have to speed up the packet transmission providing them better security. Here in this research during packet transmission the preprocessing time, post processing time and transmission speed must be considered.

– Step 1 in this step we initialize the packet for transmission.

- Step 2 Here we have to check whether same packet is available in the queueIf condition is false. Then place packet in queue for transmission of the packet and make entry in temporary table on receiver end with its ID. If condition is trueSet the packet ID at the tail of predecessor packet in queue. Do not place that packet in queue. On receiving end id would be replaced by corresponding packet data from table stored on receiver end.
- Step 3 Start iteration of step 1 and step 2 until packets are not placed in queue.
- Step 4 after transmission of all packets and completion of session remove the temporary buffer on client end.

V. CONCLUSION

In this research, to speed up the packet transmission providing them better security, we have to study the preprocessing time, post processing time and transmission speed must be considered during packet transmission.

The goal of this research is to improve the transmission speed using replacement policy to reduce the packet size during transmission. Also, avoiding the resending of same data again by buffering packet in temporary database.

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