



A SYSTEMATIC WAY FOR MULTIPLE MALICIOUS AND IRRELEVANT PACKET DETECTION IN VANET

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ABSTRACT

The number of vehicles on the road has increased in recent years. Due to the high density of all these vehicles, potential threats and road accidents are increasing. Wireless technology is designed to equip in-vehicle technology in order to reduce these factors by sending messages to each other, known as vehicular ad hoc networks or VANET. VANET provides a variety of road-safety and other applications through wireless devices installed in vehicles and roadside infrastructure. A roadside infrastructure in VANET is generally public, and is prone to several different malicious attacks including node compromise, impersonation, and false message delivery attacks. Therefore, a user of a VANET must verify the integrity of a message that is delivered from a roadside infrastructure. On the other hand, a vehicle-originated message should be anonymous in order to ensure user-privacy in a VANET. MIPDA algorithm is used to ensure about the malicious and irrelevant packets generated. It also deals with the correct packet generation; enhance the security of VANET system and to avoid the delay overhead in early. In the paper, we have applied MIPDA algorithm for detection of multiple malicious, invalid and irrelevant requests sent and received from multiple vehicles at a time and to analyze and detect the attacks in the efficient and effective manner for secure environment. And performance is tested using the detection of multiple malicious nodes in the proposed system and other performance parameters on multiple nodes such as energy consumptions, network lifetime, throughput, and packet delivery ratio and packet loss ratio.

Keywords: VANET, MIPDA, RSU, DOS, Dead Nodes, , Packet Loss, Node Velocity

I. INTRODUCTION

Vehicular ad hoc network (VANET) is a technology that enables communication amongst the vehicles by creating mobile Internet. The primary purpose of VANET is road safety and security, besides private communication. Hence reliability and survivability of the network become matters of prime concern. Reliability and survivability of the network is

