Abstract

In the present study we have proposed a secured geocaste routing in VANET with two stage efficient communication protocol. The communication protocol operates on two stages. In the first stage vehicles transmit messages within its transmission range of its radar and to the VANET Server. In the second stage VANET Server receives messages from vehicles and sends those messages to all other vehicles belonging to the same geographical region as of sender. Geographical regions are predetermined by VANET Server. One of the interesting features of this protocol is that we use the MANET infrastructure instead of roadside equipments to communicate with VANET server. Added feature of the protocol is that unlike other geocast routing protocol [8] it incorporates security issues too. So the messages are secured and trustworthy messages are broadcasted among the vehicles. The protocol has been simulated with the NS2 simulator. For this two stage communication protocol it has been found from the simulation results that the bandwidth usage is less and thus enhance the throughput and decreases the packet loss.
Secured Geocast Routing in VANET (Vehicular Ad-Hoc Network) with two Stage Efficient Communication Protocol

- Harshvardhan P. Joshi, Mihail L. Sichitiu, and Maria Kihl, "Distributed Robust Geocast Multicast Routing for Inter-Vehicle Communication", in Proc. of the First Workshop on WiMAX, Wireless and Mobility, (Coimbra, Portugal), May 2007.

Index Terms

Computer Science

Wireless Communication

Keywords

VANET server MANET Two stage communication protocol