Evaluation of Distance Vector Routing Protocols and Opposite Direction Routing Method for Different Road Topologies in VANET

IJCA Proceedings on International Conference on Recent Trends in Information Technology and Computer Science 2012

© 2013 by IJCA Journal

ICRTITCS - Number 11

Year of Publication: 2013

Authors:
Nayana. P. Vaity
Dnyaneshwar. V. Thombre

Abstract

VANET (Vehicular adhoc Network) is emerging technology in which routing is important process from perspective of analysis and design of network applications of its kind. In this paper, existing distance vector routing protocols viz. DSDV, AODV and AOMDV are analyzed not as done earlier over grid topology, but detailed of road layout is used for analysis. As we know, Road topologies such as Highway, Intersection and Bridge are common in city or urban areas. Here, three routing protocols are run for all the road topologies to obtain more accurate evaluation. Apart from this, new routing method for opposite direction movement of vehicles is also analyzed using network simulator NS 2.34. Different performance metrics such as PDR,
end to end delay and routing overhead are used to obtain the result for all three routing protocol. Finally this analytical study helps to compare and decide better of routing strategy for city scenario with all possible road topologies.

References


- Geraldes, Rute Viegas and José Manuel "Real Time changes of Road network Topology as an Approach to Mitigate The Effects of Incidents In Urban Congestion", 12th WCTR, July 11-15, 2010 – Lisbon, Portugal.

Index Terms

Computer Science Networking

Keywords
Road Topology Routing Strategy