Optimum Performance Bounds of Routing Protocols for VANET through Realistic Fading Channel

Abstract

Vehicular-Ad hoc Networks have the potential to achieve high levels of safety, efficiency and comfort on road. VANET is a campaign towards Intelligent Transport System (ITS). VANET applications are time critical and the QoS constraints require the designing and evaluation of routing protocols to be done in realistic environment. The main purpose of this paper is to simulate the routing protocols, AODV, OLSR and ZRP and to explore the impact of radio propagation models, Two Ray Ground and Nakagami in terms of QoS parameters. Extensive simulations are carried out using NS-2 and the behaviour of protocols is studied at different speeds under the influence of propagation models.

References

- Pranav Kumar Singh, "Influences of TwoRayGround and Nakagami Propagation..."
- Francisco J. Martinez, Chai-Keong Toh, Juan-Carlos Cano, Carlos T. Calafate, Pietro Manzoni,&quot; Realistic Radio Propagation Models (RPMs) for VANET Simulations&quot;, WCNC 2009 proceedings, IEEE.
- Tarikul Islam, Yongchang Hu, Dr. Ertan Onur, Dr. Bert Boltjes, Dr. J. F. C. M de Jongh,&quot; Realistic Simulation of IEEE 802. 11p Channel in Mobile Vehicle to Vehicle Communication&quot;, 13th Conference on Microwave Techniques COMITE 2013, April 17-18, Pardubice, Czech Republic.

Index Terms

Computer Science

Networks

Keywords

Two Ray Ground  Nakagami