Abstract

Vehicular Ad hoc Network (VANET) is a special class of Mobile Ad hoc Network (MANET) where vehicles are considered as MANET nodes with wireless links. The key difference of VANET and MANET is the special mobility pattern and rapidly changeable topology. There has been significant interest in improving safety and traffic efficiency using VANET. The design of routing protocols in VANET is important and necessary issue for support the smart ITS. Existing routing protocols of MANET are not suitable for VANET. AOMDV is the most important on demand multipath routing protocol. This paper proposes SSD-AOMDV as VANET routing protocol. SSD-AOMDV improves AOMDV to suit VANET characteristics. SSD-AOMDV adds the mobility parameters: Stop_times, Speed and Direction to hop count as new AOMDV routing metric to select next hop during the route discovery phase. Stop_times metric is added to simulate buses mobility pattern and traffic lights at intersections. Simulation results show that SSD-AOMDV achieves better performance compared to AOMDV.

Index Terms
Stop_times based Routing Protocol for VANET

Keywords
VANET; AOMDV; Intelligent Transportation System