Impact of Node Density and Mobility on Scalable Routing Protocols in Mobile Ad-Hoc Networks

Abstract

Mobile Ad Hoc Networks (MANETs) is a self-configurable network of mobile nodes connected by wireless links to form an arbitrary topology and communicate to each other without the use of existing infrastructure. Complexities of routing between the nodes are increasing due to the highly dynamic nature of the mobile ad hoc network results in frequent change in network topology. The routing protocols are faced with the challenge of producing multi-hop routing under host mobility and bandwidth constraint. Scalability issues are attracting attention these days due to the presence of both large node density and mobility of the nodes in ad hoc
networks. Random waypoint mobility is used in this simulation. In this paper analysis and comparisons of routing protocols such as: Ad hoc On Demand Distance Vectoring Routing Protocol (AODV), Dynamic Source Routing (DSR) and Dynamic MANET On demand Routing (DYMO) is done on the basis of the packet delivery ratio, average end to end delay, average jitter and throughput.

References


Index Terms

Computer Science

Keywords

Mobile Ad hoc Networks (MANETs) AODV DSR DYMO Node Mobility and Node Density