Abstract

Routing protocols for mobile ad hoc networks have been explored extensively in the past years. Most of the work is aimed at finding a shortest path between the source and the destination, without considering the network performance influencing factors like present network traffic, movements and application requirements etc. In the present world many applications that involve Mobile Ad hoc NETworks (MANETs) contain multimedia data that require Quality of Service (QoS) support for effective transmission. Basically meeting QoS is a mesh of multiple parameters. Many research works so far concentrated QoS routing based on single constraint only. QoS routing based on multiple constraints has been proven to be NP-Complete. Hence, hardly any exact algorithms were proposed for this problem. In this paper a new approach for QoS routing is given based on multiple constraints. In MANETs routing based on Ad hoc On Demand Distance Vector (AODV) protocol provides efficient route
establishment between nodes with minimal control overhead and reduced route acquisition latency. In this paper the normal AODV is extended to perform QoS routing based on bandwidth requirement and link stability constraints. Simulation results show that QoS performance of extended AODV is improved in the considerable manner.

Reference

- C. Perkins and P. Bhagwat, “Highly dynamic destination sequenced distance vector routing (DSDV) for mobile computers,” in Proc. ACM SIGCOMM'94, pp. 234-244.

Index Terms

Computer Science Wireless
### Key words

- Quality of Service
- bandwidth estimation
- contention
- link stability
- random destination
- statistical approach
- multi-constraint
- simulations