Abstract

Routing protocols such as AODV use minimum hop count as the main metric for path selection. However, networks that require high Quality of Service (QoS) needs to consider several criteria that could affect the quality of the chosen path in packet forwarding process. To improve the Quality of service, cross layer approach is proposed to attain reliable data transmission in MANET. Our approach includes a cross-layer design to improve information sharing between network and physical layer. The proposed cross-layer mechanism utilizes Signal to Noise Ratio (SNR) measurements along the routing path and selects the path with high quality of service rather than the path with minimum number of hops. Simulation results show that performance in terms of packet delivery ratio, delay and packet drop.
Quality of Service (QoS) Routing in Mobile Ad-hoc Network (MANET) using AODV protocol: Cross-Layer Approach

References

- IEEE 802. 11 WG, Part 11: "Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications Amendment 8:Medium Access Control (MAC) Quality of Service Enhancements".

Index Terms

Computer Science
Networks
Keywords
Manet  Nr  Physical Layer  Network Layer  Delay  Packet Delivery Ratio