Abstract

The advancement in information technology and the need for large-scale communication infrastructures has triggered the era of Wireless Sensor Networks (WSNs). Mobile ad-hoc network (MANET) is a network of wireless mobile nodes which communicate with each other without any centralized control or established infrastructure. Routing is the process of
selecting paths in a network along which data is to be sent. Routing is a critical task in MANET where the nodes are mobile. Dynamic and reliable routing protocols are required in the ad-hoc wireless networks, as they have no infrastructure (base station) and their network topology changes. There are various protocols for handling the routing problem in the ad-hoc wireless network environment. In this paper focus is given on studying the performance evaluation of various routing protocols using Qualnet simulator 5.0.2. The performance of the proactive, reactive and hybrid protocols are analyzed with different node densities for mobile and stationary nodes. The metrics used for the performance evaluation include average jitter, throughput, packet delivery ratio and average end to end delay.

Reference


Index Terms

Computer Science Wireless

Key words

Proactive Reactive Hybrid

Performance Evaluation

Qualnet

End-to-end Delay

Throughput

Jitter

Packets delivery ratio