Abstract

Developing Quality of Service (QoS) aware routing protocol is an ever demanding task for Mobile Ad hoc Networks (MANETs). This research aims in developing Reliable Geographic Routing Protocol (RGRP) towards improving Quality of Service (QoS) in heterogeneous MANET. RGRP is an adaptive on-demand geographic routing protocol which builds efficient paths based on the need of user applications and adapt to various scenarios to provide efficient and reliable routing. To lessen the impact due to inaccurate local topology knowledge, the topology information is updated at a node in a periodic manner based on network dynamics and traffic demand. On-demand routing mechanism is used in order to reduce control overhead compared to the proactive schemes which are normally adopted in current geographic routing protocols. The QoS metrics such as throughput, packet delivery ratio, delay, overhead, packets drop are taken for comparison with Ad-hoc On-demand Distance Vector (AODV) protocol. NS2 is used for simulation and the results proved that the proposed RGRP outperforms AODV in all aspects such as improved throughput, packet delivery ratio and decreased delay, overhead.
Reliable Geographic Routing Protocol (RGRP) towards Improving Quality of Service (QoS) in Heterogeneous Mobile Ad Hoc Networks


Index Terms

Computer Science

Wireless
Keywords