Mobility-based Performance Comparison of MBQAOLSRv2 and MBMA-OLSRv2 Routing Protocols

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Abstract:
This paper investigates the performance of proposed multipath routing protocols for energy-efficient and QoS awareness depending on nodes mobility in MANETs. In particular, multipath battery and queue aware routing (MBQA-OLSRv2) and multipath battery and mobility aware routing (MBMA-OLSRv2) were evaluated. EXata network simulator is used to conducts extensive simulations to compare various energy and QoS-related metrics for the proposed schemes. Simulation results prove that the MBMA-OLSRv2 scheme outperformed MBQA-OLSRv2 routing scheme in terms of several metrics such as; throughput, energy cost per packet, total packets dropped, consumed energy and delay especially in high mobility scenarios.

Keywords: MANETs; MBQA-OLSRv2; MBMA-OLSRv2; QoS; Node Mobility

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