

On QoS Routing in TDMA-Based Mobile Ad Hoc Networks

With the popularity of multimedia, QoS service is demanding from day to day. The mobile ad hoc network is an important wireless network architecture, which is self-organized and without the assistance of basic infrastructures. QoS routing in mobile ad hoc networks is an important issue for wireless technology. The paper presents a distributed slots reservation protocol (DSRP) for QoS routing on TDMA-based mobile ad hoc networks. According to one-hop neighbor's information, some strategies to select the time slots in order to satisfy the QoS requirement and not to violate the hidden-terminal and exposed-terminal problems are proposed. Route maintenance and improvement are also provided to maintain or improve a route when the network topology is changed. According to the simulation results, the proposed protocol can not only increase the findings of a route with bandwidth requirement guaranteed but also raise the throughput and efficiency of the network.