Abstract

Routing protocols for Mobile Ad Hoc Networks (MANETs) have been explored extensively in recent years. Much of this work is targeted at finding a feasible route from a source to a destination without considering current network traffic or application requirements. Therefore, the network may easily become overloaded with too much traffic and the application has no way to improve its performance under a given network traffic condition. While this may be acceptable for data transfer, many real-time applications require Quality-of-Service (QoS) support from the network. The main idea of the proposal is that QoS support can be achieved more efficiently by considering the link stability and signal strength of intermediate channels. We propose an on demand QoS routing scheme named signal Stability based QoS Routing (SSQR), that provides QoS support in terms of bandwidth and end to- end delay in mobile ad hoc networks (MANETs). SSQR is designed over Signal Stability based Adaptive Routing (SSA) and aims to find as well as maintain stable QoS routes in ad hoc network. The SSQR emphasizes on selecting QoS routes that can survive for longer period of time. This is accomplished with the help of signal stability which consists of signal strength and link stability. The performance of SSQR is extensively investigated by simulation in NS-2. Our results validate that SSQR represents an important improvement in QoS provisioning in MANET by selecting longer-lived QoS routes in mobile wireless networks.
QoS Services Constrained Signal Stability based Adaptive Routing (SSQR) Protocol for MANETs

References

- NS-2, http://www.isi.edu/nsnam

Index Terms
Keywords
Ssqr  Quality Of Services  Ad Hoc Network  Path Selection Algorithm