Abstract

This paper proposes optimization of DSR (Dynamic Source Routing) protocol in aspect of cache size and cache expiry time to meet Quality of Service requirements between source and destination node pairs. The nodes are assumed to use a TDMA (Time Division Multiple Access) based MAC (Medium Access Control) layer. Given a set of QoS requirements, a set of wireless nodes and their initial positions, the goal is to find a topology of the nodes by adjusting the transmitting power, which will meet the QoS requirements under the presence of interference and at the same time minimize the energy consumed. The Cache size and Cache Expiry time are two parameter for an optimization problem and techniques. We use Genetic Algorithms (GA) is used to solve it. After the optimization routing overhead, end to end delay and route discovery time may be reduces.
Ad Hoc Networks


Index Terms

Computer Science Wireless

Keywords

Ad-hoc Wireless Networks, Genetic Algorithm, Quality of Service Requirement, Cache Size and Cache Expiry time.