Abstract

In MANET nodes are battery operated with dynamic network topology due to mobility of nodes. Therefore energy efficiency is an important design consideration to extend the lifetime of networks. Topology of network plays an important role for energy conservation. This paper addresses how the topology of the network can be adjusted by controlling the transmission power. In this work the node in the farthest transmission range will take part in routing and the node that is geographically closer to the destination node is the candidate. Energy conservation is based on sleep based approaches. The energy is conserved by controlling a set of neighbor to which the node communicates. We have simulated our proposed scheme using Qualnet 4.5 simulator. Simulation results shows that proposed approach has a good energy conservation performance and also performs better in context of average end-to-end delay without much affecting the throughput.

References

Energy Aware Routing Protocol in MANET using Power Efficient Topology Control Method

Index Terms

Computer Science  Wireless

Keywords

Energy Aware Protocol  Topology Control  Routing  Farthest Node  Common Node  Sleep Based Approach