Abstract

A mobile ad hoc network is an infrastructure less network where the nodes are free to move randomly in any direction. The nodes have limited battery power. Hence we require energy efficient routing techniques that reduce cost of communication i.e. energy consumption in nodes, automatically increasing the network throughput. Fuzzy Controlled Energy Efficient Routing Protocol (FE2RP) determines status of each node in the routes depending upon their remaining energy, communication load, average neighbour affinity and geographical position w.r.t territory of the network. The status is evaluated as either ready or not-ready. Generally during route discovery phase, route-request packets arrive at the destination through multiple paths. One of the routes with least number of ready nodes, is elected as the optimal path for communication.

References

- Anuradha Banerjee and Paramartha Dutta. Fuzzy controlled power-aware routing


Fig. 6. Average remaining energy index x 100 vs number of nodes

Fig. 7. Percentage of packet delivery ratio vs number of nodes

Fig. 8. Average end-to-end delay in milliseconds vs number of nodes


Index Terms

Computer Science Mobile Networks

Keywords

Battery power throughput neighbour affinity route-request optimal path