Abstract

In this In MANET (Mobile Ad hoc Network) nodes are not fixed on one position that’s why proper communication is very critical issue. The nodes in MANET depend on battery for communication. Therefore energy efficiency is an important design deliberation to extend the lifetime of networks. The cluster based approach provides the efficient communication in the form of group. The nodes in Mobile ad hoc network, communicate with each other in the cluster or outside the cluster. In this research work we proposed the cluster based approach along with multipath routing in MANET. The Low Energy Adaptive Clustering Hierarchy (LEACH) is energy efficient protocol and the cluster based approach works on the basis of higher energy level. In this paper we compare the performance of multipath AOMDV (Ad hoc On-demand multipath Distance Vector) and AOMDV with LEACH protocol. In normal multipath routing the route selection is based on the shortest path that’s why energy consumption is also more due to retransmission in case of link breakage. This problem is sort out in proposed approach by selecting higher energy level of nodes and the whole communication is based on Cluster Head (CH). The cluster Head (CH) selection is based on higher energy level of nodes in the cluster
and also improves the energy utilization in network. The performance of proposed protocol is better than previous work, and provides reliable communication.

References

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Index Terms

Computer Science Wireless

Keywords

MANET, AOMDV, Residual energy, LEACH Protocol, Clustering, Multipath Routing.