A Novel Cluster-Chain based Routing Protocol to Prolong the Lifetime of WSN

Abstract

In Wireless Sensor Networks life time of the network depends on the energy of the nodes, where energy consumption is mostly used for data transmission rather than sensing and processing. Also, in the WSN, the choice of routing protocol plays an important role in utilizing the energy of nodes efficiently. In this paper, a new novel routing protocol is proposed, which combines the two major categories of hierarchical protocols namely cluster based approach and chain based approach. This proposed algorithm is simulated for weather monitoring application and the results are studied. A comparison of the proposed algorithm with the existing protocols like LEACH, PEGASIS, LEACH-C and CHIRON in the stated application area shows that the proposed algorithm gives better performance in terms of energy utilization, network connectivity and network lifetime.

References

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