Abstract

Achieving both energy efficiency and scalability at the same time is a challenging task in wireless sensor networks (WSN). In this paper, we describe the mechanism of Cluster Based Anycast Routing protocol (CBAR) for routing in WSN. This is very crucial to ensure that the system operates at minimum energy with increasing scalability and network life-time in WSN. Main objective of this research is to minimize the energy consumption and thereby enhance the
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scalability and network life-time. The network life-time can be increased with the introduction of the heterogeneity in sensor nodes. Energy consumption is very much dependent upon the efficiency of routing protocols. The design of the protocol aims to satisfy the requirements of sensor networks that every sensor transmits and receives the data as per the requirement of the node and cluster head. In each cluster, Cluster head (CH) is elected among all the clusters depending upon the efficiency of the node and sensing area coverage. CBAR avoids both flooding and periodic updates of routing information but Cluster head get information updates on the failures of nodes and modification in the cluster. Simulation results show that the proposed CBAR protocol improves energy efficiency and results in an extension of life-time for scalable network when compared with other routing protocols in WSN.

References


**Index Terms**

Computer Science  Wireless Communication

**Keywords**

Wsn  Energy Efficiency  Network Life-time  Scalability  Cluster Head  Clustering Algorithm