Abstract

Low Energy Efficient Clustering Hierarchy-Centralised (LEACH-C) protocol is one of the most pivotal parts of Wireless Sensor Networks (WSN). LEACH-C protocol employs Simulated Annealing algorithm, which is an optimization technique for cluster-head (CH) selection as well as cluster formation. A number of LEACH-C variants came into consideration that uses different optimization techniques in place of Simulated Annealing for CH selection, cluster formation and data transmission also. This paper provides an insight to such LEACH-C based protocols and also compare their performance in terms of network lifetime, stability period and energy consumption in a tabular form. Network lifetime is compared by evaluating the number of nodes dead with respect to the rounds.

References


Index Terms

Computer Science Wireless
Keywords

Cluster; Cluster-head; data transmission; energy consumption; LEACH-C; network lifetime; optimization; simulated annealing; stability period; Wireless Sensor Networks