Abstract

Large number of sensor nodes can be used in WSN (Wireless Sensor Network) and these sensor nodes have limited amount of battery. The algorithm was proposed in pursuance of obtaining maximum lifetime of network. Firstly the area was partitioned into grid and scheduling of nodes based on grid optimization was introduced to enhance the packet delivery between the nodes. Clusters were formed for each grid and all the cluster heads took participation in data transmission. Algorithms with the energy saving and efficiently delivering data to the sink must be developed. However in these algorithms the energy efficiency is declined in the process to deliver data. In this paper, node scheduling strategy is being proposed based on grid optimization. The objective of this paper is to provide an enhanced delivery of data by using grid optimization and enhancing energy efficiency. Evaluation of the proposed algorithm is being conducted by simulations. Evaluated results show that the new proposed algorithm performed better than NSBP [1], comparing in terms of the node death process and network effective lifetime. Node death process is also enhanced in the proposed algorithm over existing one significantly. Leaving the results, that are better than NSBP (A Node Scheduling Based on Partition for WSN), as evaluated through Matlab simulations.
- Yimei Kang, Yang Han, "A Node Scheduling Based on Partition for WSN (NSBP)," in Wireless Telecommunications Symposium (WTS) IEEE, pp. 1-6, April 18-20, 2012.

Index Terms

Computer Science

Wireless
Keywords

Connectivity; grid optimization; partition; weighted sum method; wireless sensor network.