Abstract

A Wireless Sensor Network (WSN) is a network comprising of wirelessly linked sensor nodes. These low computational, tiny devices can communicate in short distances. Each sensor node consists of sensing, data processing, and communication components. To ensure scalability and to increase the efficiency of the network operation, sensor nodes are often grouped into clusters. A lot of work is being done in this field; however, there is still a scope of improvement with modern meta-heuristic route optimization technique inspired from natural swarm. The area of WSN always needs research and development to contribute the more advancement to this era of technology. This paper deals with the energy conservation and at the same time on basis of energy the load balancing of existing network. Since network traffic is growing day by day the energy conservation and some fruitful measures are still needed to maintain its smooth working. In this paper, we develop an algorithm by integrating techniques such as greedy algorithm and ant colony optimization (ACO) thus making it a hybrid approach in balancing load in a WSN. This approach is simulated in java and also a same approach is implemented and the result parameters are analyzed.

References

Index Terms

Computer Science

Wireless
Keywords

WSN  swarm intelligence (SI)  Greedy algorithm  ACO  energy consumption