Abstract

Advances in sensor networks has revealed several low energy sensors which are used to monitor the surroundings in our environment such as plants, factory instruments, transportation, energy, medicines etc. In this paper, an algorithm is proposed which helps in the enhancement of the network lifetime using clustering. Clustering is the method of forming groups of sensor nodes into clusters to preserve the energy. Each cluster has a leader node referred to as a cluster head. The proposed algorithm is an extension to the LEACH algorithm and attempts to reduce the workload on a cluster head. This paper also focuses on the challenges and impact of energy consumption in sensor networks. Further work emphasizes on future direction with its
scope. Results are encouraging for researchers of this domain.

References

- Archana Bharathidasan, Vijay Anand Sai Ponduru, "Sensor Networks: An Overview", Department of Computer Science, University of California, Davis
- Sivaramakrishnan Vaidyanathan, Meenakshi Vaidyanathan, "Wireless Sensor Networks- Issues And Challenges", University of Mumbai
- Mehmet R. Yuce, Peng Choong Ng, Chin K. Lee, Jamil Y. Khan, and Wentai Liu, "A Wireless Medical Monitoring Over a Heterogeneous Sensor Network"
- Mo Li and Yunhao Liu, "Underground Coal Mine Monitoring with Wireless Sensor Networks", Hong Kong University of Science and Technology
- Rita Cucchiara, Andrea Prati, Roberto Vezzani, Luca Benini, Elisabetta Farella, Piero Zappi, "Using a Wireless Sensor Network to Enhance Video Surveillance", Journal Of Ubiquitous Computing And Intelligence, Vol. 0, No. 0, 0 2005
- Alan Mainwaring, Joseph Polastre, Robert Szewczyk, David Culler, John Anderson, "Wireless Sensor Networks for Habitat Monitoring"
- Yang Yu, Bhaskar Krishnamachari, and Viktor K. Prasanna, "Issues in Designing Middleware for Wireless Sensor Networks", University of Southern California
- Basilis Mamalis, Damianos Gavalas, Charalampos Konstantopoulos, and Grammarti Pantziou, "Clustering in Wireless Sensor Networks"
- Hongwei Chen, Chunhua Zhang, Xinlu Zong, Chunzhi Wang, "LEACH-G: an
Optimal Cluster-heads Selection Algorithm based on LEACH; journal of software, vol. 8, no. 10, October 2013
- Ping Ding, JoAnne Holliday, Aslihan Celik, "Distributed Energy-Efficient Hierarchical Clustering for Wireless Sensor Networks"; Santa Clara University

**Index Terms**

Computer Science

Networks

**Keywords**

Sensor Networks  Energy Consumption  Clustering.