Abstract

The tremendous growth of Wireless Sensor Network (WSN) in various applications such as military, defence, civil, health care, agriculture etc. has created a lot of interest among the research community for past few years. WSNs have several characteristics and constraints. Routing, Fusion, Localization is the key factors and very crucial issues that need to be considered due to the severe energy constraints. So, efficient energy management is the biggest challenge for the enhancement of the network lifetime. Many studies have been proven to extend the lifetime of the WSN. Among these, clustering based routing protocols have achieved a significant position to utilize the energy efficiently and effectively. LEACH is the most fundamental clustering based energy efficient distributed routing protocol that provides a long platform to the researchers to compare, extend, modify, analyse with other clustering routing protocols. LEACH-C is another centralized cluster-based routing protocol which is closely related to LEACH protocol. Even though few articles present the comparison result of these two protocols briefly using NS-2 Simulator, as of our knowledge, it has not been analysed more with NetSim Simulator. So, in this paper, we have made an attempt to verify the inherent properties of two existing clustering routing protocols such as LEACH and LEACH-C in depth by using NetSim Simulator.
Comparison of Routing Protocols in WSN using NetSim Simulator: LEACH Vs LEACH-C

References

- M. Bani Hani and Abdalraheem A. Ijjeh, "A Survey on LEACH-Based Energy
Aware Protocols for Wireless Sensor Networks; Journal of Communications Vol. 8, No. 3, March 2013
- M. Ye, C. Li, G. Chen, and J. Wu, EECS: An Energy Efficient Clustering Scheme in Wireless Sensor Networks, National Laboratory of Novel Softaware Technology, Nanjing University, China.
- P. Tsigas, Project on Mobile Ad Hoc Networking and Clustering for the Course EDA390 Communication and Distributed Systems; Manual for University Course.
- X. H. Wu and S. Wang; Performance comparison of LEACH and LEACH-C protocols by NS2; in Proc. 9th International Symposium on Distributed Computing and Applications to Business, Engineering and Science. Hong Kong, China, 2010, pp. 254-258.

Index Terms
Computer Science
Networks
Keywords
WSN  LEACH  LEACH-C  NetSim Simulator