Abstract

Wireless sensor network is a great boon to wireless technology which can be used in various critical applications, making it more familiar in emerging technologies which we use in our day to day life. Even though it has several advantages, it has some drawbacks like limited communication bandwidth, energy consumption etc. The purpose of the paper is to design an energy efficient cluster based routing protocol to minimize energy consumption since energy resource is the major life factor for a node. Usage of clustering concept in hierarchical protocol provides more advantages than any other traditional routing protocols. LEACH and LEACH-C are most commonly used hierarchical routing protocols. The author is proposing an enhancement of LEACH-C protocol, instead of using constant round time usage of adaptive variable round time method provides a multi-hop communication between distance nodes to base station. Thus by using this method, this protocol can be used for larger geographical region with less energy consumption and less cluster head death. The results were obtained by using NS2 simulator which shows the improvement of overall network efficiency by comparing with existing protocols.


Energy Efficient Cluster based Routing Protocol for Wireless Sensor Networks

- Zhao, Fuzhexu, you; Li, Ru; Zhang, Wei, "Improved Leach Communication Protocol For WSN", IEEE/ International conference on Control Engineering and Communication Technology ICCECT-2012, pages:700-702.

Index Terms

Computer Science Wireless

Keywords

LEACH Mobile Collector Variable Round Trip Time