Abstract

Clustering routing protocol provides an effective method for prolonging the lifetime of a wireless sensor network. But most of the researches care less about the communication between Cluster Head (CH) nodes [4] and Base Station (BS). This paper proposed a Multi-hop Cluster based Routing Protocol for long range transmission in wireless sensor network. The protocol consists of two parts, one is with respect to cluster management in sensor area, and the other is about the data transmission between base station and the sensor area. Simulation results show that the protocol offers a better performance than single-hop clustering routing protocols in terms of network lifetime and energy consumption when the base station is located far away from the sensing area.

References

- NS2, http://www.nsnam.org
- http://opnet.com/simulator

Index Terms

Computer Science
Wireless
Keywords
Wireless Sensor Networks  Gateway Node  Energy Efficient  Cluster head
Multi-hop Clustering