Abstract

Wireless sensor networks have strict constrains in size, weight and energy. The conflict of long lifetime and strict energy constrain brings a natural integration of energy harvesting into wireless sensor networks. A modified low energy adaptive clustering hierarchy (LEACH) protocol has been proposed to increase the network life time. Modified LEACH is divided into two main phases at the first setup phase and at the second steady state phase. Setup phase has been modified such that cluster head (CH) selection will be selected only from advanced nodes. Results showed significant improvement in WSN overall lifetime. Simulations show number of dead nodes vs rounds. Comparison between pure LEACH and modified one showed significant improvement in lifetime, also comparison between modified LEACH and multi-path multi-hop energy efficient routing protocol shows significant improvement in performance.

References

Multi-path and Multi-hop Energy Efficient Routing in Wireless Sensor Network


15. G. S. Arumugam and T. Ponnuchamy, “Ee–leach: development of energy-efficient leach


Index Terms

Computer Science Wireless

Keywords

Wireless Sensor Network, Energy Efficiency, LEACH, Multi-path, Multi-hop