Abstract

Wireless sensor networks (WSN) have major scope to monitor, and analyze the phenomena in the real world in details as much as possible, in places to a large degree, very dusky, very high, or very dangerous for researchers to go. Simulation could be great helpful to detect that the shortest possible time to minimize the cost of WSN when design. Simulation provides controlled environmental status for development and optimizing the design parameters and the configuration alternatives. It also represents a good prudence into the effects of the different parameters and so helps to identify those parameters to obtain the great importance for system operation and design. Some nodes transmit data directly to base station in Zonal Stable Election Protocol (Z-SEP) protocol whilst some clustering technique that used are send data to base station as well as in Stable Election Protocol (SEP) protocol. The Zonal Stable Election Protocol is implemented and compared with traditional Low Energy adaptive clustering hierarchy (LEACH) and Stable Election Protocol. Results of simulation showed that Zonal Stable Election Protocol is enhanced the stability period and end-to-end delay and less overhead than Low Energy adaptive clustering hierarchy and Stable Election Protocol. This
article also tests the node density effects on dead nodes, alive nodes and packet to base station.

References


Index Terms

Computer Science    Wireless

Keywords
wireless sensor network, number of nodes, LEACH, SEP and Z-SEP protocols, Packet-to-BS, Dead nodes, alive nodes, End-to-End Delay, Overhead.