Abstract

Wireless sensor network uses energy of various nodes employed in the network while doing transmission of data among nodes. For the network it is difficult to keep the level of energy of all nodes. Because while communicating, the nodes consumes energy from the battery source employed within the nodes. And during transmission or communication it is very difficult to replace the node's battery. Instead of replacing the battery we can reduce the energy consumption by using suitable protocol which can enhance the network lifetime. In this paper we have proposed the LEACH protocol with master cluster head concept. Before the communication takes place, protocol forms a cluster of nodes and the for one cluster a cluster
head (CH) is selected. A CH is selected on the basis of maximum energy. The node within the cluster having maximum amount of energy and minimum distance from base station as compared to other nodes is selected as a CH. Then from the selected CHs, a master CH is chosen which has maximum energy level and minimum distance from base station. After selection of CHs and master CH within the network transmission takes place and nodes send their data to the CHs and then CHs send their data further to the master CH which aggregate the data and sends it to the base station. Proposed work reduces transmission between CHs and the base station and thus reduces the energy consumption and increases the lifespan of the network. Proposed work is also compared with the previous one in terms of FND, HNA. Simulation results shows that our work gives better result than the previous one & increases the life of network.

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Index Terms

Computer Science Wireless

Keywords

Cluster Head; Master Ch; Network Lifetime; First Node Die (fnd); Half Of The Nodes Alive (hna)