Abstract

Wireless sensor network is a collection of sensor nodes, each node is coupled with irreplaceable power source and limited resources. In order to prolong network lifetime several cluster based routing protocols are proposed. However, due to the different power levels and transmission distances from each Cluster Head (CH) to the Base Station (BS) there occurs unequal and high energy depletion in the CH. In this paper, we have proposed a novel approach to select CHs, which is called as Efficient Cluster Head Selection (ECHS). This
Cluster Head Selection Algorithm for Wireless Sensor Networks

approach minimizes the energy depletion. This is done by selecting the CH with maximum residual energy node and less transmission distance between the CH and BS. Castalia simulation results shows that proposed approach is more energy efficient, and hence it is more effective to fulfil the major demands of the wireless sensor networks which prolongs the network life time.

References


Index Terms

Computer Science Algorithms
Keywords
Wsn; Cluster; Leach; Energy; Echs; Era; Energy Efficiency; Timer; Cluster Head.