Abstract

Wireless Sensor Networks (WSNs) are made out of heaps of sensor nodes, with restricted energy, that cooperates to perform a sensing project. In Wireless Sensor Network, the energy efficiency is the important thing difficulty for designing the protocol because sensor nodes have one-time battery backup. There are many cutting-edge protocols which increase the life of the wireless sensor Network through correctly the use of battery energy of the sensor node. In this research work, a brand new strategy and protocol based totally on Stable Election Protocol (SEP) in wireless Sensor network have been proposed. For proposed method, we've assumed heterogeneous environment i.e. the impact of heterogeneity of nodes, in terms in their strength, in wireless sensor networks which might be hierarchically clustered. In those networks, some of the nodes grow to be cluster heads, combination the records of their cluster members and transmit it to the sink. We count on that a percentage of the population of sensor nodes is ready with extra strength assets. We additionally anticipate that the sensors are randomly distributed and aren't cellular, the coordinates of the sink and the size of the sensor discipline are known. The uniqueness of the proposed method is that cluster head is chosen amongst normal Nodes,
Intermediate Nodes and Advanced Nodes based upon their common strength. This assets will increase the number of cluster heads in keeping with spherical and number of packets per spherical. First of all the nodes had been labeled as everyday Nodes, Intermediate Nodes and advanced Nodes. Then, all three kinds of nodes are similarly categorized as Alive nodes and dead nodes. The cluster head is selected among all 3 types of nodes on the premise of average energy. Cluster head collects statistics from member nodes, mixture it and transmit it to the base station. Cluster head choice is maximum critical. Once the cluster head is selected then the cluster head broadcasts a commercial message to the nodes. The nodes get hold of the message and decide to which cluster head it is going to be long for the cutting-edge round. A Modified-SEP (proposed approach) has been applied and in comparison with existing SEP. Three parameters i.e. the number of dead nodes, the number of alive nodes and packets transmitted to base station and so forth has been taken as performance parameters. The simulation end result shows that overall performance and throughput of our proposed protocol deliver the effective and widespread power efficiency in addition to more Network lifetime as compared to different protocols. MATLAB R2013a has been taken as an implementation platform.

References


Index Terms

Computer Science  Wireless

Keywords

Wireless Sensor Network, network lifetime, LEACH, SEP etc.