Minimum Latency Data Aggregation in Wireless Sensor Network

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Abstract

The wireless sensor networks are highly constrained type of network having sensor nodes with more capabilities. The sensor networks are deployed in various regions to collect the data. The critical issue of wireless Sensor Networks (WSNs) are network life and latency incurred to report data, which is the main area of research nowadays. The proposed model is using an optimized localization technique for data aggregation and consists of various regional aggregators that aggregate data to reduce the energy consumption and helps to enlarge the lifespan of cluster head in our existing scheme. The proposed model has been designed using the regional aggregators which lower the routing overhead over the transit cluster heads cum routers in the path between the target cluster head and the sink node. Hence network lifetime of sensor nodes is increased. The proposed model has been proved to be efficient in case of performance parameters of transmission delay reduced by the factor of one-third. Similarly the proposed model shows better performance in terms of network load, throughput, packet delivery ratio etc. parameters. The experimental results have proved the efficiency of the proposed model in the real time applications.
References


Index Terms

Computer Science Wireless
Keywords

Data Aggregation, Wireless Sensor Networks, Latency, Clustering.