Abstract

We Propose Balanced, Localized, Robust, Dynamic state changing and energy efficient spanning tree approaches for Wireless sensor networks which we call Balanced energy Efficient Spanning Tree with Sleep scheduling (BEESP-SS). In this paper first we construct the spanning tree based on RNG (Relative Neighborhood Graph) after that we find the minimum spanning tree it considers the different parent selection strategies and select the best among them, Our major concern is to balance the load with in the spanning tree, actual spanning tree is constructed based on the transmitter and receiver residual energy. It is done by measuring the energy level of the nodes in the spanning tree, because energy is drain out when large number of messages travelling through the particular node by limiting the messages travelled through the sensor nodes we can improve the lifetime of the spanning tree and reduce the frequency of spanning tree, it is done by partitioning the messages based on the energy level of the node in the spanning tree and redirect the messages to the some other nodes in the spanning tree. The proposed solution also adapted the Sleep Scheduling Algorithm, it wake up the sensor nodes in the network when it is needed. This paper also handles the route maintenance it includes node insertion and node deletion.
Optimum Power Utilization in Wireless Sensor Network using Partition Technique

- C. Hua and T.-S. P. Yum, "Optimal Routing and Data Aggregation for Maximizing Lifetime..."

Index Terms

Computer Science

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Keywords

Wireless Sensor network Partitioning sleep scheduling algorithm Localized Minimum spanning tree (LMST)

Relative Neighborhood Graph (RNG)