Abstract

A Wireless Sensor Network (WSN) is a critical network defined with restricted resources and constraints. Wireless Sensor Networks are used in multiple applications like security, military, and health applications. To optimize the network route and network life, under these constraints is always a challenge. In this paper, a multi-parameter-based hop selection analysis-based algorithm is proposed to generate the optimized route over the sensor network based on residual energy, failure rate, and sensing range using the DLQAR protocol. The number of alive nodes, dead nodes, residual energy, energy consumption terms are used to analyze the proposed algorithm. These parameters dynamically analyze the network route and change the network route as per requirements. The proposed work uses the threshold value to perform the critical node elimination. The results obtained show that the proposed algorithm is better as compared to existing algorithms in terms of alive nodes, dead nodes, residual energy, and energy consumption.
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An Improvement of Network Life Time using DLQAR Protocol in Wireless Sensor Network

Index Terms

Computer Science

Wireless

Keywords

WSN  Routing  Constraints  Failure Probability.