

Abstract Details

Title: Fuzzy Based Routing by using Local as Well as Global Information in WSN

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Abstract: WSN is a wireless network formed by a large number of sensors, including thermal, pressure or accelerator sensors, to name a few. These sensors can sense and detect the environmental statistics, including temperature, pressure, movement, etc. Within the network, the sensors are referred to as nodes. A fuzzy logic is unique in that it is able to simultaneously handle numerical data and linguistic knowledge. It is non linear mapping of input data (feature) vector into a scalar output i.e. it maps numbers into numbers. Static Three-Dimensional Fuzzy Routing Based on the Receiving Probability (SFRRP) in wireless sensor networks is an inferential routing protocol that uses a fuzzy procedure to find an appropriate path for transmitting the data packets from the sender nodes toward the base station. SFRRP does not generate any controlling packet for route discovery. In this way, the traffic load of the network is reduced, the energy consumption of the nodes decreased, the network life and data delivery ratio considerably enhanced, and the data packets delivered to the base station in an acceptable time. The research modifies the existing SFRRP routing procedure in WSN. In the existing technique the only local information is used to transfer the data from source node to the destination node. The proposed work modifies the existing work by using the global information along with the local information to transfer the data from source to destination. In addition to it, proposed system increases the fuzzy rules. The existing system proposes the fuzzy only on the basis of the 2 put variables. While the proposed system proposes 181 fuzzy rules on the basis of three input variables i.e. number of neighbour, distance from destination and energy level of the node.

Keywords: Wireless Sensor Network, Fuzzy, SFRRP.