

عنوان مقاله:

Coverage Optimization mechanism in Wireless Sensor Networks using Learning Automata and Greedy Algorithm

محل انتشار:

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خلاصه مقاله:

In wireless sensor networks (WSNs), the network coverage is one of the basic challenges and also it is one of the most important quality of service parameters. In most applications, sensor nodes are randomly deployed in the environment which causes the density of nodes become high in some areas and low in some other. In this case, some areas are not covered by none of sensor nodes which these areas are called coverage holes. Also, creating areas with high density leads to redundant overlapping and as a result the amount of energy consumption in the network increases and the network lifetimedecreases. In this paper, we proposed a new method for the coverage problem of WSNs using learning automata and greedy algorithm. The proposed scheme reduces energy consumption and increases the network lifetime by identifying and disabling the redundant nodes. The simulation results in MATLAB software show that the proposed method improves network performance metrics in term of the network coverage and .the energy consumption of sensor nodes

کلمات کلیدی:

Wireless sensor networks, clustering, learning automata, network coverage, redundant node

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