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Abstract

Wireless sensor networks (WSN) are emerging in various fields like wildlife monitoring, mining industries, security surveillance. The efficiency of sensor networks strongly depends on the routing protocol used. Routing protocols providing an optimal data transmission route from sensor nodes to sink to save energy of nodes in the network. This paper presents simulation results of existing clustering algorithms for heterogeneous wireless sensor network. The simulation results show how the election criteria for cluster heads election such as random

election and nodes with different energy level affect the number of cluster heads elected, and the network lifetime. In this paper, we analyze three different types of routing protocols: LEACH, SEP, and TEEN. Simulation results are provided to show the comparative effectiveness of different clustering algorithm on network lifetime and cluster head selection and failure nodes in the network. Sensor networks are simulated using MATLAB simulator

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Index Terms

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Keywords

Wireless sensor network TEEN LEACH SEP energy-efficient network- lifetime.

