ENERGY EFFICIENT CLUSTERING USING "THRESHOLD BASED SENSOR RELOCATION(TSBR)"

A PROJECT REPORT

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In the partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

INFORMATION TECHNOLOGY

PSNA COLLEGE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution Affiliated to Anna University,Chennai)

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MAY 2024

ABSTRACT

Due to the particularities of the underwater environment, some negative factors seriously interfere with data transmission rates, reliability of data communication, communication range, and network throughput and energy consumption of underwater sensor networks (UWSNs).In this paperwork, we have proposed a Threshold Sensor Based Relocation routing algorithm for Under-Water Sensor Network (UWSNs). The theory of network coding is introduced to Threshold Sensor Based Relocation (TSBR) to meet the requirement of further reducing node energy consumption and extending network lifetime. Hence, time-slot based balanced network coding (TSBNC) comes into being. The simulation results show that the proposed protocol can reduce the probability of node conflicts, shorten the process of routing construction, balance energy consumption of each node and effectively prolong the network lifetime.

The proposed modifications aim to optimize energy consumption, increase network lifetime, and improve data transmission reliability in WSNs. Using the Network Simulation 2 (NS2) tool, it can evaluate the proposed enhancements through comprehensive simulations