Abstract

Nowadays, underwater sensor networks have many applications, in military and exploration domains, early detection of natural phenomena such as earthquakes and tsunamis, and tracking marine creatures. Early detection of considered events and prompt delivery of necessary data to destination (the sinks) are significant necessities. This paper proposes a simple and efficient packet routing protocol for underwater sensor networks. In the proposed protocol, a three-level propagation mechanism is used for directing packets from source nodes to sink nodes. The proposed protocol is implemented to be assessed, in a series of experiments, in terms of packet delivery rate, average end-to-end delay, and energy consumption and compared with DBR algorithm. Comparison results indicated that the proposed protocol outperforms the base DBR algorithm.

References


Index Terms

Computer Science

Wireless

Keywords

Underwater Wireless sensor networks (UWSNs), Routing, Three-level propagation Model.