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Enhancement of Network Lifetime and Data Security in Underwater Sensor Network Using Leach Protocol.

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ABSTRACT.
Due to facts of the submerged surround, some negative factors will seriously muck with data transmission rates, responsibility of data communication, communication range, and network throughputs and energy consumption of submerged detector network(UWSN). hence, full consideration of node energy saving, while maintaining a quick, correct and effective data transmission, extending the network life cycle are essential when routing protocols for submerged detector networks are studied. In this paper, we've proposed a two types of fresh routing algorithm for UWSNs. LEACH is extended by searching a cluster head according to the lowest distance from the base station in order to reduced energy consumption in cluster head an in the total enclosing network. To increase energy consumption effectiveness and extend network life span and information security, we propose a time-place grounded routing algorithm(TSR), Hierarchical Clustering Algorithm(HCA). we designed a probability balanced process and applied it to TSR and HCA.

The proposition coding is introduced to TSBR to meet the necessary of another meet the need for information security, reducing nodule energy consumption and extending network life span. Hence, time- place grounded balancing routing algorithm and compared it with other classical aquatic routing protocols. The simulation results show that proposed protocol can reduce the probability of nodule conflicts, abridge the process of routing construction, balance energy consumption of each node and effectively extend the network life span.

Keywords: Under water sensor, Network, LEACH,TSR,WSN.

I. INTRODUCTION

In lately times, further and further operations have appeared with the development of wireless communication network ways. Aquatic detector networks are an arising and promising network fashion which has attracted considerable attention. In this paper, we present a time- slot based routing algorithm(TSR) by applying a series of advancements of the flooding protocol. Conflict between bumps is avoided when they start to shoot packets only within their own time- places, and they do not need to reply to their parents collectively in the process of establishing routing, rather they directly broadcast the routing dispatches. Meanwhile, to save further time and energy to quicken routing establishing process, the packet could act as the ACK to reply to their parents.

The network topology of aquatic detector networks of this paper searched is a planar centralized- tree construction. This construction has two advantages. One is easy to be extended. Tree construction can extend numerous branches and child branches which can be fluently added into the networks. The other bone is the convenience for segregating malfunctions. We can accessibly separate malfunctions from the rest of the system when bumps or routes in one branch breakdown.

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