Factors affecting MAC Protocol Performance in Underwater Wireless Sensor Networks

Abstract

Underwater wireless sensor networks (UWSNs) has gained attention to researcher due to their wide range of applications. However, due to their power constrains and limitations, an energy efficient MAC protocol is required. Existing MAC protocols for terrestrial WSNs are not sufficient to solve the issues in UWSNs. Therefore, to design a new MAC protocol for UWSNs it is required to study the factors which cause the performance degradation of MAC protocols. In this paper, the various factors which affect the performance of MAC protocols has been highlighted in terms of energy efficiency, throughput, packet delivery ratio and delay. In addition, this paper also focuses on simulation-based experimental results to compare the performance of MAC protocols with respect to data rate factor.

References

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