عنوان مقاله:

MAC Protocols in Underwater Wireless Sensor Networks: Issues and Simulations

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خلاصه مقاله:

Underwater Acoustic Wireless Sensor Network (UAWSN) use acoustic signalsto transmit data. Acoustic signals in underwater environment have high bit errorrate, long propagation delay and limited bandwidth. Another constraint in UWASNis energy. Due to these constraints, design of energy and bandwidth efficient andpropagation delay aware MAC protocol is a great challenge in UWASN.Underwater sensor nodes have to share medium. The main role of the MAC layerprotocol is to decide when a node accesses a shared medium and to resolve anyconflicts between nodes. In this paper, we evaluate the performance of three famousunderwater MAC protocols UWAN-MAC[1], R-MAC[2] and Slotted FAMA[3] interms of packet drop rate, throughput and energy consumption. We have used Aquasimsimulator to evaluate MAC protocols.

کلمات کلیدی:

underwater MAC protocols, R-MAC, UWAN_MAC, Slotted FAMA, underwater acoustic wireless sensor networks, underwater simulation

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