Abstract

Small, low cost, low power and multifunctional sensor are developed as a result of improvement in micro-electromechanical (MEMS) technology. Sensors are connected via wireless medium and are used to observe various aspects of the physical world. Data sensed by these nodes needs to be agglomerated using data fusion, which requires clocks of nodes to be synchronized with each other. Existing approaches of clock synchronization are not designed keeping wireless sensor networks in mind. So there is a need to extend or redesign and develop a new way to synchronize the wireless sensor networks that is best suited to the specific needs of a sensor-network application. In this paper, we introduced a new approach of synchronization of nodes in WSN by enhancing the CSMA/CA protocol (slotted ALOHA). A Master Node, which is assumed to be synchronized with GPS (Global positioning System), deployed in the network. The nodes in a cluster synchronized their local clock with master node using NTP. The proposed solution features minimal energy consumption, minimal packet loss and achieve better throughput.
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**Index Terms**

Computer Science  
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**Keywords**

Clock Synchronization  
WSN  
CSMA/CA  
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