

Decentralized Frame Synchronization of a TDMA-based Wireless Sensor Network

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Abstract— This paper presents a decentralized frame synchronization algorithm for a TDMA-based wireless sensor network. The algorithm is based on a distributed consensus algorithm and a time synchronization algorithm. The algorithm is evaluated using a simulation model. The results show that the algorithm achieves a high degree of synchronization accuracy and robustness.

Index Terms—ad hoc networks synchronization, decentralized synchronization, wireless sensor networks synchronization.