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Packets distribution in a tree-based topology Wireless Sensor Networks

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Abstract:

The concept of data distribution within cluster of sensor nodes to the source sink has resulted to intense research in Wireless Sensor Networks (WSNs). In this paper, in order to determine the scheduling length of packet distribution, a tree-based network topology is constructed indicating the distribution of various sensor nodes within a specific coverage area (CA_i). To evaluate the performance of various channel assignment methods; Receiver-Based Channel Assignment (RBCA), Tree-Based Multichannel Protocol (TMCP), and Capacitated Minimal Spanning Tress (CMSTs), time slot assignment scheme is used in developing the various channel assignments. The performance of packet distribution based on the assignment schemes are evaluated using appropriate simulation tool for the tree-based network topology.