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RESEARCH ARTICLE

A Novel Approach of Energy Optimization in WSN

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Abstract— The wireless link can be unreliable in realistic wireless sensor networks (WSNs). Energy efficient and reliable data forwarding is important because each node has limited resources. Therefore, we must suggest an optimal solution that considers using the information of the node's characteristic A wireless sensor network is composed of a large number of low-cost devices distributed over a geographic area. Sensor nodes have limited processing capabilities therefore simplified protocol architecture should be designed so as to make communications simple and efficient. Moreover, the power supply unit is based on an energy-limited battery the networks should be aimed at minimizing the energy consumption. A forwarding scheme for WSN aimed at combining low computational complexity and high performance in terms of energy efficiency and reliability. The approach relies on a packet-splitting algorithm based on the BURST algorithm. The performance of burst is to be obtained by Shortest Path with Load Balancing (SP).The energy efficiency is low in this splitting process compare to those shortest paths. To estimation of the mean energy reduction factor achievable with the forwarding scheme should be derived and the reassembling is done in destination side, the values to be coded in code block and simulated using MATLAB simulator. The proposed algorithm outperforms in terms of energy saving and increases the network lifetime.

Key Terms: - BURST; WSN; SP; ENERGY EFFICIENCY; PACKETS

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