

Energy Balance Routing to Enhance Network Performance in Wireless Sensor Network

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Abstract : The wireless sensors network has been an active research area over the y-year passed. Due to the limited energy and communication ability of sensor nodes, it seems especially important to design a routing protocol for WSNs so that sensing data can be transmitted to the receiver effectively, an energy-balanced routing method based on forward-aware factor (FAF-EBRM) is proposed in this paper. In FAF-EBRM, the next-hop node is selected according to the awareness of link weight and forward energy density. A spontaneous reconstruction mechanism for Local topology is designed additionally. In this experiment, FAF-EBRM is compared with LEACH and EECU, experimental results show that FAF-EBRM outperforms LEACH and EECU, which balances the energy consumption, prolongs the function lifetime and guarantees high Qos of WSN.

Keywords : energy balance, forward-aware factor (FAF), forward energy density, link weight, network performance

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