

Deadline-Aware Energy-Efficient Query Scheduling in Wireless Sensor Networks with Mobile Sink

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Abstract

Mobile sinks are proposed to save sensor energy spent for multihop communication in transferring data to a base station (sink) in Wireless Sensor Networks. Due to relative low speed of mobile sinks, these approaches are mostly suitable for delay-tolerant applications. In this paper, we study the design of a query scheduling algorithm for query-based data gathering applications using mobile sinks. However, these kinds of applications are sensitive to delays due to specified query deadlines. Thus, the proposed scheduling algorithm aims to minimize the number of missed deadlines while keeping the level of energy consumption at the minimum.