Abstract

In Wireless Sensor Networks (WSNs), trailing data sinks’ mobility for data gathering has drawn popular in recent years. To achieve optimized network performance, or target at collecting a small portion of sensed data in the network recent researches will either focus on planning a mobile sink’s moving trajectory in advance. In many application scenarios, however, a mobile sink cannot move freely in the deployed area. In this paper they propose energy consuming proactive data reporting protocols, SinkTrail for mobile sink-based data collection to avoid constant sink location update traffics when a sink’s future locations cannot be scheduled in advance. SinkTrail differs their approach from previous ones: 1) allow sufficient flexibility in the movement of mobile sinks and also predict various terrestrial changes. 2) SinkTrail doesn’t require GPS devices or predefined anchors (landmarks); it establishes a logical coordinate system for routing and forwarding data packets, making it suitable for various application scenarios. They systematically observed the impact of several design factors in the proposed algorithms. Finally conclude that both theoretical analysis and simulation results demonstrate that the proposed algorithms reduce control overheads and good performance in finding shorter
routing paths.

References


Index Terms

Computer Science Wireless

Keywords

Wireless sensor network, Sink, Routing, GPS, and Mobile sink.