Effect of using Mobile Sink on Chain-based Routing Protocols in Wireless Sensor Networks

Abstract

In this paper, we examine some protocols related to WSNs. To evaluate the efficiency of different routing schemes, we compare six chain based routing protocols: Power Efficient Gathering in Sensor Information Systems (PEGASIS), Power Efficient Gathering in Sensor Information System Extended (PEGASIS-E), Chain Oriented SEnor Network (COSEN), Energy Efficient Chain Based Sensor Network (ECBSN), Improved Energy Efficient Chain Based Sensor Network (IECBSN), and Energy-Aware PEGASIS-Based Hierarchal Routing Protocol for Wireless Sensor Networks (EAPHRN). Two scenarios are discussed to compare the performances of chain based routing protocols; in the first scenario static sink is used and in the second one mobile sink is used. We perform analytical simulations in terms of network lifetime and average energy consumption.

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chain-based routing protocols  static sink  mobile sink.