

عنوان مقاله:

EIDA: An Energy-Intrusion aware Data Aggregation Technique for Wireless Sensor Networks

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خلاصه مقاله:

Energy consumption is considered as a critical issue in wireless sensor networks (WSNs). Batteries of sensor nodes have limited power supply which in turn limits services and applications that can be supported by them. An efficient solution to improve energy consumption and even traffic in WSNs is Data Aggregation (DA) that can reduce the number of transmissions. Two main challenges for DA are: (i) most DA techniques need network clustering. Clustering itself is a time and energy consuming procedure. (ii) DA techniques often do not have ability to detect intrusions. Studying to design a new DA technique without using clustering and with ability of finding intrusion is valuable. This paper proposes an energy-intrusion aware DA Technique (named EIDA) that does not need clustering. EIDA is designed to support on demand requests of mobile sinks in WSNs. It uses learning automata for aggregating data and a simple and effective algorithm for intrusion detection. Finally, we simulate

کلمات کلیدی:

sensor network, data aggregation, Energy, intrusion

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