Reliable Transmission Scheme Against Security Attacks in Wireless Sensor Networks

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Abstract	Routing protocols in wireless sensor network are vulnerable to various malicious security attacks that can degrade network performance and lifetime. This becomes more important in cluster routing protocols that is composed of multiple node and cluster head, such as low energy adaptive clustering hierarchy (LEACH) protocol. Namely, if an attack succeeds in failing the cluster head, then the entire set of nodes fail. Therefore, it is necessary to develop robust recovery schemes to overcome security attacks and recover packets at short times. Hence this paper proposes a detection and recovery scheme for selective forwarding attacks in wireless sensor networks using LEACH protocol. The proposed solution features near-instantaneous recovery times, without the requirement for feedback or retransmissions once an attack occurs.
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