

An Energy-Efficient Routing Method with Intrusion Detection and Prevention for Wireless Sensor Networks

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Abstract— Because of the features such as limited resources, wireless communication and harsh environments, wireless sensor networks (WSNs) are prone to various security attacks. Therefore, we need intrusion detection and prevention methods in WSNs. When the two types of schemes are applied, heavy communication overhead and resulting excessive energy consumption of nodes occur. For this reason, we propose an energy efficient routing method in an environment where both intrusion detection and prevention schemes are used in WSNs. We confirmed through experiments that the proposed scheme reduces the communication overhead and energy consumption compared to existing schemes.

Keyword— wireless sensor networks, network layer attacks, intrusion detection, intrusion prevention



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