عنوان مقاله:

Energy-Aware Virtual Backbone Tree for Increasing Wireless Sensor Network's Lifetime

محل انتشار:

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خلاصه مقاله:

A wireless sensor network consists of numerous tiny sensors which have small and not rechargeable batteries. These tiny sensors are intelligent devices with the ability of wireless communication. They can sense different kinds of data such as light, voice, temperature and then process them. At the end they transmit their results to other nodes or to a central station. Existence of a physical and real infrastructure in Ad-hoc wireless networks or telecommunication networks causes to design many efficient protocols, which could not be used in sensor networks because of the lack of such infrastructures in these networks. Therefore virtual backbone has been developed to prepare an efficient infrastructure in sensor wireless networks. We use two virtual backbones which are energy aware. In this paper, they collect and transmit data to the sink. Each backbone should cover many of our nodes and each node must be covered only by one backbone. Simulation results confirm that periodic use of these tow backbones increases network lifetime .very much

کلمات کلیدی:

Wireless sensor networks, Energy consumption, Lifetime, Guha Algorithm, Virtual backbone