

基于OMNET的无线传感器网络算法的改进

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摘要:

分析了基于低能量自适应聚类层次 (LEACH) 协议, 针对LEACH路由协议存在簇头选择不合理和节点能耗不均衡的缺点, 提出了一个基于能量和到基站距离以及到基站方向的分簇算法LEACH-D, 并在簇首的数据发送中适当引入了改进的多跳路由算法, 仿真结果表明, 改进后的协议能均衡节点的能耗, 有效地延长了整个网络的生存期。

关键词: 无线传感器网络; LEACH算法; 距离与方向; 轮

Improved Airthmetic of Wireless Sensor Network Based on OMNET

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Abstract:

Based on the extensive analysis of typical routing protocols such as Low-Energy Adaptive Clustering Hierady(LEACH), a novel clustering algorithm LEACH-D according the energy of nodes ,distance to the base stations and the base station's directions has been put forward in this paper, and a modified multi-hop approaches was also introduced to the communication between clusterhead and BS. The results of simulation show that the improved protocol can balance energy consumption of nodes and prolong the lifetime of the whole networks.

Keywords: Wireless Sensor Network(WSN);LEACH algorithm; Distance and Direction ;Round

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