

一种基于最大连通度的双簇头分簇算法

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摘要:

针对最大连通度算法簇头节点负载过重, 各簇头间负载极不均衡的问题, 提出一种双簇头分簇算法。该算法根据节点度和剩余能量优化簇头选取, 提高了网络体系的稳定性。同时剩余能量最大的网关节点作为另一簇头分担一部分节点, 即保持了原算法分组投递时延少的优点, 又减少了负载过重簇头节点的负担。通过仿真试验验证, 新算法显著延长了网络生命周期。

关键词: 无线传感器网络; 双簇头; 分簇; 网关节点

A two cluster-heads clustering algorithm based on MAXD

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Abstract:

To the load of cluster heads is always high and terribly unbalanced in maximum link degree clustering algorithm, a two cluster-heads clustering algorithm is proposed. The algorithm optimizes cluster heads selection based on the node degree and residual energy to enhance the stability of network architecture. A part of nodes are assigned to gateway which has the most residual energy as the other cluster head. As a result, the less delay of packets delivery is kept and the burden of overload cluster heads is eased. It is testified by simulation that the new algorithm prolongs the network lifetime noticeably.

Keywords: wireless sensor networks; two cluster-heads; cluster; gateway

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