

基于干扰避免的 Ad hoc 网络多路径链路状态路由算法

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摘要: 在分析了现有多路径算法的基础上, 设计了一种基于 OSPF-MDR 的多路径路由算法, 新算法通过分别设计源节点、中间节点和目的节点的处理策略, 实现了节点不相交多路径, 并通过设计一种新的基于干扰避免的流量分配方法, 达到平衡网络负载的目的。仿真表明, 新算法能有效克服基于链路状态的多路径路由所面对的问题, 降低报文平均时延, 提高了报文成功递交率, 网络的整体性能进一步得到提升。

关键词: 链路状态; 多路径; 干扰避免; 路由

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Anti-Interference Based Multipath Link State Routing Algorithm for Ad hoc Networks

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Abstract: On the basis of the analysis to current multipath routing algorithm, a multipath routing algorithm modified from OSPF-MDR was designed. A node-disjoint path was realized by designing different processing strategies to source node, media node and destination node. The goal of balancing network overhead was also achieved by designing a new traffic splitting method based on anti-interference. Simulations show that the new algorithm can overcome the problem in realizing a link state multipath routing algorithm, decrease packets' average delay, increase packets' successful delivery ratio and improve the performance of the entire network further.

Key words: link state; multipath; anti-interference; routing

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