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多接口多信道无线**Mesh**网中一种基于信号干扰监测的路由度量机制

Routing metric based on interference measurement formulti-radio multi-channel wireless mesh networks

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中文关键词：无线mesh网 多接口多信道 路由度量 信号干扰

英文关键词:wireless mesh networks multi-radio multi-channel routing metric interference

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中文摘要:

多接口多信道无线Mesh网中，提出了一种基于信号干扰监测的路由度量机制(ISB)。现有的路由度量机制如WCETT、iAWARE等均存在各自的不足。通过对iAWARE深入分析，发现其并不能正确地反映背景噪声这一重要因素。为此改进了该度量机制，使其更加正确地反映背景噪声，并且具有了等分性，即可以在路由协议中使用如Bellman-Ford或Dijkstra路径计算方法。理论分析和网络仿真表明，新度量机制下的网络性能如网络吞吐量和端到端延迟均优于HopCount、ETT、WCETT和iAWARE。

英文摘要:

An interference sensing based(ISB) routing metric which mainly depend on the estimation of signal power was introduced for the multi-radio multi-channel wireless mesh networks. The existing metric such like WCETT and iAWARE all have their drawbacks were shown. As shown in the equations of iAWARE, it could be proved that a worse background noise corresponds to a better metric value which was imprecise. The iAWARE to make it suited for the environment with background noise was improved, and the isotonic property was regained. that the Bellman-Ford and Dijkstra algorithm could be deployed in ISB. The simulation results prove the novel algorithm takes the advantages of higher efficiency both in throughput and end to end delays, compared with the traditional ones HopCoMnt, ETT, WCETT and iAWARE.

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