

论文

基于博弈论的移动WiMAX接纳控制

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摘要

移动WiMAX是一种重要的宽带无线接入技术,它具有数据传输率高、覆盖范围广、支持多种数据业务等优点。为了保证不同业务的QoS,该文提出一种基于博弈论的接纳控制算法。该算法首先给不同的业务赋予不同的优先级,然后建立一个非合作二人博弈模型,通过求解纳什均衡决定是否接纳连接请求,以及带宽的预留方案。仿真结果表明,该算法能够提高带宽的利用率,降低新发起连接的阻塞概率和切换连接的丢弃概率,并且能给不同业务提供区分服务。

关键词 [无线城域网](#); [接纳控制](#); [博弈论](#); [QoS](#)

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Mobile WiMAX Access Control Based on Game Theory

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Abstract

Mobile WiMAX is an important technology for broadband wireless access. It has high-speed data transmission rate, great covering range, supporting several different service classes and some other merits. For the sake of guaranteeing every service's QoS, a new access control algorithm based on game theory is proposed. The algorithm gives services different priorities firstly, and then formulates a non-cooperative two-person game. Finally it decides to accept or reject connect application and selects bandwidth reservation scheme by figuring out Nash Equilibrium. The simulation results show the algorithm can increase bandwidth utilization, reduce the blocking probabilities of new originated connections and the dropping probabilities of handover connections, and can provide differentiated services to distinct services.

Key words [Wireless metropolitan area networks](#) [Access control](#) [Game theory](#) [QoS](#)

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