

论文

## 超宽带无线通信MAC层的准入控制

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摘要

超宽带无线通信系统一般以Ad hoc形式组建网络。该文针对以DS-UWB通信系统为物理层的Ad hoc网络, 借鉴了MAC层准入控制的两种策略: 全网络吞吐量控制策略与单用户链路吞吐量控制策略; 在系统完全功率控制的设定前提下, 根据物理链路的QoS指标, 分别对两种准入策略进行仿真。仿真结果显示, 扩频码长度、信噪比等影响UWB通信链路质量的因素对系统准入用户数存在较大影响。

关键词 [UWB通信](#) [Ad hoc网络](#) [准入控制](#)

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## Admission Control in MAC Layer over UWB

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Abstract

Ultra-wideband communication system is generally organized in the form of Ad hoc network. In this paper, two strategies of admission control—the throughput control on overall network or each link, are simply analyzed for Ad hoc network which uses DS-UWB technology as PHY layer. According to the requirements of Quality of Service (QoS) on each link, the number of admitted users in the networks is simulated under perfect power control. It shows that the factors affecting the quality of links such as the periods of orthogonal code and signal to noise ratio have large influence on the number of the admitted users in the UWB Ad hoc networks.

Key words [UWB Communication](#) [Ad hoc network](#) [Admission control](#)

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