

论文

# 业务非均匀分布CDMA系统中一种基于公平性保证的贪婪呼叫接纳控制策略

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摘要

呼叫接纳控制(Call Admission Control, CAC)是移动通信系统资源管理的主要内容之一。它通过接纳或者拒绝一种用户服务请求,来保持系统的正常运行,是平衡用户服务满意度与系统资源最大化利用矛盾的主要手段。该文主要研究小区业务非均匀分布时基于公平性保证的动态CAC策略,提出了一种新的CAC策略,可适用于多业务且有变速率(Variable BitRate, VBR)业务的情况。该策略采用贪婪算法,用户请求接入以全系统的预期信干比作为判决条件,从而实现了不同到达率小区之间阻塞率的均衡,保证了用户接入的公平性,对于实际系统的应用具有重要的意义。

关键词 [CDMA](#) [呼叫接纳控制](#) [公平性](#) [多业务](#) [业务非均匀分布](#)

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## A Fairness-Based Greedy Call Admission Control Strategy with Non-uniform Traffic Distribution in CDMA Systems

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Abstract

Call admission control (CAC) is one of the most important parts of resource management in mobile communication systems. It keeps the system work stable by accepting or rejecting users' service requests. CAC solves the conflict between the service satisfaction of user and system resource utilization. This paper focuses on the dynamic CAC strategy providing guaranteed fairness in the CDMA systems with non-uniform traffic distribution among cells. A novel CAC strategy, which can support multi-traffic with different QoS requirements and VBR traffic, is proposed based on former research achievements. By adopting greedy algorithm, whether accepting or rejecting a new call request depends on the target Signal-to-Interference of the whole system. Therefore the equilibrium of blocking probability among cells with different arriving rates and the access fairness is guaranteed. It is very significant for practical system applications.

Key words [CDMA](#) [Call admission control](#) [Fairness](#) [Multi-traffic](#) [Non-uniform traffic distribution](#)

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