研究论文

一种支持LTE语音业务的优先级半持续调度机制

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摘要：

根据用户等级、用户设备对物理资源块(PRB)的需求量、用户设备的平均信道质量以及平均传输速率等因素来计算长期演进语音(VoLTE)用户设备的优先级，并将优先级机制引入到长期演进(LTE)无线资源的半持续调度机制中，提出了一种基于用户优先级的VoLTE无线资源调度方案. 该方案能够避免频繁的无线资源调度信令和语音数据竞争有限的共享无线资源，有效提高无线资源的利用率和调度效率，提高了系统支持的VoLTE用户容量和用户满意度. 通过NS3仿真平台，验证了该方案对于LTE语音业务的性能优化.

关键词： 长期演进　资源分配　分组调度　IP语音业务

Priority semi-persisting scheduling scheme for voice over LTE service

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Abstract:

This paper proposes a new scheduling algorithm for allocating the LTE radio resource, Priority Semi-Persisting Scheduling(PrSPS). PrSPS calculates the priority of the user equipment using the user grade, PRBs needed, average channel quality and average transmission rate. Adopting this priority method in semi-persisting scheduling mechanism can avoid the competition between resource scheduling signalling and voice date, improve the radio resource utilization and scheduling efficiency, increase the user capacity of VoLTE and improve satisfaction of VoLTE users. Using the NS-3 simulation platform, the paper evaluates the performance of PrSPS.

Keywords: LTE　resource allocation　packet scheduling　VoIP service

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