



Transient QoS Measure for Call Admission Control in WCDMA System with MIMO

International Workshop on Quality of Service in Multiservice IP Networks

QoS-IP 2004: Quality of Service in Multiservice IP Networks pp 545-558 | Cite as

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Conference paper

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Part of the Lecture Notes in Computer Science book series (LNCS, volume 3375)

Abstract

This paper presents an efficient capacity evaluation algorithm of the WCDMA with multiple-input multiple-output (MIMO) system for quality of service (QoS) support. To define the capacity of the system, we derive the E_b/N_o gain taking into account MIMO concept and the outage probability as the QoS measure using central limit approximation, Chernoff bound and the refined large deviation approach. Based on the QoS measures, we propose an efficient transient call admission control (CAC) algorithm. Numerical results show that there is a substantial increment in system capacity by adopting MIMO system and the theory of the refined large deviation approach is a good approach for transient QoS support.

Keywords

Outage Probability MIMO System Ergodic Capacity

Wideband Code Division Multiple Access Connection Admission Control

These keywords were added by machine and not by the authors. This process is experimental and the keywords may be updated as the learning algorithm improves.

This work was supported by the KOSEF through the grant No. R08-2003-000-10922-0.

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About this paper

Cite this paper as:

Jeon C.Y., Jang Y.M. (2005) Transient QoS Measure for Call Admission Control in WCDMA System with MIMO. In: Ajmone Marsan M., Bianchi G., Listanti M., Meo M. (eds) Quality of Service in Multiservice IP Networks. QoS-IP 2004. Lecture Notes in Computer Science, vol 3375. Springer, Berlin, Heidelberg

- DOI https://doi.org/10.1007/978-3-540-30573-6_43
- Publisher Name Springer, Berlin, Heidelberg
- Print ISBN 978-3-540-24557-5
- Online ISBN 978-3-540-30573-6
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