



QoS and QoE Management in UMTS Cellular Networks

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S-38.3215 Special Course on Networking Technology for Ph.D. students at TKK

Outline

- General information
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General information

- Course description and material
 - See: <http://www.netlab.tkk.fi/opetus/s383215/2006/>
 - Contact: Mika Tarvainen (mika.tarvainen@netlab.tkk.fi)
 - See also: <http://www.netlab.tkk.fi/engl.shtml>
 - Contact: prof Raimo Kantola (raimo.kantola@tkk.fi)
- 9 Lectures (E110) & 2 Exercise classes (F402) using Matlab
 - 19/9-28/11 every Tuesday, time 17:00-19:00, in Otakaari 5
- Exams* and course completion for M.Sc. and Ph.D. students
 - 12 Dec 06, time 17:00-19.00, retrieval examination in Jan 07
 - Test: 30 questions with multiple choice (20/30 = pass)
 - Course completion: pass the examination (of 4 ocrs)
 - Not compulsory exercises: 2 additional ocrs

* No documentation allowed during exams



Contents

Lectures

1. Introduction to QoE and QoS management and service applications
2. QoS in UMTS cellular systems as defined in the standards
3. Packet Data Transfer across EGPRS and WCDMA networks
4. QoS Functions in Access Networks
5. QoS Functions in Core and Backbone Networks
6. Radio Network Dimensioning and Planning
7. QoS Provisioning
8. QoE and QoS Monitoring and data analyses
9. QoE and QoS Optimization

Exercise classes using Matlab

1. Tool for EGPRS dimensioning
2. Tool for WCDMA (enhanced) dimensioning



References

- D. Soldani, M. Li and R. Cuny (eds.), **QoS and QoE Management in UMTS Cellular Systems**, John Wiley and Sons, June, 2006, 460 pp.
 - <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-0470016396.html>
 - <http://www.connecting.nokia.com/NOKIA/nns.nsf/a/78786C61AB5A7C5AC225718F0026BAA3>
(Contact Mr. Geoff Farrell @ Wiley gfarrell@wiley.co.uk)

See also:

- <http://lib.tkk.fi/Diss/2005/isbn9512278340/>

