K. WIRELESS NETWORKING
THEORY SYMPOSIUM

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Sponsoring Technical Committees:
Personal Communications and Radio Communications

K01 WIDEBAND CDMA NETWORKS: CODE ASSIGNMENT
Monday 29 April 2002
8:50 - 10:20
Odets, 4th Floor
Session Chair: Mauri Nissila, VTT, Finland

K01-1 Performance Evaluation of Orthogonal Variable-Spreading-Factor Code Assignment Schemes in W-CDMA
Rajivun Assurat, Kenichi Kawanishi, Rajkumar Odets, 4th Floor
Session Chair: Mauri Nissila, VTT, Finland

K01-2 Efficient Algorithms for the Assignment of OVSF Codes in Wideband CDMA
M. Dell’Amico, M. L. Merani, University of Modena and Reggio Emilia, Italy, F. Maffioli, Politecnico di Milano, Italy

K01-3 Dynamic Code Assignment Improves Channel Utilization for Bursty Traffic in Third-Generation Wireless
Carl E. Fossa Jr., Nathaniel J. Davis IV, Virginia Polytechnic Institute and State University, USA

K01-4 Spreading Code Assignment in an Ad Hoc DS-CDMA Wireless Network
Yunnan Wu, S. Y. Kung, Princeton University, USA, Gian Zhang, Wenwu Zhu, Microsoft Research, China, China

K02 WIRELESS MULTIMEDIA SERVICES
Monday 29 April 2002
10:40 - 12:10
Odets, 4th Floor
Session Chair: Catherine Larro, Philips Research, France

K02-1 Utility-oriented Adaptive QoS and Bandwidth Allocation in Wireless Networks
Yaxin Cao, Victor O. K. Li, The University of Hong Kong, Hong Kong

K02-2 Resource Allocation for Multimedia Services on the UMTS Downlink
Shahzad Ali Malik, Djamal Zeghlache, Institut National des Telecommunications, France

K02-3 Inter-stream Synchronization for Multimedia Applications in Wireless-ATM Networks
A. Iera, A. Modafferi, R. Agostino, G. Araniti, University of Reggio Calabria, Italy, A. Molinaro, University of Calabria, Italy

K02-4 A Capacity-Optimal QoS Provisioning Scheme for Multimedia Traffic in CDMA Networks
Tao Shi, Zhiheng Niu, Tsinghua Univ., China

K03 WIDEBAND CDMA NETWORKS: CALL ADMISSION AND PERFORMANCE
Monday 29 April 2002
13:40 - 15:10
Odets, 4th Floor
Session Chair: T. S. Randhawa, Sierra Wireless, Canada

K03-1 Uplink Admission Control in WCDMA Based on Relative Load Estimates

K03-2 Performance Evaluation of Priority-based Call Admission Control in Multiservice DS-CDMA Cellular Networks Supporting VBR Video Traffic
T. S. Randhawa, Sierra Wireless Cluster at New Mic, Canada, R. H. S. Hardy, Simon Fraser University, Canada

K03-3 An Analytical Framework for the Design and Performance Evaluation of Realistic CDMA-CPH Systems
Sebnem Z. Ozer, MeshNetworks, Inc., USA, Symeon Papavassiliou, New Jersey Institute of Technology, USA

K03-4 A Serial Acquisition Scheme Based on Statistical-Hypothesis-Testing for Asynchronous DS/CDMA Systems
Marco Guainazzo, Claudio Sacchi, Carlo S. Regazzoni, University of Genova, Italy

K03 QoS of AD-HOC NETWORKS, A JOINT SESSION WITH COMMUNICATIONS QoS AND RELIABILITY
Monday 29 April 2002
13:40 - 15:10
Carnegie, 5th Floor
Session Chair: Kenichi Mase, Niigata University, Japan

K03-1 A Novel Framework for QoS-Aware Resource Discovery in Mobile Ad Hoc Networks
Jianghuan Liu, Bo Li, The Hong Kong University of Science and Technology, USA, Gian Zhang, Wenwu Zhu, Microsoft Research, China, Jun Zhang, University of Wisconsin at Milwaukee, USA

K03-2 Group Mobility and Partition Prediction in Wireless Ad Hoc Networks
Karen H. Wang, Baochun Li, University of Toronto, Canada

K03-3 Predictive Location-based QoS Routing in Mobile Ad Hoc Networks
Samarth H. Shah, Klara Nahrstedt, University of Illinois at Urbana-Champaign, USA

K03-4 A Set Partitioning Approach for Cellular Planning of Mobile Radio Network
Syed Zahid Ali, Imperial College of Science, Technology, and Medicine, UK

K04 PACKET SCHEDULING FOR WIRELESS NETWORKS
Monday 29 April 2002
15:30 - 17:00
Odets, 4th Floor
Session Chair: Zhiemei Jiang, AT&T Labs - Research, USA

K04-1 Channel Capacity Fair Queueing in Wireless Networks: Issues and a New Algorithm
Li Wang, Yu-Kwong Kwok, Wing-Cheong Lau, Vincent K. N. Lau, The University of Hong Kong, Hong Kong

K04-2 Distributed Weighted Fair Queueing in 802.11 Wireless LAN
Albert Bench, Xavier Pérez, NEC Europe Ltd., Germany

K04-3 Channel Error and Handoff Compensation Scheme for Fair Queueing Algorithms in Wireless Networks
Suwon Lee, Kiseon Kim, Kwangiu Institute of Science and Technology, Korea, Aftab Ahmad, DePaul University, USA

K04-4 Scheduling Start Time in CDMA Burst Admission
Lui Zhuge, University of Southern California, USA, Victor O. K. Li, Univ. of Hong Kong, Hong Kong

K04 MOBILE IP, A JOINT SESSION WITH COMMUNICATIONS QoS AND RELIABILITY
Monday 29 April 2002
15:30 - 17:00
Carnegie, 5th Floor
Session Chair: Kelly Krick, Nortel Networks, USA

K04-1 Dynamic Service Negotiation Protocol (DSNP) and Wireless Diffserv
Jyh-Cheng Chen, National Tsing Hua University, Taiwan, Anthony McCauley, Telcordia Technologies, USA, Venkatesh Sarangan, Penn State University, USA, Shinhichi Baba, Yoshhiro Ohba, Toshiba America Research, Inc., USA

K04-2 A Linux-based EGPRS Real-time Test Bed Software for Wireless QoS and Differentiated Service Studies
Meng-Ju Lin, Hui Luo, Li Fung Chang, AT&T Labs, USA

K04-3 Integration of IP Mobility and Security for Secure Wireless Communications
Melbourne Barton, John Lee, Sanjai Narain, K. Daniel Wong, Telcordia Technologies, USA, Derek Atkins, IHTFP Consulting, USA, Deidra Ritcherson, University of Chicago, USA, Kemal E. Tepa, Rutgers University, USA

K04-4 Optimizing Public-Key Encryption for Wireless Clients
Nachiketh R. Potlappally, Sivaths Ravi, Anand Raghunathan, NEC USA, Inc., USA, Ganesh Lakshminarayana, Alphion Corporation, USA
K05 AD-HOC WIRELESS NETWORKS: DESIGN 1
Tuesday 30 April 2002
10:40 - 12:10
Alvin, 5th Floor
Session Chair: Hui Luo, AT&T Labs - Research, USA
K05-1 An Ad Hoc Network with Mobile Backbones
Kaixin Xu, Xiaoyan Hong, Mario Gerla, University of California at Los Angeles, USA
K05-2 Ad Hoc Networks with Smart Antennas Using IEEE 802.11-based Protocol
Nader S. Fahmy, Terrence D. Todd, McMaster Univ., Canada, Vytas Kezys, TalaricCom Inc., Canada
K05-3 Adaptive Backbone-based Multicast for Ad Hoc Networks
Chaiporn Jaikaeo, Chien-Chung Shen, University of Delaware, USA
K06 NETWORK CAPACITY AND DIMENSIONING
Tuesday 30 April 2002
10:40 - 12:10
Odets, 4th Floor
Session Chair: Franco Vatalara, University of Rome at Tor Vergata, Italy
K06-1 Analytical Concepts for GPRS Network Dimensioning
Ullrich Vormfeld, Aachen University of Technology, Germany
K06-2 Measurements from a Campus Wireless Network
Ron Hutchins, Ellen W. Zegura, Georgia Institute of Technology, USA
K06-3 Capacity Regions for Wireless Ad Hoc Networks
Stavros Tournopoulis, Andrea Goldsmith, Stanford University, USA
K06-4 Coverage in Wireless Ad-Hoc Sensor Networks
Xiang-Yang Li, Peng-Jun Wan, Ophir Frieder, Illinois Institute of Technology, USA
K07 AD-HOC WIRELESS NETWORKS: ROUTING
JOINT SESSION WITH NEXT GENERATION INTERNET
Tuesday 30 April 2002
13:40 - 15:10
Alvin, 5th Floor
Session Chair: Anthony C.K. Soong, Ericsson
K07-1 Scalable Ad Hoc Routing in Large, Dense Wireless Networks Using Clustering and Landmarks
Xiaoyan Hong, Mario Gerla, Yunjung Yi, Kaixin Xu, UCLA, USA, Taek Jin Kwon, Telcordia Technologies, Inc., USA
K07-2 A TDMA-based Bandwidth Reservation Protocol for QoS Routing in a Wireless Mobile Ad Hoc Network
Wen-Hwa Liao, National Central Univ., Taiwan, Yu-Chee Tseng, National Chiao-Tung Univ., Taiwan, Kuei-Ping Shih, Tamkang Univ., Taiwan
K07-3 The Selective Intermediate Nodes Scheme for Ad Hoc On-Demand Routing Protocols
Yunjung Yi, Mario Gerla, UCLA, USA, Taek Jin Kwon, Telcordia Technologies, USA
K07-4 Load Balancing of Multipath Source Routing in Ad Hoc Networks
Lianfang Zhang, Zenghua Zhao, Yantai Shu, Lei Wang, Tianjin University, China, Oliver W. W. Yang, University of Ottawa, Canada
K08 POWER ALLOCATION IN CDMA NETWORKS
Tuesday 30 April 2002
13:40 - 15:10
Odets, 4th Floor
Session Chair: Lilijana Trajkovic, Simon Fraser University, Canada
K08-1 Capacity and Power Investigation of Opportunity Driven Multiple Access (ODMA) Networks in TDD-CDMA Based Systems
K08-2 Optimum Power Allocation for Soft Handoff Algorithms over Lognormal Shadowing Channels
Mazen O. Hasna, Mohamed-Slim Alouini, University of Minnesota, USA
K08-3 Joint Error Control and Power Allocation for Video Transmission over CDMA Networks with Multiuser Detection
Shengjie Zhao, Zixiang Xiong, Xiaodong Wang, Texas A&M University, USA
K08-4 Self-similarities in Transmission Delay of CDMA Cellular Packet Systems for Varying Transmission Power Control Error
Kazuo Mori, Tomotaka Nagaosa, Hideo Kobayashi, Mie University, Japan, Hirotsahi Hisaka, YRP Key Technology Laboratories, Japan, Takahiko Kobayashi, Tokyo Denki University, Japan
K09 HANDOFF TECHNIQUES
Tuesday 30 April 2002
15:30 - 17:00
Alvin, 5th Floor
Session Chair: Alberto Zanella, CSITE/CNR, University of Bologna, Italy
K09-1 Discrete-time Analysis of Soft Handoff in CDMA Cellular Networks
Alexa E. Leu, Brian L. Mark, George Mason University, USA
K09-2 Reordering Soft Handoff Frames to Minimize Delay in CDMA Cellular Networks
Ivan N. Vukovic, Rajesh S. Pachyannur, Inran Ali, Philip J. Fleming, Motorola, Inc., USA
K09-3 HOPOWER: A New Handoff Protocol for Overlay Networks
Fan Du, Lionel M. Ni, Abdolhossein Esfahanian, Michigan State University, USA
K09-4 Estimating Velocity of Mobiles in EDGE Systems
Chengshan Xiao, University of Missouri--Columbia, USA
K09-5 Low Latency Handoff for Wireless IP QoS with NeighborCasting
Eunsoo Shim, Hunchyu Wei, Yusang Chang, Richard D. Gitlin, Columbia University, USA
K10 TCP PERFORMANCE IN WIRELESS NETWORKS
JOINT SESSION WITH NEXT GENERATION INTERNET
Tuesday 30 April 2002
13:40 - 15:10
Odets, 4th Floor
Session Chair: Lilijana Trajkovic, Simon Fraser University, Canada
K10-1 On-Demand TCP: Transparent Peer to Peer TCP/IP over IrDA
Jean Tournilhes, Hewlett Packard Laboratories, USA, Liz Magalhaes, Casey Carter, University of Illinois at Urbana-Champaign, USA
K10-2 Improving TCP Performance after a Long Channel Outage
Homare Murakami, Gang Wu, Masugi Inoue, Communications Research Laboratory, Japan
K10-3 Handover Support for TCP Connections Through Path Prediction
S. Papayiannis, S. Hadjiefthymiades, L. Merakos, University of Athens, Greece
K10-4 ROHC+: A New Header Compression Scheme for TCP Streams in 3G Wireless Systems
G. Boggia, P. Camarda, V. G. Scevo, Politecnico di Bari, Italy
K11 AD-HOC WIRELESS NETWORKS: DESIGN 2
Wednesday 01 May 2002
8:50 - 10:20
Alvin, 5th Floor
Session Chair: Herman D. Hughes, Michigan State University, USA
K11-1 A Task Graph Based Application Framework for Mobile Ad Hoc Networks
Wang Ke, Prithwish Basu, Thomas D. C. Little, Boston University, USA
K11-2 Signaling and QoS Guarantees in Mobile Ad Hoc Networks
Chi-Hsiang Yeh, Hussein T. Mouftah, Hossam Hassanein, Queen’s University, Canada
K11-3 Computing Optimal Local Cover Set for Broadcast in Ad Hoc Networks
Min-Tse Sun, Ten-Hwang Lai, Ohio State University, USA
K11-4 Effect of Availability Factor Threshold and Clustering Gap on Performance of Clustering Mechanisms for Multicluster Mobile Ad Hoc Networks
Aqeel A. Siddiqui, Ericsson Inc., USA, Ravi Prakash, University of Texas at Dallas, USA
K12 MOBILITY MANAGEMENT
Wednesday 01 May 2002
8:50 - 10:20
Odets, 4th Floor
Session Chair: Byoung-Jo Kim, AT&T Labs - Research, USA
K12-1 State Analysis and Aggregation Study for Multicast-based Micro Mobility
Ahmed Helmy, Univ. of Southern California, USA
K12-2 Connection Tree Based Micro-mobility Management for IP-centric Mobile Networks
Qiang Gao, Anthony Acampora, The University of California at San Diego, USA
K12-3 An Optimal Location Management Scheme for Minimizing Signaling Cost in Mobile IP
Jiang Xie, Ian F. Akyildiz, Georgia Institute of Technology, USA
K12-4 Location Information Services in Mobile Ad Hoc Networks
Tracy Camp, Jeff Boleng, Lucas Wilcox, Colorado School of Mines, USA
K13 AD-HOC WIRELESS NETWORKS: POWER CONSERVATION TECHNIQUES
Wednesday 01 May 2002
10:40 - 12:10
Alvin, 5th Floor
Session Chair: Herman D. Hughes, Michigan State University, USA
K13-1 Scheduled Rendezvous and RFID Wakeup in Embedded Wireless Networks
Milan Nosovic, Terry D. Todd, McMaster University, Canada
K13-2 Coordinated Power Conservation for Ad Hoc Networks
Chavali Srinathapornphat, Chien-Chung Shen, University of Delaware, USA
K13-3 A Routing Protocol and Energy Efficient Techniques in Bluetooth Scatternets
Balakrishna J. Prabhhu, A. Chockalingam, Indian Institute of Science, India
K13-4 A Comprehensive Energy Conservation Solution for Mobile Ad Hoc Networks
John A. Shire, Gustavo de Veciana, The University of Texas at Austin, USA
K14 PERFORMANCE ANALYSIS OF WIRELESS NETWORKS
Wednesday 01 May 2002
10:40 - 12:10
Odets, 4th Floor
Session Chair: Byoung-Jo Kim, AT&T Labs - Research, USA
K14-1 Performance of UMTS Radio Link Control
Qingping Zhang, Hsuan-Jung Su, Bell Laboratories, Lucent Technologies, USA
K14-2 Performance Analysis for Cellular Systems Supporting Heterogeneous Services
Dongmei Zhao, Sherman Shen, Jon W. Mark, University of Waterloo, Canada
K14-3 Performance Evaluation of WAP-based Applications over GPRS
Peter Stuckmann, Christian Hoymann, Aachen University of Technology, Germany
K14-4 Measurement-based Replanning of GSM Cell Capacities Considering Retrivals, Redials and Hand-offs
Ertan Onur; Hakan Delic, Cam Ersoy, M. Ufuk Caglayan, Bogazici University, Turkey
K15 LINK ADAPTATION TECHNIQUES
Wednesday 01 May 2002
13:40 - 15:10
Alvin, 5th Floor
Session Chair: Vello Tralli, University of Ferrara, Italy
Tim Holloway, Andrea Goldsmith, Peter Glynn, Stanford University, USA
K15-2 Performance Analysis of Rate Adaptation Scheme for Data Traffic in DS-CDMA Systems
Liang Xu, Xuemin Shen, Jon W. Mark, University of Waterloo, Canada
K15-3 Efficient Radio Resource Control for Manhattan Street Environments
Mohamed Moustafa, Visionics Corporation, USA, Ibrahim Habib, The City University of New York, USA, Mahmoud Naghshineh, IBM Watson Research Center, USA
K15-4 Unslotted DS/CDMA Packet Radio Network Using Rate/Space Adaptive OLSR Vinh V. Phan, Nokia Networks, Finland, Sabe G. Gligic, University of Oulu, Finland
K16 MULTICAST PROTOCOLS FOR WIRELESS NETWORKS
Wednesday 01 May 2002
13:40 - 15:10
Odets, 4th Floor
Session Chair: Kia Makkii, Florida International University, USA
K16-1 Analysis of Mobile Multicasting in IP-based Wireless Cellular Networks
Nilanjan Banerjee, Sajal K. Das, The University of Texas at Arlington, USA
K16-2 Family ACK Tree (FAT): A New Reliable Multicast Protocol for Mobile Ad Hoc Networks
Ming-Hu Jiang, Wanjiun Liao, National Taiwan University, Taiwan
K16-3 A Framework for Handling Multicast Source Movement in Mobile-IP
Hrishikesh Gossain, Siddesh Kamat, Dharma P. Agrawal, University of Cincinnati, USA
K16-4 Cumulative Acknowledgement Multicast Repetition Policy for Wireless LANs or Ad Hoc Network Clusters
Leonard E. Miller, Byung-Jae Kwak, National Institute of Standards and Technology, USA
K17 CHANNEL MODELS AND MAC PROTOCOLS
Wednesday 01 May 2002
15:30 - 17:00
Alvin, 5th Floor
Session Chair: Gianluca Mazzini, University of Ferrara, Italy
K17-1 Analytical Study of a Slotted CSMA Protocol on a Two-State Markov Channel
A. Giovanardi, University of Ferrara, Italy
K17-2 A First-Order Markov Model for Correlated Nakagami-m Fading Channels
A. Ramesh, Synopsys (India) Pvt. Ltd., India, A. Chockalingam, Indian Institute of Science, India, L. B. Milstein, University of California at San Diego, USA
K17-3 Aloha with Preamble Sampling for Sporadic Traffic in Ad Hoc Wireless Sensor Networks
Amr E.Haydii, Centre Suisse d’Electronique et de Microtechnique, Switzerland
K17-4 An Accurate Line of Sight Propagation Performance Model for Ad Hoc 802.11 Wireless LAN (WLAN) Devices
David G. Green, SRI International and Monmouth University, USA, M. S. Obaidat, Monmouth University, USA
K18 RADIO ACCESS
Wednesday 01 May 2002
15:30 - 17:00
Odets, 4th Floor
Session Chair: Fulvio Babich, University of Trieste, Italy
K18-1 Performance Evaluation of Common Radio Resource Management (CRRM)
Antti Tolli, Petteri Hakalan, Nokia Networks, Spain, Harri Holma, Nokia Networks, Finland
K18-2 A New Protocol for Wireless LANs and Ad Hoc Networks
P. Nicolaidis, G. I. Papadimitriou, A. S. Pomportzas, Aristotle University, Greece, M. S. Obaidat, Monmouth University, USA
K18-3 Web SHAKE: A Fast WWW Access Method for Mobile Terminals on Temporary Cluster Networks
Yousuke Konishi, Susumu Ishihara, Tadanori Mizuno, Shizuoka University, Japan
K18-4 Running TCP over IS-2000
Farid Khafizov, Mehmet Yavuz, Nortel Networks, USA

Upcoming Conferences
IWQOS 2003
10th International Workshop on Quality of Service
15-17 May - Miami Beach, FL, USA
www.cs.virginia.edu/iwqos
CTW 2002
IEEE Communication Theory Workshop
19-22 May - Sanibel Island, FL, USA
www.ctw02.gatech.edu
INFOCOMM 2002
21st IEEE International Conference on Computer Communications
23-27 June - New York, NY, USA
ICM 2002
IEEE International Conference on Multimedia and Expo
26-29 August - Lausanne, Switzerland
http://www.icme2002.org
PIMRC 2002
3rd IEEE International Symposium on Personal, Indoor and Mobile Communications
15-18 September - Lisbon, Portugal
http://www.pimrc2002.org
MILCOM 2002
IEEE Military Communications Conference
6-9 October - Anaheim, CA, USA
http://www.milcom.org/2002
GLOBECOM 2002
IEEE Global Communications Conference
17-21 November - Taipei, Taiwan, R.O.C.
WONC 2003
IEEE Wireless Communications and Networking Conference
17-19 March - New Orleans, LA, USA
WONC2003@ieee.org
CFC 2003
Optical Fiber Communications Conference and Exhibit
25-27 March - Atlanta, GA, USA
http://www.osa.org
IM 2003
IFIP/IEEE International Symposium on Integrated Network Management
24-28 March - Colorado Springs, CO, USA
IM2003@ieee.org
INFOCOMM 2003
22nd IEEE International Conference on Computer Communications
30 March–3 April – San Francisco, CA, USA
INFOCOMM2003@comsoc.org
ICC 2003
IEEE International Conference on Communications
11-15 May – Anchorage, AK, USA
ICC2003@comsoc.org
MILCOM 2003
IEEE Military Communications Conference
25-29 October – Boston, MA, USA
MILCOM2003@comsoc.org
GLOBECOM 2003 / IEEE ComSoc EXPO 2003
IEEE Global Communications Conference
1-5 December – San Francisco, CA, USA
GLOBECOM2003@comsoc.org