

G06 QoS FOR MULTIMEDIA AND IP TELEPHONY 1

Tuesday 30 April 2002
13:40 - 15:10
Edison, 5th Floor

Session Chair:

G06-1 Policing Aggregates of Voice Traffic with the Token Bucket Algorithm
M. J. C. Buchli, D. De Vleeschauwer, J. Janssen, G. H. Petit, Alcatel Bell, Belgium

G06-2 Channel Loss and Queuing Loss Tradeoffs in Voice Transmission over ATM Switching Systems

S. B. ZahirAzami, A. Yongacoglu, L. Orozco-Barbosa, A. Ali, University of Ottawa, Canada

G06-3 A General Method for Analyzing and Synthesizing Loss Patterns

Vilho Räisänen, Nokia Networks, Finland Ari Lakaniemi, Nokia Research Center, Finland

G06-4 Orthogonal Layered Multicast: Improving the Multicast Transmission of Multimedia Streams at Multiple Data Rates
M. Novaes, P. Westerink, C. Codella, IBM T. J. Watson Research Center, USA

G07 QoS FOR IP TELEPHONY (2)

Tuesday 30 April 2002
15:30 - 17:00

Edison, 5th Floor

Session Chair: Ajay Joesph, *IBasis, USA*

G07-1 Assessing Network Readiness for IP Telephony

M. Bearden, L. Denby, B. Karaçali, J. Meloche, D. T. Stott, Avaya Labs Research, USA

G07-2 Perceived Speech Quality Prediction for Voice over IP-based Networks

Lingfen Sun, Emmanuel C. Ifeachor, University of Plymouth, UK

G07.3 Performance Comparison between VBR Speech Coders for Adaptive VoIP Applications

F. Beritelli, S. Casale, G. Ruggeri, University of Catania, Italy

G07-4 A Passive Method for Monitoring Voice-over-IP Call Quality with ITU-T Objective Speech Quality Measurement Methods
Adrian E. Conway, Verizon, USA

G08 IP TELEPHONY - ISSUES AND TECHNOLOGY

Wednesday 01 May 2002
8:50 - 10:20

Edison, 5th Floor

Session Chair: Elliot Eichen, *Genuity, USA*

Invited Talk - IP Telephony, Convergence and the Regulatory Process

J. Scott Marcus, Federal Communications Commission, USA

G08-1 A Framework for 911 Service in a PBX LAN

Karthik Venkataraman, David Johnston, Deep Medhi, University of Missouri at Kansas City, USA

G08-2 A Platform Architecture to Support the Deployment of Distributed Applications
Tonghong Li, Andreas Hoffman, Marc Born, Ina Schieferdecker, GMD FOKUS, Germany

C11 VoIP AND QoS MANAGEMENT, A JOINT SESSION WITH COMMUNICATIONS QoS AND RELIABILITY

Wednesday 01 May 2002
10:40 - 12:10

Carnegie, 5th Floor

Session Chair: Jergen Quittek, *NEC Europe, Germany*

C11-1 End-to-End Measurement Based Admission Control for VoIP Networks

Kenichi Mase, Yuichiro Toyama, Niigata University, Japan

C11-2 Characterizing Packet Audio Streams from Internet Multimedia Applications

Chen-Nee Chuah, University of California at Davis, USA, Randy H. Katz, University of California at Berkeley, USA

C11-3 TCP-Friendly Transmission of Voice over IP

F. Beritelli, G. Ruggeri, G. Schembra, University of Catania, Italy

C11-4 Architecture and Design of an Enhanced H.323 VoIP Gateway

T. Dagiuklas, P. Galiotos, INTRACOM S.A., Greece

H NEXT GENERATION INTERNET

Technical Program Committee

Co-Chair: Stan Moyer, *Telcordia Technologies, USA*

Co-Chair: Michael Devetsikiotis, *North Carolina State University, USA*

Alagan Anpalagan, *University of Toronto*
S.-H. Gary Chan, *Hong Kong University of Science and Technology*

Ted Faber, *USC Information Sciences Institute*
Nelson Fonseca, *State University of Campinas, Brazil*

David Harle, *University of Strathclyde, Scotland*
Bassam Hashem, *Nortel Networks*

Mohammad Ilyas, *Florida Atlantic University*
Muhammad Jaseemuddin, *Nortel Networks*

Sung-Ju Lee, *HP Labs*
Pascal Lorenz, *University of Haute-Alsace, France*

Amitabh Mishra, *Virginia Polytech*
Vishal Misra, *University of Massachusetts*

Tim Moors, *Polytechnic University*
Jogesh Muppala, *Hong Kong University of Science & Technology*

Eric Nahum, *IBM Watson Research*
Algirdas Pakstas, *University of North London*

Symeon Papavassiliou, *New Jersey Institute of Technology*

Elizabeth Royer, *UC Santa Barbara*

Behcet Sarikaya, *Alcatel USA*

Ray Sundararaman, *Lucent*

Joe Touch, *USC Information Sciences Institute*

Sponsoring Technical Committees:

Communications Systems Integration and Modeling, Computer Communications, Communications Software, Personal Communications

H01 NEXT GENERATION INTERNET BANDWIDTH MANAGEMENT

Monday 29 April 2002
8:50 - 10:20

Alvin, 5th Floor

Session Chair: Michael Devetsikiotis, *North Carolina State University, USA*

Invited Talk: Next Generation Internet: What's Missing?

Will Leland, *Telcordia, USA*

H01-1 A New Bandwidth Sharing Scheme for Non-Responsive Multicast Flows
Fethi Filali, Walid Dabbous, *INRIA, France*

H01-2 An Early Bandwidth Notification (EBN) Architecture for Dynamic Bandwidth Environment

Debojyoti Dutta, *USC / ISI, USA*, ongguang Zhang, *HRL Laboratories, L.L.C., USA*

H01-3 Prefix Caching Assisted Periodic Broadcast for Streaming Popular Videos
Yang Guo, Don Towsley, *University of Massachusetts at Amherst, USA*, Subhadrata Sen, *AT&T Labs-Research, USA*

H02 NEXT GENERATION INTERNET PERFORMANCE

Monday 29 April 2002
10:40 - 12:10

Alvin, 5th Floor

Session Chair: Tim Moors, Polytechnic University, USA

H02-1 Efficient Simulation of Delay in TCP/IP Networks Using DPR-based Splitting
Ozdemir Akin, J. Keith Townsend, North Carolina State University, USA

H02-2 On the Computation of End-to-End Delay in a Network of GPS Servers with Long-Range Dependent Traffic
Nelson L S da Fonseca, Flavio de M Pereira, Dalton S Pereira, *State University of Campinas, Brazil*

H02-3 On the Transition to a Low Latency TCP/IP Internet
Bartek Wydrowski, Moshe Zukerman, The University of Melbourne, Australia

H02-4 On The Effectiveness of Push-out Mechanisms for the Discard of TCP Packets
Kleber V Cardoso, José F de Rezende, *Federal University of Rio de Janeiro, Brazil*, Nelson L S da Fonseca, *State University of Campinas, Brazil*

H03 NEXT GENERATION INTERNET SERVICE INFRASTRUCTURE

Monday 29 April 2002
13:40 - 15:10

Alvin, 5th Floor

Session Chair: Stan Moyer, *Telcordia Technologies, USA*

Invited Talk - **Open Platforms for Service Delivery**
Dave Marples, *Open Services Gateway Initiative, UK*

H03-1 A Unifying Infrastructure for Internet Services
Jaideep Chandrashekar, Zhi-li Zhang, University of Minnesota, USA, Y. Thomas Hou, Fujitsu Laboratories of America, USA

H03-2 Feature Interactions in Services for Internet Personal Appliances
Mario Kolberg, Evan H. Magill, University of Stirling, UK, Dave Marples, Simon Tsang, Telcordia Technologies, USA

H03-3 Name-to-Address Translation Algorithms for Zeroconf Networks
Cuneyt Akinlar, A. Udaya Shankar, University of Maryland, USA, Sarit Mukherjee, David Braun, Panasonic Technologies Inc., USA

H04 NEXT GENERATION INTERNET OPERATIONS AND MANAGEMENT

Monday 29 April 2002
15:30 - 17:00

Alvin, 5th Floor

Session Chair: Stan Moyer, *Telcordia Technologies, USA*

H04-1 Usage-based Pricing Law to Charge IP Network Services with Performance Guarantees
Nicola Blefari-Melazzi, Dario Di Sorte, Gianluca Reali, University of Perugia, Italy

H04-2 Router-Assisted Layered Multicast
ZaiChen Zhang, Victor O. K. Li, The University of Hong Kong, China

H04-3 Selection of Candidate Cores for Core-based Multicast Routing Architectures
Hwa-Chun Lin, Zhe Hong Lin, National Tsing Hua University, Taiwan

H04-4 Enabling Dynamic Market-Managed QoS Interconnection in the Next Generation Internet by a Modified BGP Mechanism
Junseok Hwang, Syracuse University, USA, Jörn Altmann, Huw Oliver, Alfonso Suarez, Hewlett-Packard Laboratories, UK

K07 Ad-Hoc WIRELESS NETWORKS: ROUTING, JOINT SESSION WITH WIRELESS NETWORKING THEORY

Tuesday 30 April 2002
13:40 - 15:10

Alvin, 5th Floor

Session Chair: Gianluca Mazzini, *University of Ferrara, Italy*

K07-1 Scalable Ad Hoc Routing in Large, Dense Wireless Networks Using Clustering and Landmarks
Xiaoyan Hong, Mario Gerla, Yunjung Yi, Kaixin Xu, University of California at Los Angeles, 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 University, Taiwan, Yu-Chee Tseng, National Chiao-Tung University, Taiwan, Kuei-Ping Shih, Tamkang University, Taiwan

K07-3 The Selective Intermediate Nodes Scheme for Ad Hoc On-Demand Routing Protocols
Yunjung Yi, Mario Gerla, *University of California at Los Angeles, 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

C05 PROVISIONING AND DIMENSIONING, A JOINT SESSION WITH COMMUNICATIONS QoS AND RELIABILITY

Tuesday 30 April 2002
10:40 - 12:10

Carnegie, 5th Floor

Session Chair: Stan Moyer, *Telcordia Technologies, USA*

C05-1 Network Services Definition and Deployment in a Differentiated Services Architecture
E. Nikolouzou, S. Maniatis, P. Sampatakos, H. Tsetsekas, I. S. Venieris, National Technical University of Athens, Greece

C05-2 Path Provisioning for Service Level Agreements in Differentiated Services Networks
S. K. Biswas, Tellium, Inc., USA, S. Ganguly, R. Izmailov, NEC USA, Inc., USA

C05-3 Game Theoretic Analysis of Network Dimensioning Strategies in Differentiated Services Networks
Péter Füzési, Attila Vidács, Budapest University of Technology and Economics, Hungary

C05-4 Efficient Heuristic Algorithms for Finding Multiconstrained Paths
Jingchao Chen, DongHua University, China

K10 PERFORMANCE IN WIRELESS NETWORKS, JOINT SESSION WITH WIRELESS NETWORKING THEORY

Tuesday 30 April 2002
15:30 - 17:00

Odets, 4th Floor

Session Chair: Ljiljana Trajkovic, *Simon Fraser University, Canada*

K10-1 On-Demand TCP: Transparent Peer to Peer TCP/IP over IrDA
Jean Tournilhès, *Hewlett Packard Laboratories, USA*, Luiz 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. Squeo, Politecnico di Bari, Italy