

Table of Contents

Wireless Multimedia Systems

The Impact of Wireless Device Access on Content Delivery Networks	1
<i>Justin C. Denney, Nicholas J.P. Race (Lancaster University)</i>	
Adaptive Access Regulation for VBR Video Streams	16
<i>Gundula Dörries (Fraunhofer Institute IMK), Peter Martini (University of Bonn)</i>	
Performance Evaluation of Live Video Streaming Service in 802.11b WLAN Environment under Different Load Conditions	30
<i>Yevgeni Koucheryavy, Dmitri Moltchanov, Jarmo Harju (Tampere University of Technology)</i>	
Packetization Scheme for Streaming High-Quality Audio over Wireless Links	42
<i>Jari Korhonen, Roope Järvinen (Nokia Research Center)</i>	

Communication Protocols for Multimedia

Preserving Established Communications in IPv6 Multi-homed Sites with MEX	54
<i>Marcelo Bagnulo, Alberto García-Martínez, Ignacio Soto, Arturo Azcorra, Juan F. Rodríguez Hervella (Universidad Carlos III de Madrid)</i>	
Observations on Equation-Based Estimation of TCP-Compatible Rate for Multi-rate Multicast Scenarios	66
<i>Ivica Rimac, Jens Schmitt, Ralf Steinmetz (Darmstadt University of Technology)</i>	
Smoothing the TCP Rate by Learning the Delay versus Window Size Dependency	78
<i>Ibtissam El Khayat, Guy Leduc (University of Liège)</i>	
KOM ScenGen The Swiss Army Knife for Simulation and Emulation Experiments	91
<i>Oliver Heckmann, Krishna Pandit, Jens Schmitt, Ralf Steinmetz (Darmstadt University of Technology)</i>	

Scheduling Issues

- The Effect of Per-input Shapers on the Delay Bound in Networks
with Aggregate Scheduling 107
*Evgueni Ossipov, Gunnar Karlsson (KTH Royal Institute of Techno-
logy)*
- Scheduling and Quality Differentiation in Differentiated Services 119
Johanna Antila, Marko Luoma (Helsinki University of Technology)

Caching

- Size-Distortion Optimized Proxy Caching for Robust Transmission
of MPEG-4 Video 131
Imed Bouazizi (University of Aachen)
- Design and Performance Evaluation of a Price-Based Cache
Algorithm for Mobile Web Services 143
Chung-Ming Huang, Tz-Heng Hsu (National Cheng Kung University)

Quality of Service Architectures

- Admission Control and Resource Reservation Framework for the
OMODIS QoS Framework 155
Katrine Stemland Skjelsvik, Vera Goebel (University of Oslo)
- Efficient Reservation-Based QoS Architecture 168
*Rui Prior, Susana Sargento, Pedro Brandão,
Sérgio Crisóstomo (University of Porto)*
- Performance Evaluation of the Preemptive Bandwidth
Allocation Protocol 182
*Nawel Chefai, Gregor V. Bochmann,
Nicolas D. Georganas (University of Ottawa)*
- Impact of Network Topology on the Performance of Budget Based
Network Admission Control Methods 195
*Michael Menth, Stefan Kopf (University of Würzburg),
Joachim Charzinski (Siemens AG)*

Novel Communication Services

- Perceptual Network Metaphors: Breaking the Network
Transparency Paradigm 207
*Manuel Oliveira (University of College London),
Jon Crowcroft (Cambridge University)*

Quality Differentiation with Source Shaping and Forward Error Correction	222
<i>György Dán, Viktória Fodor (KTH Royal Institute of Technology)</i>	
Mapping UMTS Bearers to DiffServ PHBs	234
<i>Jonas Olsson, Börje Ohlman (Ericsson Research)</i>	
Enhancing the Coexistence of Unicast and Multicast Sessions in Diffserv Architecture	246
<i>Laurent Fazio, Fethi Filali (INRIA)</i>	
Middleware	
Session Sharing as Middleware Service for Distributed Multimedia Applications	258
<i>Marco Lohse, Michael Repplinger, Philipp Slusallek (Saarland University)</i>	
Evaluation of Middleware for Distributed Objects on Handheld Devices	270
<i>Tom Kristensen (Thales Communications), Lars Preben S. Arnesen, Eirik Valen, Thomas Plagemann (University of Oslo)</i>	
Infrastructure	
Spatio-temporal QoS Pattern Analysis in Large Scale Internet Environment	282
<i>Ilka Miloucheva, Ulrich Hofmann (Salzburg Research), P.A. Aranda Gutiérrez (Telefónica I+D)</i>	
Jungle Issues in Class-Based Routing	294
<i>Marília Curado, Orlando Reis, João Brito, Gonçalo Quadros, Edmundo Monteiro (University of Coimbra)</i>	
Second-Chance Auctions for Multimedia Session Pricing	306
<i>Peter Reichl, Sandford Bessler (Telecommunications Research Center Vienna FTW), Burkhard Stiller (University of Federal Armed Forces Munich / ETH Zurich)</i>	
Efficient Offline Certificate Revocation	319
<i>Jose L. Muñoz, Jordi Forné, Oscar Esparza, Miguel Soriano (Technical University of Catalonia)</i>	
IP Telephony	
Packetization and Silence Influence on VoIP Traffic Profiles	331
<i>Antonio Estepa, Rafael Estepa, Juan M. Vozmediano (Universidad de Sevilla)</i>	

Using Context Information to Avoid Service Interactions in
 IP Telephony 340
*Manuel Görtz, Ralf Ackermann, Andreas Mauthe,
 Ralf Steinmetz (Darmstadt University of Technology)*

Multimedia Applications

cPost-it: Context-Based Information Sharing System 352
*Seiie Jang, Sanggoog Lee (SAIT Ubicomb Lab., Suwon),
 Woontack Woo (KJIST U-VR Lab., Gwangju))*

Content Based Localized Robust Audio Watermarking 364
Wei Li, Xiangyang Xue (University of Fudan)

A Mixed XML-JavaBeans Approach to Developing T-learning
 Applications for the Multimedia Home Platform 376
*Martín López-Nores (Universidade de Vigo), Ana Fernández-Vilas
 (Universidade de Vigo), Rebeca P. Díaz-Redondo
 (Universidade de Vigo), Alberto Gil-Solla (Universidade de Vigo), José
 J. Pazos-Arias (Universidade de Vigo), Manuel Ramos-Cabrer (Uni-
 versidade de Vigo), Jorge García-Duque (Universidade de Vigo)*

A Multimedia, Multichannel, and Personalized
 News Provider 388
*Marco Delato, Alessandra Martelli, Maurizio Martelli (Ksolutions),
 Viviana Mascardi, Alessandro Verri (Università di Genova)*

Encoding

Energy-Scalable Motion Estimation for Low-Power
 Multimedia Applications 400
Seongsoo Lee (Soongsil University)

Pruned Mode Decision based on Variable Block Sizes Motion
 Compensation for H.264 410
Jeyun Lee, Byeungwoo Jeon (SungKyunKwan University)

Author Index 419