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Economics of Converged, Internet-Based Networks

7th International Workshop on Internet Charging
and QoS Technologies, ICQT 2011
Paris, France, October 24, 2011
Proceedings

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Preface

With the appearance of new technologies and new services, the nature of the economic stakes in the ICT (Information and Communication Technologies) sector is continually evolving. An illustration is the soaring number of providers, who base their business models on publicity instead of bandwidth selling. Following the same trends, the power relationships have radically changed in the last decade, between the providers offering connectivity, and those managing services and user identities (content providers, cloud computing providers, social networks).

Therefore, the 7th International Workshop on Internet Charging and QoS Technology (ICQT 2011) is devoted to discussing the most recent approaches, models, and mechanisms in the highly important research area of network economics. The present volume of the Lecture Notes in Computer Science series includes those papers presented at ICQT 2011 — collocated this year with the 7th International Conference on Network and Service Management — taking place on October 24, 2011, in Paris, France and hosted by the Paris Descartes University.

For the success of future QoS-enabled communication services, the emergence of viable regulation policies, business models, pricing schemes, and charging and accounting mechanisms is of paramount importance. In particular, the possibility of providing service guarantees, the efficiency of pricing mechanisms, and the economics of inter-domain services are of utmost urgency. Thus, they determine — in the form of three technical sessions — the core of the ICQT 2011 program. All contributions included in this volume fit perfectly into the general scope of the international ICQT workshop series, which is mainly characterized by the focus on identifying novel service charging solutions, investigating and evaluating their technical feasibility, and consolidating technical and economic mechanisms for enabling a fast, guaranteed, and efficient charging of services. This is of fundamental importance for the future evolution of Internet-based networks.

This year's ICQT followed the already established tradition of a vivid workshop series on charging and QoS technology issues, which started back in 2001 with the first ICQT workshop in the framework of the Annual Meeting of the German Society for Computer Science (GI) and the Austrian Computer Society 2001 in Vienna, Austria. In 2002, ICQT was collocated with the QoSIS 2002 workshop in Zürich, Switzerland, in 2003 with the NGC 2003 workshop in Munich, Germany, and in 2004 again with QoSIS 2004 in Barcelona, Spain. In 2006, ICQT was hosted by the University Institute of Technology (IUT), St. Malo, France together with ACM SIGMETRICS 2006, and in 2009 by the Rheinisch-Westfälische Technische Hochschule (RWTH) in Aachen, Germany, together with the IFIP Networking 2009.

As in the past, ICQT 2011 brought together researchers from the areas of technology and economics in both industry and academia to discuss key improvements and to support further economics in these fields. The combination of micro-economic models, auctions, game theory (cooperative and non-cooperative), peer-provided services, and regulation policies addressed important aspects at the intersection of networking research and business modeling. Thus, ICQT 2011 provided a truly interdisciplinary forum for analyzing topics at the overlap of those areas. Like all of its predecessors, ICQT 2011 consisted of a single-track one-day event, which has proved to be especially suitable for stimulating the interaction between and the active participation of the workshop audience.

In summary, the workshop started with a keynote presentation delivered by Andrew Odlyzko, who is internationally recognized to be one of the most distinguished research fellows in the area. The following three technical sessions included a total of six full papers, which were selected after a thorough review process out of a total number of 18 submissions. The resulting final program demonstrated again the international scope of this workshop series and included papers from Europe, Asia, North America, and South America. The international orientation of ICQT is also reflected in the composition of its Technical Program Committee, whose members again devoted their excellent knowledge together with many hours of their precious time to provide the basis for a highly qualified technical program and, thus, to contribute in an unfailing way to the technical and research success of ICQT.

Furthermore, the editors would like to express their thanks to Patrick Zwickl, the ICQT 2011 webmaster for his excellent work. Special thanks go to the organizers of the CNSM 2011 conference for enabling the collocation of ICQT 2011 with their renowned event, as well as to the local organizers. Finally, all three editors would like to address their thanks to Springer, and especially Anna Kramer, for a very smooth cooperation on finalizing these proceedings. Additionally, special thanks go to the support of the European COST Action IS0605 “Econ@Tel” and their Working Group WG4 researchers.

October 2011

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A set of very detailed and constructive reviews for papers submitted to ICQT 2011 were provided by all ICQT reviewers, corresponding to the full Program Committee members as stated above, and additionally: Ashraf Bany Mohammed, Olivier Bournez, René Golembewski, Michael Grey, László Gyarmati, Emmanuel Hyon, Vijay Kamble, Samson Lasaulce, Peter Reichl, and Sander Wozniak. Therefore, it is with great pleasure that the Program Co-chairs thank all those reviewers for their important work.

Table of Contents

Keynote

Economics, QoS, and Charging in the Next Great Telecom Revolution	1
<i>Andrew Odlyzko</i>	

Session 1: Service Guarantees

Compensation Policies and Risk in Service Level Agreements: A Value-at-Risk Approach under the ON-OFF Service Model	2
<i>Loretta Mastroeni and Maurizio Naldi</i>	
Impacts of Universal Service Regulation for Broadband Internet Services	14
<i>Jeonghoon Mo, Weonseek Kim, and Dongmyung Lee</i>	

Session 2: Evaluation of Pricing Schemes

A Token Pricing Scheme for Internet Services	26
<i>Dongmyung Lee, Jeonghoon Mo, Jean Walrand, and Jinwoo Park</i>	
Exploring User-Provided Connectivity—A Simple Model	38
<i>Mohammad Hadi Afrasiabi and Roch Guérin</i>	

Session 3: Inter-domain Services

Network Bandwidth Allocation with End-to-End QoS Constraints and Revenue Sharing in Multi-domain Federations	50
<i>Isabel Amigo, Pablo Belzarena, Federico Larroca, and Sandrine Vaton</i>	
On the Quantification of Value Networks: A Dependency Model for Interconnection Scenarios	63
<i>Patrick Zwickl, Peter Reichl, and Antonio Ghezzi</i>	

Author Index	75
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