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Network Economics for Next Generation Networks

6th International Workshop on Internet Charging and QoS Technologies, ICQT 2009
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Proceedings

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Preface

Starting with the imminent roll-out of the IP Multimedia Subsystem (IMS) and fourth-Generation networking technology, Next Generation Networks (NGN) are gradually becoming reality, with charging and Quality-of-Service (QoS) issues as two of the key drivers for the evolution toward the convergent all-IP network of the future. Therefore, the 6th International Workshop on Internet Charging and QoS Technology (ICQT 2009) was devoted to discussing the most recent approaches, models, and mechanisms in this highly interesting and important research area.

The present volume of the *Lecture Notes in Computer Science* series includes those papers presented at ICQT 2009—collocated this year with the IFIP Networking 2009 conference—taking place on May 15, 2009, in Aachen, Germany and hosted by the Rheinisch-Westfälische Technische Hochschule (RWTH Aachen).

For the commercial success of future QoS-enabled communication services, the emergence of viable business models, pricing schemes, and charging and accounting mechanisms is of paramount importance. Problems in this domain can only be addressed through a broad interdisciplinary approach linking together a variety of technical and economic perspectives, which are constantly driving a plethora of relevant research topics for application developers, business architects, network providers, service providers, and customers. Within the current trend toward a convergent NGN architecture, competition modeling, pricing mechanisms, and the economics of inter-domain traffic are of specific importance and urgency. Thus, they determined—in the form of three technical sessions—the core of the ICQT 2009 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 convergent all-IP Next Generation Networks.

This year's ICQT followed the already established tradition of an unusually 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 QofIS 2002 workshop in Zürich, Switzerland, in 2003 with the NGC 2003 workshop in Munich, Germany, and in 2004 again with QofIS 2004 in Barcelona, Spain. In 2006, ICQT was hosted by the Universitary Technological Institute St. Malo, France together with ACM SIGMETRICS 2006.

As in the past, ICQT 2009 brought together researchers from the area of technology and economy in both industry and academia to discuss key improvements and to support further progress in these fields. The combination of micro-economic models, auctions, game theoretic approaches, peer-to-peer, and IMS-based charging addresses a highly interesting facet at the intersection of networking research and business

modeling. Thus, ICQT 2009 provided a truly interdisciplinary forum for analyzing topics at the overlapping of those two areas, providing for a unifying framework for all presentations included in the program of ICQT 2009.

Like all of its predecessors, ICQT 2009 provided a single-track and one-day program, which proved to be especially suitable for stimulating the interaction between and the active participation of the workshop audience. Summarized briefly, the workshop started with a keynote presentation delivered by Jim Roberts, 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 nine full papers, which were selected after a thorough reviewing process out of a total number of 26 submissions. The resulting final program demonstrated again the international scope of this workshop series and included papers from Europe and Asia.

The international orientation of ICQT is also reflected in its composition of the 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 the ICQT 2009 webmaster for his excellent work.

Special thanks go to the organizers of the IFIP Networking 2009 conference for enabling the collocation of ICQT 2009 with their renowned event, as well as to the local organization handled in a truly exceptional way by Otto Spaniol and his enthusiastic team, including Martin Krebs, Jan Kritzner, and Alexander Zimmermann.

Finally, all three editors would like to address their thanks to Springer, and especially Anna Kramer, for a smooth cooperation on finalizing these proceedings. Additionally, special thanks go to the support of the European COST Action IS0605 “Econ@Tel” and their WG4 researchers as well as to the FP7 EU-funded project “SmoothIT” (No. 216259).

May 2009

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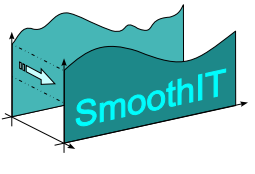

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Reviewers

A set of very detailed and constructive reviews for papers submitted to ICQT 2009 were provided by all of our reviewers, corresponding to the full Program Committee members as stated above and Loubna Echabbi additionally. Therefore, it is with great pleasure that the Program Co-chairs thank all those reviewers for their important work.

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