

Special issue on telecommunications network strategy and planning

cinkler@tmit.bme.hu

Networks 2010 (www.networks2010.pl), the 14th International Telecommunications Network Strategy and Planning Symposium will take place on September 27-30, 2010 in Warsaw, Poland. For this occasion we have edited a Special Issue of the Journal of Infocommunications on Telecommunications Network Strategy and Planning that consists of six selected papers from Networks 2008 (www.networks2008.org), the 13th International Telecommunications Network Strategy and Planning Symposium.

Networks 2008 was a five-day professional and scientific event held from September 28, 2008 in Budapest, Hungary, organized jointly by the Scientific Association for Infocommunications (www.hte.hu) and the Department of Telecommunications and Media Informatics (www.tmit.bme.hu) of the Budapest University of Technology and Economics (BME-TMIT). Altogether 90 papers were presented in 21 technical sessions. 26 countries were represented by authors with the most papers coming from Hungary, then Japan, US, Germany, Canada, Spain and UK in descending order. There were eight keynote talks held by influential telecom experts in four plenary sessions, as well as 11 half-day tutorials in two days. Throughout the conference there was also a related exhibition. The conference had a total of 335 registered participants from 30 countries, including 74 students that took advantage of the special offer to them of free attendance at the tutorials. All the Networks 2008 papers are available through IEEE (ieeexplore.ieee.org), while all the presentations and tutorials are available at: http://www.networks2008.org/online_offline_presentations.

The theme of the conference, which was “Convergence in Progress”, was reflected by the presentations from various perspectives. Not only new scientific methods for network optimisation and planning were presented, but also very practical approaches, experiences and case studies on introducing new solutions, and on the convergence of telecommunications, information and media technologies, as well as of fixed and mobile communications.

For the closing ceremony of the conference three papers were selected for the Best Paper Award. These are the first three papers of our Special Issue. The first, the US paper titled “FTTH Network Economics – Key Parameters Impacting Technology Decisions” performed a thorough analysis of technology and economic aspects in access network deployment.

The second, the French paper titled “Migrating to a Next Generation WDM Core Network” focuses on core networks and suggests a migration strategy towards switched wavelength-division multiplexed networks based on techno-economic analysis.

The third paper by authors from Spain titled “All-optical networks and switching technologies for a 3D videoconference system with the feeling of presence” discusses how an optical network should be designed and what optical technology should be chosen in order to meet strict higher-layer service requirements.

The fourth paper by Japanese authors is entitled “Reducing total call-blocking rates by flow admission control based on equality of heterogeneous traffic”. This teletraffic paper proposes a new connection admission control scheme that guarantees quality of services (low blocking), which is of particular interest for the increasingly popular video services.

The fifth paper by Polish authors titled “Flow optimization in IP networks with fast proactive recovery” proposes and evaluates new methods for recovering IP networks after a failure.

And finally the last, sixth paper, is a joint paper of authors from different countries including Hungary, titled “Network Resilience Requirements and Algorithms for Multicasting and Broadcasting Digital TV” which discusses and evaluates methods for protecting multicast TV services upon a failure to minimise the impact onto the quality experienced by the users.

We hope that our selection of papers clearly represents the main areas of interest of recent Networks conferences. Enjoy reading them!

*Tibor Cinkler,
BME-TMIT, Hungary*
*Oscar Gonzalez-Soto,
ITU Consultant, Spain*
*Gyula Sallai,
BME-TMIT, HTE, Hungary*
*Rati C. Thanawala,
Alcatel-Lucent, USA*
*Andy Valdar,
University College London, UK*

Guest Editors



TIBOR CINKLER (cinkler@tmit.bme.hu) has received M.Sc. ('94) and Ph.D. ('99) degrees from the Budapest University of Technology and Economics (BME), Hungary, where he is currently associate professor at the Department of Telecommunications and Media Informatics (TMIT). His research interests focus on optimisation of routing, traffic engineering, design, configuration, dimensioning and resilience of IP, Ethernet, MPLS, ngSDH, OTN and particularly of heterogeneous GMPLS-controlled WDM-based multilayer networks. He is author of over 180 refereed scientific publications and of 4 patents. He teaches various related courses on networking and optimization at the university, as well as for companies and also gives tutorials at conferences and summer schools. He has been involved in numerous related European and Hungarian projects and he took part in the work of Technical Program Committees of numerous conferences. He was the Technical Program Committee Chair of Networks2008, the International Telecommunications Network Strategy and Planning Symposium, held in Budapest in 2008.



OSCAR GONZÁLEZ SOTO (oscar.gonzalez-soto@ties.itu.int) graduated as Telecomunicación Engineer at the Escuela Superior de Ingenieros de Telecomunicación de Madrid in 1969. Performed master seminars in Strategy for the International Telecom Industry and Business Management Development at the London Business School and Euroforum – INSEAD. Currently he is a Consultant for Strategic Planning and Assessment in the Telecom sector. He is associated to the ITU-BDT for the programs in Network Planning and for the International Centres of Excellence. Previously has been Director of Network Planning and Economics at the Alcatel centre for network design and integration at Paris HQ, after holding different positions as manager for techno-economic evaluations and network planning development (Strategy centre in Brussels), Telecom planning tools, Performance analysis and Teletraffic methodologies (Research centre in Madrid). He participated in the organization of more than 15 international conferences and has published more than 50 papers at international fora. Currently is member of the Advisory Council for the International Teletraffic Congress, of the International Management Committee for the NETWORKS International Symposium and the IEEE.



GYULA SALLAI received MSc degree from the Budapest University of Technology and Economics (BME) in 1968, PhD and DSc degrees from the Hungarian Academy of Sciences (MTA) in 1976 and 1989 resp., all in telecommunications. He was appointed as honorary professor in 1990, as full professor in 1997. His professional life is related to the telecommunications, then the ICT. He was senior researcher in telecommunication network planning, then research director, strategic executive director, later deputy CEO responsible for telecommunication services with the Hungarian Telecom Company; then international vice president, after that executive vice president for the ICT regulation and scarce resource management with the Communication Authority of Hungary. Since 2002 he is the head of the Department of Telecommunications and Media Informatics at the BME. He was the vice-rector of the BME as well. He is also the chairman of the Telecommunication Committee



of the MTA, the president of the Hungarian Scientific Association for Infocommunications (HTE) and a member of the Hungarian Academy of Engineering. Recently his main research area is the ICT management and regulatory issues. He was the general chair of the International Telecommunications Network Strategy and Planning Symposium, held in Budapest in 2008 (Networks2008).

RATI C. THANAWALA is Network Planning, Performance and Economic Analysis Vice President at Bell Labs. Her organization of Bell Labs scientists and engineers works with operators in the communications industry worldwide, and the U.S. Government, supporting advanced technology planning for evolution to Next Generation Networks. The work includes end-to-end network modeling and network design, performance, reliability and operations systems engineering, and business cases for customers and product managers evaluating product and network evolution scenarios. Rati is also a member of the Homeland Security Standards Panel created by the U.S. Department of Homeland Security in cooperation with the American National Standards Institute to align the cutting-edge efforts of the standards community with urgent national priorities of homeland security. Rati has over 20 years of experience in introduction of new technologies into telecommunication networks, leading innovations for new products and services, and managing global organizations across a variety of R&D, Systems Engineering, and Business Management functions. Rati holds a BS in Mathematics from Lucknow University, India and a Masters and Ph.D. in Computer Science from Yale University. She attended the Program for Management Development at Harvard University.



ANDY VALDAR obtained his honours degree in electronic and electrical engineering at Loughborough University of Technology in 1969. Then he joined BT (then the GPO) as an open-competition executive engineer in the Network Planning Department. Some 18 months after joining BT, Andy was awarded a bursary to study full time at Essex University for an MSc in telecommunications systems. On returning to BT he became involved in the pioneering work concerned with the introduction of digital switching in BT's network. In 1977, Andy joined the UN ITU agency for a three-year teaching and course development assignment in India and subsequently undertook ITU teaching assignments in Bangladesh, India, and Swaziland. After returning to the UK in 1980, Andy's career in BT has ranged from network planning, development of international standards and technical strategy, marketing, product management and new product development. During the last nine years of his time in BT he became General Manager of network and technology strategy. In 1999 Andy left BT to take up the role with University College London as Academic Director of the BT Masters Programme, which led to an MSc in Telecommunications Business. He then moved to take over the directorate of BT's other MSc Programme – the BT MSc. Andy is currently an active participant in international telecommunications conferences, chairman of the board of Editors on the Journal of the Institute of Telecommunications Professionals (ITP), and is the author of a recently published best selling text book explaining telecommunications networks.

Infocommunications Journal

Editorial Office (Subscription and Advertisements):
 Scientific Association for Infocommunications
 H-1055 Budapest, Kossuth Lajos tér 6-8, Room: 422
 Mail Address: 1372 Budapest Pf. 451. Hungary
 Phone: +36 1 353 1027, Fax: +36 1 353 0451
 E-mail: info@hte.hu, Web: www.hte.hu

Articles can be sent also to the following address:
 Budapest University of Technology and Economics
 Department of Telecommunications
 Tel.: +36 1 463 3261, E-mail: szabo@hit.bme.hu
Subscription rates for foreign subscribers:
 4 issues 50 USD, single copies 15 USD + postage

Publisher: PÉTER NAGY • Manager: ANDRÁS DANKÓ

HU ISSN 2061-2079 • Layout: MATT DTP Bt. • Printed by: Regisztr Kft.