NETWORK AND
SERVICE MANAGEMENT SERIES

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This is the ninth issue of the series on Network and Service Management, which is typically published twice a year. It was originally published in April and October, but since last year it is published in July and December. The series provides articles on the latest developments in this well established discipline, highlighting recent research achievements, and providing insight into both theoretical and practical issues related to the evolution of the discipline from different perspectives. The series provides a forum for the publication of both academic and industrial research, addressing the state of the art, theory, and practice in network and service management.

An important recent development in the community was the change of chairmanship in the IEEE Committee on Network Operations and Management (CNOM); http://cnom.tssg.org/. Professor James Won-Ki Hong of POSTECH, Korea, stepped down as Chair of IEEE CNOM after serving for two terms of two years each. Under James' active leadership and in conjunction with the respective Chair of the IFIP WG 6.6, the flagship management conferences Integrated Management (IM) and Network Operations and Management Symposium (NOMS) became more valuable to the community, and previously self-standing events such as DSOM, MMNS, and IPOM got integrated into Manweek. After a call for nominations, the election for the new chairs took place last June during IEEE/IFIP IM 2009, and the new CNOM officers elected are the following: Chair, Dr. Marcus Brunner of NEC Europe, Germany; Vice Chair, Prof. George Pavlou of University College London, United Kingdom; Technical Program Chair, Prof. Lisandro Granville of the Federal University of Rio Grande, Brazil; and Secretary, Dr. Brendan Jennings of Waterford Institute of Technology, Ireland. You may note that Prof. Pavlou is also Co-Editor of this series. The new officers plan to continue the organization of successful events such as IM and NOMS, as well as smaller events such as DSOM, MMNS, and others. Key to the success of these events has been the good collaboration with the IFIP TC6 sister organization WG 6.6. Under the leadership of the new officers, this successful collaboration will continue.

Another important development for the community has been the completion of the integration work in the European EMANICS project on Management of the Internet and Complex Services, which came to an end in April 2010. EMANICS was a European Network of Excellence that brought together 13 research institutions active in the management of the future Internet. It included work areas dealing with integration (long-term vision, virtual laboratory, and testbeds), dissemination (a new European conference; see below, electronic dissemination, training and technology transfer, open source initiatives) and joint research activities (scalable, economic, and autonomic management). For more information, visit the project site, http://www.emanics.org/. You will also find there a newsletter with community news, events, and developments. EMANICS has also established a European conference on Autonomous Infrastructure Security & Management (AIMS). This conference will continue after the end of EMANICS, and its fourth instance (AIMS 2010) is taking place at the University of Zurich, Switzerland, together with the 4th International Summer School in Network and Service Management on 21–25 June, 2010; http://www.aims-conference.org/2010/.

The key annual event in this area, which this year was the 12th IEEE/IFIP Network Operations and Management Symposium (NOMS 2010), was held 19–23 April in Osaka, Japan; http://www.ieee-noms.org/2010/. The second key annual event in this area used to be Manweek, which brought together conferences and workshops such as DSOM, MMNS, and IPOM, as well as MACE and NGNM. Last year's Manweek 2009 took place during 26–30 October in Venice, Italy; http://www.manweek.org/2009/, but from this year the Manweek workshops will be amalgamated into the new IFIP/IEEE Conference on Network & Service Management (CNSM 2010) which intends to become another flagship event, complementing IM and NOMS. This year's first CNSM occurrence will take place 25–29 October in Niagara Falls, Canada. We will report on it in the next editorial of this series.

We again experienced an overwhelming interest in the ninth issue, receiving 22 submissions in total. For each of the articles we got at least three independent reviews. We finally selected four articles, resulting in an acceptance rate of 18.2 percent. It should be mentioned that the acceptance

rate for all the previous issues has ranged between 18 and 25 percent, making this series a highly competitive place to publish. We intend to maintain our rigorous review process in future issues, maintaining thus the high quality of the published articles.

The first article, "Autonomic Renumbering for the Future Internet" by Beck, Chrisment, Droms, and Festor, takes the view that IPv6 represents an evolutionary approach toward the future Internet and considers autonomic renumbering in this context, showing that autonomic self-* properties can be considered to make it a success.

The second article, "Self Adjustment of Grid Networks" by Batista and Fonseca, takes the view that grid networks will become effective when they are capable of self-adjusting the resources allocated to the execution of an application, and identifies the characteristics needed to empower grid networks with self-adjustment characteristics.

The third article, "A Context-Aware Policy-Based Management Framework for Delay Tolerant Networks" by Peoples, Parr, Scotney, and Moore, presents a policy-based protocol middleware, the context-aware broker, which autonomously manages deep space networks, and demonstrates the positive cost-benefit impact in an example scenario.

Finally, the fourth article, "Very Important IPs for Mission-Critical Networks" by Yoon, proposes a novel denial-of-service mitigation method for mission- critical networks by building a whitelist of source addresses that are given higher priority under attack conditions, resulting in mission-critical networks that can survive these attacks, with clients being able to access victim sites.

We hope that readers of this issue again find the articles informative, and we will endeavor to continue with similar issues in the future. We would finally like to thank all the authors who submitted articles to this series, and the reviewers for their valuable feedback and comments on the articles.

Biographies

George Pavlou (g.pavlou@ee.ucl.ac.uk) is a professor of communication networks in the Department of Electronic and Electrical Engineering, University College London, United Kingdom. He received a Diploma in engineering from the National Technical University of Athens, Greece, and M.Sc. and Ph.D. degrees in computer science from University College London. His research interests focus on network management, networking, and service engineering, including aspects such as traffic engineering and quality of service management, policy-based systems, autonomic networking, content-centric networking, and communications middleware. He has been instrumental in a number of European and U.K. research projects, and has contributed to standardization activities in ISO, ITU-T, and IETF. He is Vice Chair of IEEE CNOM, and was Technical Program Co-Chair of the 7th IFIP/IEEE Integrated Management Symposium (IM 2001) and the 10th IFIP/IEEE International Conference on Management of Multimedia and Mobile Networks and Services (MMNS 2008).

Aiko Pras (a.pras@utwente.nl) is an associate professor in the Departments of Electrical Engineering and Computer Science at the University of Twente, the Netherlands, and a member of the Design and Analysis of Communication Systems Group. He received a Ph.D. degree from the same university for his thesis, titled *Network Management Architectures*. His research interests include network management technologies, web services, network measurements, and accounting. He is chairing IFIP Working Group 6.6 on "Management of Networks and Distributed Systems" and is research leader in the European Network of Excellence on "Management of the Internet and Complex Services" (EMANICS). He has also been contributing to research and standardization activities as a member of the Internet Research Task Force (IRTF) Network Management Research Group (NMRG). He was the technical program co-chair of the Ninth IFIP/IEEE Integrated Management Symposium (IM 2005) and is a Steering Committee member of the IFIP/IEEE NOMS and IM Symposia.