

## GUEST EDITORIAL

### Network and Service Management Series

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This is the second issue of the new series on **Network and Service Management** that is published twice a year. The series intends to provide 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.

In the last editorial we listed the major conferences, workshops and journals in this area, highlighting the recently established IEEE Electronic Transactions on Network and Service Management (eTNSM). This has recently passed the first major IEEE approval, in which the proposed title, scope and sponsorship were approved, with the IEEE Communications Society being the sole sponsor. The next key milestone is the phase 2 approval that will consider relevant business aspects (e.g. financial projections). This was to take place at the February 2006 IEEE Periodical meeting. The journal currently publishes two issues per year and three issues have been published so far. These are freely available at present at <http://www.comsoc.org/eTNSM>.

Another important development for the community has been the start in the beginning of 2006 of the European EMANICS project on Management of the Internet and Complex Services. This is an EU Network of Excellence that brings together 13 research institutions active in the area of network and service management. It encompasses work areas dealing with integration (long term vision, virtual laboratory and testbeds), dissemination (a new European conference, 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/>.

Finally, it is worth noting that the key annual event in this area, which this year is the 10<sup>th</sup> IEEE/IFIP Network Operations and Management Symposium (NOMS 2006), is to be held April 3-7, 2006 in the Vancouver Convention and Exhibition Center, Vancouver, Canada. This includes a three day symposium with technical paper, application and panel sessions and two days of tutorials by renowned experts in the field, see <http://www.noms2006.org/>.

We again experienced an overwhelming interest for the second issue, receiving 23 submissions overall. All these submissions were subject to 3 independent reviews and we finally selected 5 articles, resulting in an acceptance rate of 21.7%. We intend to maintain this high quality in the future, publishing only articles that make it through our rigorous review process.

The first article "Taxonomy of Conflicts in Network Security Policies" by Hamed and Al-Shaer provides first a good introduction on network security policies and then presents a comprehensive classification of security policy conflicts that can arise both in a single device and also across network devices.

The second article "Designing Scalable On-demand Policy-based Resource Allocation in IP Networks" by Haddadou, Ghamri-Doudane and Agoulmine first proposes an extension to the IETF

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policy-based management framework for dynamic network provisioning. It then considers the performance and scalability of such a system, including an analytical evaluation of the policy-based architecture.

The third article “Protocols for Dynamic Service Negotiation in the Next Generation Internet” by Sarangan and Chen presents a survey of relevant protocols and mechanisms. A desired list of characteristics of such mechanisms is drawn and existing protocols are compared based on the identified characteristics.

The fourth article “Managing Routing Disruptions in Internet Service Provider Networks” presents first a good introduction to inter- an intra-domain routing and describes the causes and effects of routing changes. It then provides network design guidelines and practices for operators to use in order to minimize the impact of relevant disruptions.

Finally, the fifth article “Managing the Configuration Complexity of Distributed Applications in Internet Data Centers” by Eilam, Kalantar, Konstantinou, Pacifici and Pershing examines the challenges in configuring Web applications, reviewing model-based tools available and proposing a new tool that uses model transformation techniques.

We hope that readers of this issue find again 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.

#### **1.1.1.1 BIOGRAPHIES**

GEORGE PAVLOU ([G.Pavlou@surrey.ac.uk](mailto:G.Pavlou@surrey.ac.uk)) is Professor of Communication and Information Systems at the Center for Communication Systems Research, Department of Electrical Engineering, University of Surrey, UK, where he leads the activities of the Networks Research Group. He received a Diploma in Electrical and Mechanical Engineering from the National Technical University of Athens, Greece and MSc and PhD degrees in Computer Science from University College London, UK. His research interests focus on network management, networking and service engineering, including policy-based management, programmable networks, traffic engineering, multimedia service control and object-oriented communications middleware. He has been instrumental in a number of European and UK research projects and has contributed to standardization activities in ISO, ITU-T and IETF. Prof. Pavlou has been the technical program co-chair of the Seventh IFIP/IEEE Integrated Management Symposium (IM 2001).

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