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NETWORK AND SERVICE MANAGEMENT SERIES

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 at 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 at http://www.emanics.org/.

Finally, it is worth noting that the key annual event in this area, which this year is the 10th 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 three independent reviews, and we finally selected five articles, resulting in an acceptance rate of 21.7 percent. 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, first provides a good introduction to 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 Internet Engineering Task Force (IETF) 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 list of desired 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," first presents a good introduction to inter- and intradomain 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 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@surrey.ac.uk) is a professor of communication and information systems at the Center for Communication Systems Research, Department of Electrical Engineering, University of Surrey, United Kingdom, 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 M.Sc. and Ph.D. degrees in computer science from University College London, United Kingdom. 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 U.K. research projects, and has contributed to standardization activities in ISO, ITU-T, and IETF. He was technical program co-chair of the Seventh IFIP/IEEE Integrated Management Symposium (IM 2001).

AIKO PRAS (pras@cs.utwente.nl) is an associate professor in the Departments of Electrical Engineering and Computer Science at the University of Twente, the Netherlands, and member of the Design and Analysis of Communication Systems Group. He received a Ph.D. degree from the same university for his thesis, *Network Management Architectures*. His research interests include network management technologies, Web services, network measurements, and accounting. He has participated in many European and Dutch research projects, such as SURFnet6 RoN, M2C, WASP, and Internet NG. He currently 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 technical program co-chair of the Ninth IFIP/IEEE Integrated Management Symposium (IM 2005).