NOMS 2008

IEEE/IFIP Network Operations and Management Symposium

Pervasive Management for Ubiquitous Networks and Services

Panels Program

	Monday 7 April	Tuesday 8 April			Wednesday 9 April			Thursday 10 April			Friday 11 April
9:00 -10:30	Tutorial & Workshops	Opening and Keynote			Keynotes			Technical Session 12	App. Session 3	Dissertation Digest 1	Tutorial & Workshops
10:30-11:00	Coffee break	Poster Session 1/Coffee break			Poster Session 3/Coffee break			Coffee break (10:40-11:00)			Coffee break
11:00-12:40	Tutorial & Workshops	Technical Session 1	Technical Session 2	Panel 1	Technical Session 7	Technical Session 8	Panel 3	Technical Session 13	Technical Session 14	Panel 5	Tutorial & Workshops
12:40-2:00	Lunch	Lunch			Lunch			Lunch			Lunch
2:00-3:40	Tutorial & Workshops	Technical Session 3	Technical Session 4	App. Session 1	Technical Session 9	Technical Session 10	App. Session 2	Technical Session 15	Technical Session 16	Dissertation Digest 2	Tutorial & Workshops
3:40 - 4:10	Coffee break	Poster Session 2/Coffee break			Poster Session 4/Coffee break			Coffee break			Coffee break
4:10 - 5:50	Tutorial & Workshops	Technical Session 5	Technical Session 6	Panel 2	Technical Session 11	Tools	Panel 4	Dist. Experts Panel & Closing Plenary			Tutorial & Workshops
					Tools demo (5:50 - 7:00)			Outrageous Opinion Session (5:50 - 7:00)			
	Welcome Reception (7:00 - 9:00)				Gala Dinner (7:00 - 10:00)						

Tuesday, April 8, 2008

11:00 - 12:40 **Panel 1: Teaching Network Management: Are we Adequately Preparing the Next Generation? - Chair: Mehmet Ulema**

Lunch

4:10 - 5:50 **Panel 2: Enterprise Mashups and Web 2.0 for Management - Chair: Hani Jamjoom**

Wednesday, April 9, 2008

11:00 - 12:40 **Panel 3: Identification and Classification of Internet Traffic: A Cat-and-Mouse Chase? - Chair: Stenio Fernandes**

Lunch

4:10 - 5:50 **Panel 4: What's IT management really worth to the business? - Chair: Kamal Bhattacharya**

Thursday, April 10, 2008

11:00 - 12:40 **Panel 5: Control and management of session-based services linkage with transport resource in NGN/IMS environment - Chair: Tomohiro Otani**

Panel 1: Teaching Network Management: Are we Adequately Preparing the Next Generation?

Tuesday, April 8, 2008 - 11:00 - 12:40
Organizer: Mehmet Ulema, Manhattan College, USA

Networks have become mission critical in many organizations, and the graduates of CS/EE programs are expected to be involved and play key roles in the management of these networks. However, the current curricula in many universities cover the topic of network management, typically in a lecture or two in a networking or a network design classes. Only a few institutions are offering courses in network and service management.

The distinguished experts assembled for this panel will discuss their visions of the teaching network and service management. This panel intends to take a look at the currents state of network management education and discuss what we should do to make the network management an attractive part of any CS/EE curriculum. The following is a list of some key points that the panel is expected to address:

1. A survey of the current curricula and NM courses
2. Labs, projects, etc., if any, used as part of the NM courses
3. NM courses in Undergraduate vs. Graduate programs.
4. NM specific programs/degrees
5. Enhancement of the existing curricula with respect to NM.
6. What should we do to attract students into this field?

Panel 2: Enterprise Mashups and Web 2.0 for Management

Tuesday, April 8, 2008 - 4:10 - 5:50
Organizers:Dr. Hani Jamjoom and Dr. Nikos Anerousis IBM T.J. Watson Research Center

Mashups are an exciting genre of interactive Web applications that draw upon content retrieved from external data sources to create entirely new and innovative services. They are a hallmark of the second generation of Web applications informally known as Web 2.0. This panel explores what it means to be a mashup, the different classes of popular mashups constructed today, and the enabling technologies that mashup developers leverage to create their applications. Of particular interest are the many opportunities that mashup technology offers for distributed systems management. This includes rapid prototyping of management interfaces, integration with external data sources and services such as geographical mapping, and the use of community knowledge and social networks to perform management tasks. Finally, we will explore many of the emerging technical and social challenges that mashup developers face.

Panel 3: Identification and Classification of Internet Traffic: A Cat-and-Mouse Chase?

Wednesday, April 9, 2008 - 11:00 - 12:40
Organizers: Stenio Fernandes, Federal Center for Education in Technology (CEFET-AL) Brazil, Carlos Kamienski, Federal University of the ABC (UFABC) Brazil

Characterization of Internet traffic has become over the past few years one of the major challenging issues in telecommunication networks. It relies on an in-depth understanding of the composition and the dynamics of Internet traffic, which is essential in management and supervision of the ISP's network. Furthermore, the increased capacity and availability provided by broadband connections has led to a more complex behavior for a typical user, very different from a dial-up user. In general, characterization of Internet traffic from users plays a key role in capacity planning for the infrastructure needed for matching users demand and in proposing new management policies and even personalized pricing structures. There have been some recent efforts on measuring and analyzing Internet traffic. Most of them point out that currently the predominant type of traffic is produced by peer-to-peer (P2P) file sharing applications, which can be responsible for up to 80% of the total traffic volume. In more recent analyses, last year's Video traffic has greatly increased Internet usage, surpassing P2P. Furthermore, the current trend of moving phone calls from the PSTN to the Internet via P2P VoIP applications represents a threat to telephony companies and its effects have not yet been completely understood. However, those previous investigations suffer from known limitations, such as lack of scalability (e.g. in packet-based analysis), loss of information due to traffic summarizations (e.g. in MIB/SNMP byte count analysis), failure to correctly identify the application (e.g., when relying only on protocol types and port numbers) and little comprehension of the user behavior. Most work in this area in recent years focus on scalable traffic identification, based on inference methods (heuristics, information theory, clustering, machine learning, etc) using flow or even packet header information, yet relying on packet payload (signature) for benchmark. The latter has some drawbacks that hinder it to be used as an effective application identification method, such as limited scalability, encrypted traffic and privacy. As the Internet continuously grows in size and complexity, the need of comprehensive understanding of the underlying network traffic becomes evident. There are several benefits of having an in-depth knowledge of the network traffic, such as network capacity planning, traffic engineering, fault diagnosis, application and protocol performance profiling and anomaly detection. However, conducting a sound Internet measurement and analysis study is a difficult undertaking.

This panel brings up the problem of IP traffic analysis and focuses on application identification. This raises a number of questions of how research in this field is organized now and ought to be organized in the future:

- What are the main challenges in developing scalable inference methods for traffic classification, given the ever-changing nature of Internet traffic patterns?
- How to deal with the cat-and-mouse chase between classification techniques and evasion techniques?
- How to deal with the tradeoff between accuracy and the amount of data to analyze? Packet-based or Flow-based techniques?
- Will the research community make available any good open source traffic identification tool? What are the features that such tool should provide to researchers and ISPs?
- Is it better to undertake offline or online processing?
- If there are legal issues regarding access to packet payload, how to cope with this?
- Are the new approaches (e.g., pattern-recognition, sampling, clustering) effective?

Panel 4: What's IT management really worth to the business?

Wednesday, April 9, 2008 - 4:10 - 5:50

Organizer/Chair:Dr. Kamal Bhattacharya, IBM T.J. Watson Research Center

Striving towards a model for IT organizations to be treated as a business organization is a lofty goal that has not (yet) materialized and needs to be thoroughly challenged. IT organizations have been characterized as fragmentized capital asset administrators and the death of corporate IT has been predicted with the advent of consolidation technologies. However, reaching a mature utility model is still far ahead and it is questionable that we truly understand the business value of a consolidated IT model.
In this panel we want to discuss the following questions: What is the business value of managing networks and IT systems and how do we measure it? How do we measure the return on investment of costly IT solutions that promise to streamline costly IT operations?
Is IT Service Management a viable solution or an over-engineered hype? What is more important, providing IT managers more visibility into business decisions or enabling business more transparency into IT services?
What is the role of promising consolidation technology trends such as virtualization or Web2.0 for IT management? Whereas we know about the potential reduction of energy costs through virtualization, will be reduce service management costs and will IT organizations facilitate a competitive advantage for the business through consolidation technologies or service composition?

Panel 5: Control and management of session-based services linkage with transport resource in NGN/IMS environment

Wednesday, April 9, 2008 - 11:00 - 12:40

Organizer: Tomohiro Otani, KDDI R&D Laboratories, Inc., Japan

Recently, session-based services such as VoIP, video and so on are emerging and enabled by mainly SIP. On the other hand, QoS guaranteed transport network is envisioned thanks to L2/L3 network technology evolution such as MPLS Diffserv-TE. The challenge is how to control and manage such services and network smoothly and dependably in NGN/IMS environment. In this panel session, panelists present their view on standardization, development status and issues of control and management.

(1) Service providers' requirements for future attractive services.
(2) Standardization activity in various organizations.
(3) Enabling technologies of network management.