
Global Communications Newsletter

June 2002

A Report on Salah Aidarous' South America Distinguished Lecturer Tour Rio de Janeiro, São Paulo, and La Paz March 15-25, 2002 By Salah Aidarous

This DLT has been planned since early 2001. However, it took a year to be held due to the change of ComSoc president and executives. The attendance was surprisingly high, due to the good publicity by chapter chairs via Web and email. The attendees represented a wide selection of both industry and academia. Service providers, equipment suppliers, software suppliers, professors, and students were represented, and the discussions covered technical, business, and related aspects. The presentations in Rio de Janeiro, São Paulo, and Campinas were on "Evolution to 3G Wireless: The Reality versus Expectations." In La Paz, in addition to a talk on 3G, a presentation on "Challenges in Evolving to IP-Based Global Networks" was also given. From the discussions and comments during the presentations and after them, it was clear that the objectives of the DLT were met. The audience was excited with the rapid changes in the wireless field and its impact on our lives.

Rio de Janeiro

The talk was held in Fundação Getúlio Vargas (FGV), downtown Rio. FGV is equipped with LCD projectors and PCs (it usually hosts M.B.A. programs). Attendance was excellent, even with the difficulty of parking in downtown Rio. There were over 40 attendees who made very interesting remarks and questions that made the session last one hour longer than planned.

There were a lot of comments and questions on the direction of 3G in the market. Due to the current economic situation and service providers' conservative policies, 3G will experience further delays in implementation and deployment. Also, many service providers may try to enhance 2G or 2.5G and wait for 3G business rather than jump too soon. A lot of questions dealt with real experiences like Japan's DoCoMo iMode service and FOMA.

São Paulo

Due to the expected large number of attendees, the talk was planned to take place in the auditorium of the Polytechnic School, University of São Paulo. About 100 attendees were there, most of them students. This created a good arena for discussions.

One question raised by the attendees was "whether it is

pragmatic, from the point of view of current economic situation, to focus on 2G and 2.5G instead of devoting all the effort to move to 3G." Another related question was "if we move to 3G, who will be motivated to build applications for 2G and 2.5G?"

Campinas

This talk was organized in CPQD (the equivalent to Telcordia in Brazil). The talk attracted more than 80 attendees from local industries and the University of Campinas. The discussions were very interesting, and the focus was on potentially successful implementations of 3G and services to be delivered that could not be provided with 2G and 2.5G. Another question dealt with the situation of overpopulated world regions, like Asia and South America, and their needs for basic services (e.g., dial tone) before 3G.

La Paz

This was the first DLT for the Bolivian Chapter, and they were well prepared for it. Giving a talk at 10,000 ft high is something special. The talk was arranged in Hotel Radisson, and it was divided between the morning and the afternoon to allow broad audience participation in the discussion of several topics. There was a 20-minute video on the IEEE and its chapters in South and Central America before the talk to promote institute membership. This was accompanied with a display of the different publications and membership forms. There were about 100 participants (half of them were students) attending the two talks. The talk was publicized in the local newspaper, and by direct emails to members and telecom organizations. This helped to draw attendees from other cities. There was also a good number of student volunteers to facilitate logistics for the event to make it run efficiently.

In the morning IP session, there were many questions on VoIP: commercial deployment, profitability, and broadband services offering (e.g., VOD, videoconferencing). In the afternoon 3G session, there were many questions on the types of applications and services that can be provided. However, the most relevant ones concerned the best strategy to follow: to exploit the current 2G/2.5G or to move directly to 3G (if investment is available).

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Management for eBusiness in the New Millennium: A Report on APNOMS 2001

By G. Chen, V. Varadharajan, P. Ray, and P. Zuluaga, Australia

The fifth Asia-Pacific Network Operations and Management Symposium, APNOMS 2001, was held September 26–28, 2001 in Sydney, Australia. Started in 1997, APNOMS has provided an important platform for academics, researchers, and the telecommunication industry at large in the Asia Pacific region to exchange their research results, and discuss and advance all aspects of telecommunications management. In the past few years, these annual symposia have become truly international events, attracting audiences and presenters from over 10 countries. APNOMS 2001 was the first symposium to be held outside of Korea (1997 [1], 1999 [3]) and Japan (1998 [2], 2000 [4]). The Symposium was held only two weeks after the September 11 terrorist attacks in New York. Although some countries and institutions implemented certain travel restrictions which resulted in cancellations, APNOMS 2001 still attracted 141 registered delegates (112 attendees) representing the academic, R&D, service provider, and vendor communities from 14 countries. Its program covered keynote speeches, tutorials, special sessions, technical sessions, poster sessions, a distinguished expert panel, and vendor exhibitions.

The theme of this three-day symposium was “Management for eBusiness in the New Millennium.” Powered by the Internet, broadband, and wireless communications, ebusiness is rapidly transforming our society, our culture, and our everyday life. It is also rapidly changing the strategy, mission and business priorities in the IT and telecommunications industries. Customer information and relationship management are becoming crucial elements for successful ebusiness.

Alternative business models have to be sought to satisfy new service delivery needs and paradigms. We are beginning to see the fusion of Internet, information and communication technology, multimedia services, and entertainment applications. At the networking level, we are witnessing the integration of voice and data over IP-based networks, and the development of mobile and wireless and high-speed networks. New software infrastructures are being developed to address the issues of interoperability, integration, and application extensibility. Open standards are playing a crucial role in technology development. Security and trust issues are becoming significant when ebusiness transactions are conducted over the Internet, telephone, smartcards, and wireless devices. These developments will continue to occur at an accelerated pace in the 21st century, and operation and management of networks, services, and ebusiness applications will be even more critical to timely business decision making and service delivery.

With this background, this symposium focused on the theme of management of ebusiness. The symposium not only provided a forum for discussing general ebusiness challenges in the ICT industry, but also for discussing and sharing specific regional experiences in managing ebusiness.

The first day of the Symposium consisted of six tutorials covering different aspects of ebusiness management. Richard Thornton of Telstra, Australia, presented on “Trends and New Innovations in Telecommunication Networks and Services.” The tutorial reported the dramatic change in the telecommunications landscape in recent years from both business and customer perspectives. He demonstrated that the change is largely due to new technology, services, applications, and particularly new business models and revenue streams. Tae-Myung Chung of Seongkyunkwan University, Korea, presented “Information Security Technology for eBusiness.” The tutorial covered in detail different security solutions, strategies, models, functionalities, applications, and research trends for security in electronic commerce. Michael Richter of Telstra, Australia, presented “eTOM: An eService Architecture from TMF.” The tutorial introduced in detail the TeleManagement Forum’s eTOM as an ebusiness enhancement of TMF’s Telecoms Operations Map. The tutorial also presented Telstra’s experience with eTOM as part of the ebusiness deployment framework. Yoshito Tobe of Keio University, Japan, presented a very interesting session on “Management of Information Appliances.” The tutorial addressed various issues in managing information appliances, especially home appliances, as an important aspect of ebusiness. Salah Aidarous of NEC America, United States, presented a session on “Management of IP-Based Networks and Services.” The tutorial examined the technology triggers and challenges service providers are facing to offer IP-based services with their current network infrastructure while maintaining their competitiveness. Finally, Tom Jepsen of Fujitsu Network Communications, United States, presented a session on “Storage Area Networks (SAN) for the Enterprise: Architecture, Applications and Protocols.” The tutorial described the increased role of SANs in the enterprise environment to support ebusiness solutions. All tutorials were well attended, and there were many interesting discussions between the audience and speakers in and outside the sessions.

Four keynote speakers presented on the second and third

CCW 2001

The 16th IEEE Annual Computer Communications Workshop (CCW '01) workshop was held in Charlottesville, Virginia, October 14–17. Continuing the tradition of CCW, the workshop had a technically strong invited program on recent results and developments in wired and wireless communication networks.

Even though the conference took place just one month after the terror attacks in New York City and Washington, the conference had a regular attendance. However, several planned speakers had to cancel their trips, and they were missed.

The conference program had sessions on content delivery networks (chair: Steven Low), scalable wide-area content distribution (chair: Kevin Almeroth), optical networks (chairs: Martin Reisslein, Joe Bannister), sponsored research in networking (chair: John Daigle), wireless networks (chair: Ness Shroff), QoS and constrained-based routing (chair: Lixin Gao), recent advances in traffic analysis and performance evaluation (chair Marwan Krunz), Internet topology and traffic characterizations (chair: Sugih Jamin), and recent developments of TCP (chair: Sally Floyd). Malathi Veeraraghavan organized a panel on the role of packet switching and circuit switching in future networks. The social event featured a tour of the historic grounds of the University of Virginia, followed by a tasting of Virginia wines and the conference dinner. The workshop took place at the peak of the fall foliage, and conference participants took the opportunity to visit the beautiful Blue Ridge Mountains in the Charlottesville vicinity.

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Management for eBusiness in the New Millennium: A Report on APNOMS 2001/(cont'd)

days of the conference. Hirokazu Ohnishi of NTT, Japan, presented a talk entitled "R&D Vision towards Network and Platform Enabled Informative Ambience Society." Neville Roach, Chairman of Fujitsu Australia, gave a speech entitled "The Impact of Information and Communication Technologies on Business and Society." The speech focused on challenges and impacts ebusiness is bringing to society, such as the digital divide and social justice. Peter Moore of Microsoft, Australia, presented his speech "Realizing the Value of the Internet," in which he shared with the audience Microsoft's ebusiness strategy. Finally, Young-Hyun Cho of Korea Telecom shared with the audience the experiences and future of ebusiness in Korea in his talk entitled "Service Management under the e-Biz Environments."

Following the tradition of APNOMS, a special second-day session was conducted with four speakers: Kouzou Sakae (NTT DoCoMo, Japan), Soo-Sung Jung (KT ICOM, Korea), Chris Philips (CiTR, Australia), and Kaiquan Chen (SECIC-CHC, China). These invited speakers from different countries in the Asia Pacific region shared with the audience their ebusiness experience, lessons, strategy, and future outlook in their own countries.

The main body of the Symposium consisted of eight technical sessions and one poster session. From a total of 80 paper submissions, 40 were selected for technical presentations in the technical sessions and 14 for poster session presentation. These papers represented the latest results of research and development in management of ebusiness, covering major research areas including mobile management, OSS platform and architecture, IP management, implementation experiences and case studies, Web-based management, QoS and fault management, security management, and SLA management.

The vendor exhibition program provided a platform for

vendors to exhibit their latest tools, platforms, products, and systems to support ebusiness. This program also provided an excellent environment for researchers and academics to interact with vendors. Seven companies including Agilent Technologies, EMC2 Corporation, ETRI (Korea), Fujitsu Limited, GAUPI Info-Comm. Inc. (Korea), Korea Telecom, and NTT Comware Corporation participated in the vendor exhibition program.

The APNOMS 2001 three-day event ended September 28 with a very interesting distinguished experts panel on the topic of "Management for eBusiness in the New Millennium." Chaired by Vijay Varadharajan (Microsoft Chair Professor, Macquarie University, Australia), four panelists, Kazunori Shimamura (Kochi University of Technology, Japan), Seong-Beom Kim (Korea Telecom, Korea), Graham Chen (CiTR, Australia), and Il-Soo Ahn (Samsung Electronics, Korea), discussed and debated a large range of issues the industry is facing in managing growing ebusiness. These issues included the market and customers needs, the challenges in technology, standards, tools and platforms. The panelists also discussed the impact of global technology sectors downturn to the future of eBusiness and the need to seek the right business models and new revenue streams. The audience also participated in discussion and debate throughout the session.

APNOMS 2001 was a very successful symposium. It was well attended, and the feedback on all aspects of the conference organization (in particular the technical program) was very positive. It contributed to the transformation of APNOMS into a very important international symposium with a very strong focus on characteristics of the Asia Pacific region, the area with strongest growth in all aspects of tele-
(Continued on next page)

The 4TH IEEE/IFIP International Conference on Management of Multimedia Networks and Services (MMNS2001)

By Ehab al-Shaer and Giovanni Pacifici

The IFIP/IEEE International Conference on Management of Multimedia Networks and Services 2001 was the fourth in its series aimed at stimulating technical exchange in the field of management of multimedia networking. The aim of this conference is to provide a forum for exploratory research and practical contributions from researchers all over the world. A total of 106 papers were submitted to the conference, from over 30 different countries in North America, Europe, South America, the Middle East, and the Far East, of which only 23 were accepted as full papers and 6 were accepted as short/position papers. MMNS 2001 was hosted by the School of Computer Science and the Multimedia Networking Research Laboratory at DePaul University, Chicago, Illinois. There were two half-day tutorials, one on virtual private networks by Raouf Boutaba of the University of Waterloo, and one on IP service provisioning and traffic engineering by Masum Hasan of Cisco. The MMNS 2001 technical program had seven sessions that covered a variety of research topics focused on managing and deploying multimedia on the Internet: Multimedia Traffic Streaming, Wireless Multimedia, QoS Management, Fault Management, Agents for Multimedia Management, and Multimedia Service Management. The program also featured two poster sessions and two panel discussions. Each of the two panel sessions, the

Future of Internet Quality of Service and Resource Management of Wireless Multimedia, included four experts from the industry and the academia. The MMNS 2001 keynote speaker was David Hutchison. Professor Hutchison's talk addressed future directions for monitoring and managing the Grid which is foreseen as the next-generation network infrastructure for science, e-business, and ubiquitous computing services. MMNS 2001 also had two invited speakers, Gautam Kar and Andrew Campbell. Dr. Kar discussed fault determination on distributed systems, and Professor Campbell presented a programmable network architecture that spawns customized services on demand.

In addition to the 86 on-site attendees of the conference, many others attended MMNS 2001 over the Internet, via real-time broadcast over the Mbone. The attendees enjoyed the terrific weather and social events featured during MMNS 2001 (e.g., the conference opening reception, Art Institute tour, Navy Pier adventures, and the Halloween Banquet).

More information about MMNS 2001, including audio/video session streaming of the talks/presentations, soft copy of the proceedings, and author/speaker information can be found at the MMNS2001 Web site: <http://www.mnlab.cs.depaul.edu/mmns2001>.

A First Wireless Applications Workshop sponsored by the IEEE Communications Society in INT – Paris

By Hossam Afifi and Djamal Zeglache, France

The INT (National Institute in Telecommunications, France) has successfully organized the first annual Workshop on Wireless Applications (ASWN).

The main idea behind launching this event was to give a large number of researchers the possibility to meet and discuss very specific problems in a specialized workshop. This effort was fruitful and the workshop was attended by more than 50 participants with 23 papers. A second event with full IEEE ComSoc sponsorship will be held again in Paris in 2002 before launching the workshop worldwide. We hope to increase even more the workshop attendance by targeting specific wireless domains.

The ongoing evolution in computer, telecommunications, and wireless networks brings a new set of challenges to the information and communications industry. A trend toward the convergence of these industries with such different historical backgrounds and competing technical philosophies is clearly and hopefully taking shape. There are nonetheless many challenges to overcome before convergence can be achieved.

The overwhelming progress in wireless technology offers nowadays data access through a diversity of radio access networks. Cellular radio networks will coexist with wireless local area networks and ad hoc networks, and each technology will provide a set of advantages for indoor and outdoor information services. Managing this diversity of technologies, improving interoperability and performance, will remain challenging tasks for years to come.

In such a heterogeneous context, there is a need for unifying network management and introducing open service architectures to ease the development of new applications and services. AAA aspects such as accounting for multiple media access and QoS profiling must also be introduced to enable multimedia service offers, service management, and service control over the wireless Internet. Security and content protection are needed to foster the development of new services, while adaptable applications for variable bandwidth and variable costs will open new horizons for ubiquitous communications.

Choosing Paris for the first and second editions is due to the strong presence of wireless networks manufacturers, European wireless standardization bodies, and application designers and wireless services customers.

DISTINGUISHED LECTURER TOUR/(Cont'd from page 1)

Summary

The DLT was very successful due to good advanced planning, chapter publicity, and good coordination between them. It was a good opportunity to attract students to ComSoc and its activities.

Finally, the efforts of Jorge Hedderwick, Silvio Barbin, José Apolinário, and Sandra Hidalgo were the key to making this DLT a success.

Recommendations

It is important to recognize the outstanding effort of Region 9 Chapters' Chairs with limited resources in the current hard economic situation. These Chapters do not have the industry support usually available for U.S. Chapters, and may need ComSoc special support to survive and maintain a minimum level of activities.

REPORT ON APNOMS 2001/(Cont'd from page 3)

communications and ebusiness industry.

APNOMS 2002 will be held September 25–27 2002 at Jeju Island, Korea. For more information, please visit <http://dpmn.postech.ac.kr/conf/apnoms2002>.

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References

- [1] James W. Hong, "Toward Global Network Management," *J. Net. and Sys. Mgmt.*, vol. 6, no. 1, March 1998, pp. 91–93.
- [2] M. Ejiri, J. T. Park, H. Okazaki, and J. W. Hong, "Managing the New Telecommunications Paradigms: A Report on APNOMS '98," *J. Net. and Sys. Mgmt.*, vol. 6, no. 4, Dec. 1998.
- [3] Y. H. Cho, H. Tokunaga, J.W. Hong and T. Chujo, "Meeting the Challenge in End-to-End Service Management: A Report on APNOMS '99," *J. Net. and Sys. Mgmt.*, vol. 7, no. 4, Dec. 1999.
- [4] Tomo Taniguchi, "A Report on APNOMS 2000," *Global Communications Newsletter, IEEE Commun. Mag.*, vol. 39, no. 5, May 2001.

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