Global
Communications
Newsletter

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IEEE INFOCOM

By Harvey A. Freeman, INFOCOM Standing Committee Chair

IEEE INFOCOM was started in 1982 as the first conference on computer communications to be jointly sponsored by the IEEE Computer Society and the IEEE Communications Society, the two largest constituent societies of the IEEE. In the Computer Society, Local Area Networks and the ARPAnet (the precursor to the Internet) were attracting a great deal of research interest among computer scientists. In the Communications Society, the old-line telephone systems researchers were finding that wide area networks and PBX-based data handing systems were hot topics. This conference was among the first to recognize the convergence of all of these topics, a notion taken for granted today.

IEEE INFOCOM was chartered to have a Conference Board or Standing Committee to oversee its operation. This nine-member committee was to be composed of three members of the Computer Society, three from the Communications Society, and the past, current, and the next year's General Chair. The functions of the Standing Committee include selecting the sites of future INFOCOMs, selecting the General and Technical Program Chairs for the future conferences, and providing continuity from year to year. This committee meets three times a year at INFOCOM, ICC, and GLOBECOM and its members, by now all of whom have served as either a General or Technical Program Chair of the Conference, also participate in planning meetings held by the current and future conference committees.

The first IEEE INFOCOM General Chair was Harvey Freeman, of HAF Consulting, who is also the Standing Committee Chair and the first Technical Program Chair was Vint Cerf, of MCI and ARPAnet and Internet fame. Almost 200 people attended this first INFOCOM to hear the panels and the 36 paper presentations. Next year's chairs are Bharat Doshi of Lucent Technologies, the General Chair, and Technical Program Chairs Tony Ephremides of the University of Maryland and Satish Tripathi of the University of California at Riverside. The 18th IEEE INFOCOM will be held in New York City, 21–25 March 1999.

In keeping with the IEEE's new guidelines about major international conferences being held outside North America, INFOCOM 2000 will be held in Tel Aviv, Israel. INFOCOM '97 was held in Kobe, Japan. The Standing Committee's decision to hold INFOCOM outside of North America every third year means that we are already looking at potential sites for INFOCOM 2003. Several European and Asian locations are currently under consideration.

INFOCOM has come a long way since 1982. There were 850 papers submitted for INFOCOM '98's 152 paper slots, the most ever submitted. For '99, the number submitted has decreased, but we expect that the quality has improved even more as people look to INFOCOM as the place to present their latest work. Attendance has increased to over 700 this year, but the efforts of the Conference Committees have enabled the attendees to still feel the closeness and camaraderie established in 1982.

We look forward to seeing the readers of this article at a future INFOCOM. Conference information can be found on our Web page at http://www.comsoc.org/confs/infocom/99

Report from OECC '98

By Hideo Kuwahara and Naohisa Ohta, Japan

The third OECC was held on July 12-16, 1998 at International Conference Hall of the Nippon Convention Center, located in Makuhara Messe, Chiba Japan, approximately 30 minutes east of Tokyo. The OECC is designed be held in the Asian Pacific region every year to provide an international forum for presentations and discussions of significant progresses in research and development, as well as in applications of optical communication systems and optoelectronics. The first OECC was held in Japan in 1996 and the second OECC was held in Korea last year.

The OECC '98 was cosponsored by the IEEE Communications Society and the Electronics Society of the Institute of Electronics, Information and Communication Engineers (IEICE) and was technically cosponsored by IEEE COMSOC/LEOS and Optical Society of America(OSA). The OECC '98 Organizing Committee was co-chaired by Prof. T. Aoyama and Dr. K. Kobayashi.

In the OECC '98, 287 papers were presented in 47 oral and poster sessions, including 17 post-deadline papers and two tutorial papers, In the plenary session, Honorable Guest Speech titled "Devices and Technology Solution for Future Ultra Wide Band Optical Communication" was given by Prof. Jun-ichi Nishizawa, and two plenary talks, "High Capacity WDM Networking: The Technology Evolution of Photonics" by Dr. Herwig Kogelnik, and "Global Megamedia Network for Electrum Cyber Society in the 21st Century" by Dr. Shigehiko Suzuki highlighted the wide views including historical and future evolutions.

Special symposia were organized on the topics of

- Towards the Photonic Networks: Today and Future
- Ultra-large Capacity Optical Memory Technology
- Plastic Optical Fibers and Their System Applications to stimulate research on those active topics worldwide

The OECC '98 gathered 640 participants, including 521 from Japan,

(Continued on page 4)

Southern California's Orange County ComSoc Chapter Knows How to Draw Large Audiences

By Khoi Nguyen, Director of North America Region

One of my goals as Director of the North America Region is to promote information exchanges between ComSoc chapters so that we all can learn from each other's experience. The purpose of this article is twofold. One, it highlights the success formula of one chapter although it was founded only recently. It is my hope that other chapters will benefit from the experience of this Southern California chapter and achieve success on their own. Two, it gives recognition and pays tribute to the dedicated volunteers who are behind their chapter's success. Without dedicated volunteers such as those depicted in this article, no chapters can survive, let alone succeed. I hope other chapters in the North America Region, after reading this article, will come forward and share their own success stories, so that we all become successful in building strong ComSoc chapters all over the globe. My sincere thanks to Dwight Borses for his contribution to drafting this article.

How do you put together top-notch technical programs month after month that consistently draw large audiences? The Orange County (OC), California, Chapter of the Communications Society achieved this result by fostering synergy across computing, signal processing, and communications disciplines. Even with a very small core of dedicated volunteers, the OC ComSoc Chapter regularly draws 50 to 70 engineers to their monthly meetings by working closely with their sister organizations, the Computer and Signal Processing Societies.

The ComSoc OC Section's newest chapter, was formed on 25 October 1995 through petition by the current Chair. With its first meeting in November 1995, held jointly with the Computer Society, on the topic of CDMA Wireless Communications (presented by Qualcomm VP Richard Kerr), the ComSoc Chapter demonstrated it could bolster technical meeting attendance and fill the geographic void between the Los Angeles and the San Diego ComSoc chapters.

The present OC ComSoc ExCom consists of five officers: Chair Dwight Borses, Vice-Chair Pierre Perra, Secretary Maung Nyeu, Treasurer Albin Gess, and Programs/Publicity Chair Katherine Baum. Chapter Chair Dwight Borses is a Member of the Technical Staff in National Semiconductor's Field Applications Engineering. He is the founder of the IEEE OC ComSoc Chapter and Interim Chair of the IEEE OC Signal Processing Society. Vice-Chair Pierre Perra is a Senior Member of the IEEE and current chair of the OC Section. He, too, has been an ComSoc officer since its founding. Treasurer Albin Gess is a Senior Member of the IEEE, a Fellow of the Institute for the Advancement of Engineering, and Treasurer of the OC Computer Society. Secretary Maung Nyeu has been an active contributor to both the Computer and Communications Society Executive Committees for several years. Maung works as a Senior Engineer for Standard Microsystems. Programs/Publicity Chair Katherine Baum is also OC Computer Society Chair. Currently she is a Technical Writer at Unisys Corporation.

The OC ComSoc received good support from the engineering community. Rockwell Corporation in Newport Beach has provided Quent Cassen, who presented two programs on Standards and Status of Personal Communications Systems, and Michael Henderson, who presented 56 K Modems last year and Splitterless DSL this year. PairGain's Chief Scientist, George Zimmerman, presented Delivering High-Speed Access with xDSL. ARINC's William Stewart presented Employing Advanced Wireless Technology for Management of Mobile and Remote Resources. San Diego based Qualcomm Corporation has provided speakers for several meetings, including the inaugural meeting. Audrey Viterbi presented Turbo Codes in a meeting jointly held with the Signal Processing Society, which proved to be a very popular session. Other meetings with signal processing and communications focus have been led by Communications Engineering Services' President Bernard Sklar, on Use of the Viterbi Equalizer to Mitigate the Effects of Fading in GSM Communications, Berkeley Design Technology's Jeff Biers on Current Directions for DSP Processors, and Aerospace Corporation's Chris Silva on Nonlinear Techniques with application to communications.

OC ComSoc chapter meetings were well attended. Chapter Chair Dwight Borses' talks on "TCP/IP, Cable Systems as Networks" and the recent tutorial "CDMA: Cellular, PCS, and LEO Communications" attracted almost 80 people. But by far the most heavily attended meeting was on "ISDN — An Engineer's Primer," presented by Hollander Associates' President Gary Hollander, which drew an audience of 105. In addition, ComSoc presentations are posted on the Web. The OC ComSoc page can be accessed at http://www.ieee-occs.org/comm.htm. Information on current technical meetings, and details of past meetings back to 1996 can be found at http://www.ieee-occs.org/meetings.html. The OC ComSoc receives a complimentary subscription to the full line of Communications Society publications which are available on loan to its members.

The OC ComSoc currently has 408 members, compared to 214 of the Signal Processing, and 1053 of the Computer Society. By providing technical topics of interest across these disciplines, and by combining strength with its sister organizations, the OC ComSoc has brought new levels of service to its engineering community. With a broader base of volunteers, the organization can do even more in the years to come.

Report from the IEEE Vehicular Technology/Communications Society Joint Italian Chapter

By Francesco Vatalaro, Italy

The IEEE Vehicular Technology/Communications Society joint Chapter of the North Italy Section was founded 15 May 1998. As an IEEE senior member, and as the Interim Chapter Chair, I am glad to announce our community this important event, while I thank all colleagues who gave their approval, and particularly those friends who helped in collecting almost 50 signatures on the petition.

The chapter is based in Genoa, on the Riviera Ligure, in the north of Italy. It is hosted by the Istituto Internazionale delle Comunicazioni (IIC), a non-profit institute whose main aim is to promote cultural initiatives in the fields of telecommunications and transportation. This convergence is the same which suggested to promote our joint IEEE Chapter, and this is one motivation for this twinship with IIC. I wish to thank IIC, and personally its president, Paolo de Ferra, for hosting our new-born Chapter in their wonderful XIX century villa Piaggio, with a gorgeous view over the gulf of Genoa.

The Chapter Executive Committee is being established. It includes nine members: Oreste Andrisano (University of Bologna), Maurizio Decina (Politecnico di Milano, and Past-President, IEEE Communications Society), Maria Gabriella

(Continued on page 4)

Dr. Kenzo Takahashi Appointed Associate Editor for Chapters Corner

By Byeong Gi Lee, Editor, Global Communications Newsletter

There are 126 ComSoc Chapters all over the world: 73 chapters in the North America Region; 24 in the Europe, Middle East, and Africa Region; 13 in the Latin America Region; and 16 in the Asia Pacific Region. Chapters are one of the most important parts of ComSoc organizations and play a central role for ComSoc's globalization. Traditionally, the *Global Communications Newsletter* has a dedicated column titled "Chapters Corner," under the coordination of the Chapters Director, which reports ComSoc Chapters activities. With the ComSoc's restructuring, the position of Chapters Director has disappeared and its function has been distributed to four Regional Directors. It was a meaningful change as it helps to put together all regional ComSoc activities, including Chapters activities, under the responsibility of the Regional Director. From the *GCN's* perspective, however, it implies loss of the focal point of the Chapters activity reports. This is why the *GCN* was not able to include Chapters Corner during the past several months.

In order to resolve this problem, we have studied various possible solutions, and finally come up with the conclusion that the best solution is to appoint a new Associate Editor for the dedicated job of Chapters Corner coordination. Based on this decision, we have searched for a capable candidate who has a broad technical and cultural background. This effort has been rewarded with the luck of finding Kenzo Takahashi. In the following, I would like to introduce him briefly.

Kenzo Takahashi is Professor of Communications Theory and Broadband Networks at Universiti Telekom, which will next year become Multimedia University in IT City (also known as Cyberjaya) near Kuala Lumpur. He serves as the coordinator of Center for High-speed Broadband Networks in the university. He began his technical career by joining NTT Laboratories in 1966. His R&D activities at NTT were in the field of broadband transmission, video transmission, satellite communications, digital networks and others. He served for two years as Director of Planning in ITU Association of Japan and developed telecommunications standards in cooperation with ITU Secretary General Office in Geneva. He also served for three years as a professor of telecommunications at Asian Institute of Technology in Bangkok, which is an international educational organization for selected postgraduates. During his tenure at Asian Institute of Technology, he gave many speeches and lectures and served for IEEE Chapter formation in various Asian countries, and organized several international conferences in cooperation with IEEE ComSoc and other international organizations. His activities contributed greatly for formation of a close linkage among various academic societies. He now serves as a member of the International Relations Committee of the IEICE Communication Society.

The IEEE Communications Society's Education Department

By Ron Bose, Director of Education Department

The Education Department's goal has traditionally been to provide ComSoc members access to a variety of continuing education and professional development materials. The department is run by an Education Board, that consists of Chair Ron Bose, Takeshi Hattori, James Kurose, and Kazem Sohraby.

Since 1998, the department has changed its focus to that of developing new educational products for ComSoc members, particularly those that can be delivered through the Internet. These products are developed by funding joint projects with commercial and industrial organizations, or by developing commercial relationships with external companies.

Two specific examples of new products are as follows:

- We have decided to record some of our top tutorial products for future distribution to our members. The first such activity is the recording of a tutorial on the subject of "Network Management," by Manu Malek of Bell Labs, scheduled for 14 October 1998. The tutorial will be taped by a company called Eloquent Inc. This information will then be edited and packaged for members on a CD or on a Web site, along with Eloquent's player software, that allows the viewer to see a streaming video, coordinated audio as well as viewgraphs on split screen. We expect product availability by the end of 1998. For examples of the Eloquent display, I would encourage a visit to http://www.eloquent.com.

Although the price of this product has not yet been determined, our goal is to make this low-priced and platform-independent, so as to benefit our members worldwide, particularly those who cannot travel to live presentations of tutorials and workshops. As we evaluate our experience with Malek's tutorial, we expect to release other similar products in 1999.

- Our second project in 1998 is to develop a Web site that provides a review of training material on communications topics that are currently available on the Web. This is a joint project of ComSoc and the University of Texas, Dallas. This site will include search capabilities, site reviews, and links to other "approved" training sites. I expect this to provide a valuable member service for those who are looking for communications training information on the Web. We have a working "proof-of- concept" Web site in operation, and expect to deliver a working product to COMSOC members by December 1998.

Please continue to look in *IEEE Communications Magazine* for information on new ComSoc educational products. The Education Department would also like your ideas on educational products that may be useful to you. Please contact Ron Bose (r.bose@ieee.org) with your ideas and suggestions.

IEEE ComSoc Singapore Office

By Fanny Su, Singapore

Today's Engineer

This quarterly publication by IEEE-USA, which debuted in 1998, is the only magazine exclusively devoted to developing an engineer's non-traditional professional skills. It is aimed at engineers of all disciplines and is a valuable resource to members in the Unied States and worldwide. Articles include columns and editorials which promote the development of cutting-edge professional skills that go beyond an understanding of technical fundamentals. They cover the broader context in which engineering is practiced, including the ability to think critically, creatively, independently, and cooperatively, and the development of strong interpersonal and communications skills and high ethical standards.

Issues are available in print and via an online Web version.

(Continued on page 4)

ComSoc Singapore Office/*(Continued from page 3)*

To find out more about this new and exciting publication, check it out at http://www.todaysengineer.org

Senior Member Initiative References

The IEEE Bylaws require that Senior Member applicants submit three references from existing Senior or Fellow Members with their application. These references are intended to endorse the qualifications of the applicant for elevation.

One of the goals of the 1998 IEEE Strategic Plan is to increase Senior Membership dramatically in the next five years. Since the Senior Member Initiative program was launched to encourage Sections to nominate eligible members to Senior member status, the IEEE has had many enquiries from applicants who have difficulty getting Senior and Fellow Members as referees.

Do your IEEE collegues a favor if you are already a Senior Member, be a volunteer referee with your Section. And if you think you qualify as a Senior Member, go ahead and apply as a Senior Member.

Senior Member applicants are encouraged to seek help from their Section when looking for referees. The Section's SAMIEEE recipient will have a list of Senior and Fellow Members within their locality and your field of expertise. Many times, referees may not know the applicants personally. Attending your local Section or Chapter activities will give you more exposure and network opportunities to meet Senior and Fellow Members. Ask your Section committee to introduce you briefly, then follow up with your request for referees and your completed Senior Application form and supporting curriculum vitae and documents.

Remember existing Senior and Fellow members are not obligated to be your referees, and getting to know each other better improves your chances of a good reference. If they are unfamiliar with your field of expertise or qualifications, they maybe able to refer you to others who would be more knowledgeable and act as better referees.

Please send an email to senior-member-forms@ieee.org if you require a Senior Membership Elevation kit.

Global Communications Newsletter

www.comsoc.org/pubs/gcn

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IEEE Communications Society

IEEE Vehicular Technology/*(Continued from page 2)*

Di Benedetto (University of Roma La Sapienza), Gabriele Falciasecca (University of Bologna and Fondazione Marconi), Franco Grimaldi (Wind), Pietro Porzio Giusto (Telecom Italia Mobile), Federico Tosco (CSELT), Francesco Vatalaro (University of Rome Tor Vergata and IIC), and Valerio Zingarelli (Omnitel Pronto Italia).

The chapter's first meeting has been scheduled for Thursday, 8 October 1998, in Florence, during ICUPC '98. On that occasion the Chapter Officers will be elected and the first initiatives to be taken will be decided. Recently, we also received the approval of the IEEE Central and South Italy Section, so that our Chapter, originally promoted within the IEEE North Italy Section, is now connected to both Italian sections. Therefore, although still not officially, I can safely anticipate that the Chapter will be very likely a joint Italian Chapter.

I wish to thank for their efforts both chair, Giuseppe Zingales of University of Padova (North Italy Section) and Gaspare Galati of University of Roma Tor Vergata (Central and South Italy Section). I am fully confident that our chapter will undertake significant initiatives, in line with the IEEE's tradition of dissemination of engineering sciences, and with its present strong commitment to internationalization. With our chapter we will do our best toward these aims.

Report from OECC '98/*(Continued from page 1)*

32 from Korea, 31 from USA, 14 from China, eight from Australia and the United Kingdom, seven from Denmark, 4 from Canada and Germany, and so on. The OECC '98 Technical Program Committee awarded five best papers in five technical categories, namely, 1) Communication Networks, 2) Optical Systems and Technologies, 3) Optical Fibers and Cables, 4) Optical Active Devices and Modules, and 5) Optical Passive Devices and Modules.

A related exhibition, InterOpto '98, was held in the same site (Makuhari Messe) from July 14 to 17 organized by Optoelectronic Industry and Technology Development Association (OITDA), and about 200 exhibitors participated in the exhibition.

The next OECC, OECC '99, will be held in Beijing, China, on 19–21 October 1999, in conjunction with the Asia-Pacific Conference on Communications (APCC).