Global Communications Newsletter

November 1998

# IEEE ComSoc Student Membership: Does It Pay Off for European Students?

*By Horst Bessai, Director of EAME Region*

Our Society's success is strongly based on young membership recruited at universities. On top of a student's "typical" budget problems, the currency situation in many countries makes it very costly for a large percentage of potential Student Members to belong to both IEEE and the Communications Society. When discussing these issues with European students, two frequently asked questions are:

- What are the likely returns of ComSoc membership expressed in money or other measurable benefits?
- How and when will these returns be measured?

After many years in the telecommunications industry, and as a university professor in academia, I would like to share with you my personal view of ComSoc student membership. Actually, it is a perfect investment. One should clearly distinguish between students with a mere customer-like attitude and those wishing to play a more proactive role in new and exiting developments. Our volunteers always enjoy an excellent network within ComSoc's worldwide structure — if they are open to discussion and willing to share their ideas with colleagues. I am not aware of any other institution with a better "marketplace" of this kind and with more perfect information platforms. So here is a list of some very good reasons to join the IEEE Communications Society at the earliest possible stage in your career — as a Student Member.

First of all, ComSoc's publications are *the* world standard literature in all areas related to telecommunications. Even promising niche applications and emerging technologies are covered, whenever they become visible. Any scientific work (technical report, project work, thesis, etc.) in our field would be incomplete without the author's attempt to study the technical literature made available by IEEE ComSoc. Our world-class transactions, journals, and conference papers are being carefully reviewed by teams of top-level experts. Sooner or later you may want to join one of these teams.

Student membership fees are considerably lower than those paid by Members (including higher grades such as Senior Members or Fellows). Nevertheless, Student Members receive the same membership benefits and services (although they may not vote in IEEE elections or hold office, for which Member grade is required).

In addition to low-cost, easy-to-use textbooks, ComSoc offers activities such as short courses and self-paced home study programs that are formally structured and provide measurable learning experience. You can easily develop your technical skills with these practical learning tools.

By attending ComSoc's major technical conferences, workshops, and local meetings, students can interact with leaders in their fields. You can go to technical sessions, attend tutorials, talk to colleagues, and learn more about new product developments at collocated trade shows — all at extremely low Student Member fees.

Wouldn't it be great to receive a student travel grant to attend a technical conference abroad — sponsored by IEEE ComSoc? Our Society offers a limited number of such grants for applicants who wish to go to ICC, GLOBECOM, INFOCOM, ICUPC, NOMS, or IM. Note that a rigorous selection of excellent papers will be made, based on review scores, and only top-notch papers will be awarded. Interested? Please read more about this program and follow carefully the instructions on ComSoc's Web site at:

http://www.comsoc.org/~travel

When applying for a new job (maybe your first one in industry or academia), you may want to gain a competitive edge by simply adding "Student Member, IEEE Communications Society" to your resume.

Take the initiative to communicate with fellow students and mentors at your nearest ComSoc Student Branch or Chapter. You will find a complete list of Chapters in Region 8, including contact information, at:

http://www.comsoc.org/~chapters/indchap/chapters-8.html

Volunteer service on one of ComSoc's Chapter Boards and committees can develop your interpersonal skills such as debate, presentation, structuring, and conducting meetings.

To summarize, ComSoc is an outstanding forum for educational and professional development activities. About 19 percent of our Society's membership in IEEE Region 8 are students. Why don't you go ahead and see how you can benefit from our programs?

---

## India Chapter Receives the 1998 ComSoc Chapter of the Year Award at GLOBECOM '98

***By Kenzo Takahashi***
***Chapters Corner Associate Editor***

The IEEE Aerospace & Electronic Systems, Communications, and Lasers & Electro-Optics Society Chapter, India, is one of many outstanding IEEE ComSoc Chapters all over the world. They have developed various academic activities well matched to the fundamental disciplines of the IEEE ComSoc. Especially, they have continuously planned and successfully performed numerous events including the following ones last year.

(1) Organized the IEEE International Conference on Personal Wireless Communication every two years and sponsored it in conjunction with the IEEE Bombay Section and the University of

*(Continued on page 4)*

# *BONAPARTE: Telemedicine and Tele-education Share a Common Broadband Platform*

*By Giancarlo Pirani, Italy*

In September 1998, CSELT, the corporate research center of the Telecom Italia Group, hosted the final demonstration of the ACTS Broadband Optical Network using ATM Pon Access facilities in Realistic Telecommunication Environments (BONAPARTE) Project. The event included a telemedicine demonstration session in connection with Hospital Molinette, a tele-education demonstration session with the Polytechnic of Turin, and demonstrations of several hardware and software developments of the project — TMN architecture, OAM and automatic failure recovery functionality, Vb5 interface, new UNIs.

BONAPARTE has run over the last three years (Sept. 1995–Aug. 1998) in the framework of the EU-funded ACTS (Advanced Communications Technologies and Services) program. Sixteen European companies (six telecom equipment manufacturers, six universities, two telecom operators, one SME, and one medical clinic) have worked together under the lead of the Italian telecom manufacturer ITALTEL.

The general aim of the project was to prove that ATM PON (passive optical network) systems are a viable way to provide access to broadband applications. This has been achieved carrying out telemedicine and tele-education trials involving real users at four European sites: Turin (Italy), Madrid (Spain), Basel (Switzerland), and Hamburg (Germany).

The ATM PON system has provided high-bandwidth ATM connectivity to end users in Turin and Madrid requiring broadband telecommunication services for their multimedia applications. Hospitals, medical clinics and universities have been connected to and participated in telemedicine and tele-education trials in the above-mentioned sites, interconnected via the ATM pilot network provided by the ACTS JAMES project through the National Hosts (see *GCN* issue of November 1997).

A toolset for tele-education consisting of two parts has been used: an improved version of the Isabel CSCW application and a telepresence box. The project has also addressed pedagogical aspects, and has developed the material for the full-fledged course "Teleteaching via ATM Networks," which represents a sensible reference for course material as it has been refined during two semesters. The course was part of the normal academic program in two of the European universities joining the trial. The teleteaching course was attended by 109 people between 21 and 39 years of age. Most were students attending the program, but also a small number of experts (five) and teachers (two) were present to evaluate the program. Most students attended the course because of their "interest in audiovisual and multimedia applications."

The BONAPARTE Project has developed a high-quality telemedicine application that has been used in routine clinical sessions since November 1997. The application has been designed to be used in four main telemedicine scenarios:

- Advanced teleradiology services
- Real-time medical imaging cooperative diagnosis between two geographically separated physicians
- Telepresence in a clinical session
- Remote access to medical image databases

The feedback from the users participating in the project trials showed that several positive effects were obtained through the use of the high-quality telemedicine system: optimization of the referring process, optimization of the Medical Imaging Center management, improvement of the final diagnosis of a patient case, and acquisition of the concept of teleradiology.

The ATM PON system has been used in the Turin field trial site as the access network between CSELT, where the National Host ATM cross-connect is located, and the Turin users (Fig. 1): Hospital S. Giovanni Battista (also known as Hospital Molinette) and Hospital S. Luigi of Orbassano, both part of the Section of Radiological Sciences of the University

*(Continued on page 4)*

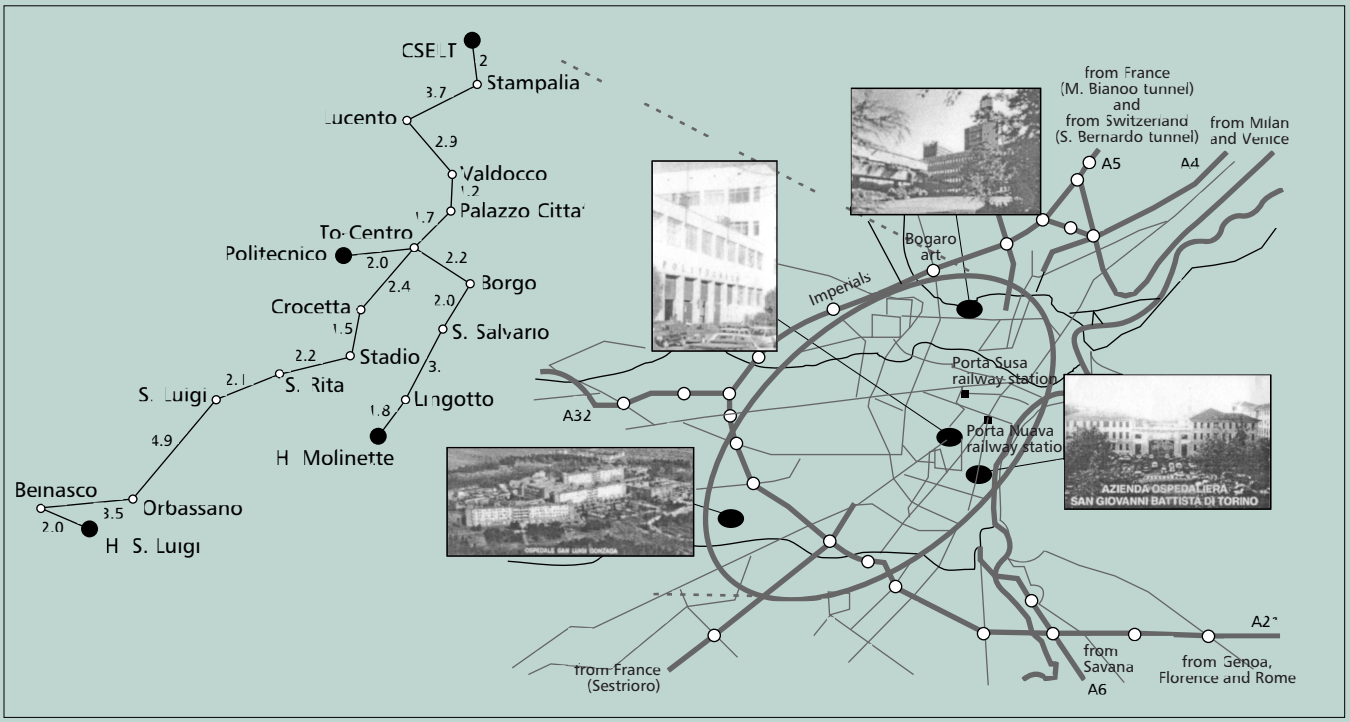


**Figure 1.** *Turin field trial site locations.*

# IEEE ComSoc Singapore Office Report

*By Fanny Su Beh Noi, Singapore*

## Acceptable Currencies in the Asia Pacific for the 1999 IEEE Membership Renewal

Members residing in the Asia Pacific will receive their 1999 renewal invoice in the mail in October. The respective exchange rates will apply to your country of residence:

| Country | Currency | 1 US$ = |
|---|---|---|
| Australia | Australian Dollar | 1.7535 |
| Gilbert Island | Australian Dollar | 1.7535 |
| Hong Kong | Hong Kong Dollar | 7.9807 |
| Indonesia | New Rupiah | 13,650.0000 |
| Japan | Yen | 153.6990 |
| Maldive Republic | Maldiv Rupee | 12.3585 |
| New Guinea | Kina | 2.6250 |
| New Zealand | New Zealand Dollar | 2.0702 |
| Philippines | Philippine Peso | 46.2630 |
| Singapore | Singapore Dollar | 1.8454 |
| Solomon Islands | Solomon Island Dollar | 5.0967 |
| Thailand | Baht | 43.9950 |

The above exchange rate remains fixed for the duration of the 1999 renewal cycle for local check currency payments.

Due to the currency crisis in the region, the Special Circumstances Minimum Income benefit may apply to your individual situation. If your 1998 annual income is expected not to exceed US$8,600.00, you may qualify to receive 50 percent off your current dues and assessments and 50 percent off one Society (of your choice). Members are encouraged to retain their IEEE membership by taking advantage of this savings through the Special Circumstances Minimum Income Benefit.

## Joint European Research and its Diffusion: An Open Subject

*By Joan Garcia-Haro, Spain*

Sometimes the success of a research project is not strictly measured by the achievement of good results and pure investigation goals. In addition, the dissemination of the project itself, its results, and its impact upon the scientific community, industrial and commercial environments, and the entire society in general are very important.

It is generally admitted that U.S., Canadian, and Japanese research projects obtain a major degree of publicity compared to European Union (EU) ones. In fact, when talking to non-EU colleagues about joint European research projects, I got the impression that they were not informed enough about them, and they wanted to know more about European research policy, hot topics, concrete projects, and results. In addition, even among Europeans, people not involved in such projects have some misunderstanding and difficulties in distinguishing between real research and mere bureaucracy related to EU research projects.

In this context, I find it interesting and useful for *GCN* readers to mention the existence of the InfoWin project. InfoWin stands for Multimedia Information Window for ACTS. ACTS is the acronym for the Advanced Communication Technologies and Services program of the European Union. Under this program, companies, public organizations, research institutes, schools, and universities agree to form consortia and to collaborate in order to carry out specific research projects.

*(Continued on page 4)*

## IEEE Membership Continues to Grow, Communications Society Membership Surges Along

Despite the economic and currency crisis in the Asia Pacific, the IEEE has seen an increase in membership. The Region 10 (Asia Pacific) July statistics shows an increase of 9.0 percent in total members from 34,194 (July1997) to 37,280 (July 1998), including an encouraging 23.5 percent increase in student membership from 6350 (July 1997) to 7840 (July 1998).

Thanks in part to the new Web membership application, more than half of all non-student Member applications submitted in 1998 have been submitted electronically. Currently, Web applicants outside the U.S. and Canada cannot use a credit card to pay via the Web but must instead mail checks or fax credit card information. However, by year end the IEEE Web-based application will use a server that protects credit card payments for applicants from all Regions. At present, only 30 percent of the Web applications come from prospective members outside the U.S. and Canada. With the new capability by year end, we hope to see an increase in applications.

The overwhelming response to the half-year 1998 membership promotion by the Communications Society increased the Communications Society membership by 10,000 members. July 1998 Communications Society membership stood at 48,153, as compared to 37,648 in July 1997, giving it a 27.9 percent growth.

## Member-Get-a-Member (MGM) and Student-Get-a-Student (SGS) Programs

Existing higher-grade Members are eligible to recruit non-Student members while existing IEEE Student Members are eligible to recruit new Student Members. Only applications from brand new IEEE members or first-time conversions from Affiliate to Member status will be eligible for inclusion in the program. Both programs begin 1 September 1998 and end 15 August 1999. Recruiters will be given cash voucher awards in recognition of their efforts. Vouchers will be mailed to all eligible recruiters in September 1999. The cash voucher awards system is based on the number of new members recruited as follows.

| MGM<br>New Members recruited | Voucher Value<br>(in US$) |
|---|---|
| 1 to 2 | US$5.00 |
| 3 to 5 | US$10.00 |
| 6 to 9 | US$20.00 |
| 10 or more | IEEE membership for the year 2000 |

| SGS<br>New Student Members recruited | Voucher Value<br>(in US$) |
|---|---|
| 2 to 4 | US$5.00 |
| 5 to 7 | US$10.00 |
| 8 or more | US$15.00 |

To qualify for MGM/SGS credit, the recruiter's name and membership number must be clearly printed in the recruiter box on the 1999 application when it arrives at IEEE with accompanied proper payment. No recruiter will be qualified retroactively.

**INDIA CHAPTER**/*(Continued from page 1)*

Victoria Canada at Mumbay, 17–19 December 1997; the conference drew 128 technical papers and about 160 participants from 28 countries. The need for communications connectivity in rural areas was emphasized throughout this conference.

(2) Sponsored a national seminar on GPS and DGPS in association with the Indian Institute of Technology (IIT), Kanpur, and two other institutions, 21–23 February 1997, and had about 200 participants from both academic society and Government.

(3) Organized a national seminar on "Strategic Communication for Law Enforcement and Public Safety Services" jointly with the Department of Electronics Government in association with the National Telematics Forum and had about 100 participants.

(4) Frequently organized short-term workshops with the support of outstanding worldwide lecturers and contributed to this service not only for Chapter members but also for interested leaders in the regional societies. These events, generally held monthly, covered the fields of systems engineering in aircraft design and navigation, public safety management, and advanced wireless communications.

*Greetings from IEEE ComSoc*

*It is my great pleasure to inform the readers of* IEEE Communications Magazine *that this Chapter has been awarded the 1998 ComSoc Chapter of the Year Award to be presented at GLOBECOM '98 in Sydney, Australia. Congratulations to the Chapter! I hope they keep up the good work and encourage the other Chapters to continue their excellent efforts in support of our evolving academic society.*

*By Ron Horn*

*Vice President–Membership Development*


Global Communications Newsletter

www.comsoc.org/pubs/gcn

**BYEONG GI LEE**

Editor

Seoul National University
School of Electrical Engineering
Seoul 151-742, Korea
Tel: +82-2-880-7276
Fax: +82-2-880-8214
E-mail: blee@tsp7.snu.ac.kr

**SAEWOONG BAHK**

Associate Editor

E-mail: sbahk@netlab.snu.ac.kr

**KENZO TAKAHASHI**

Associate Editor, Chapters Corner

**Regional Correspondents**

ABRAHAM ALCAIM, Brazil • PHAN ANH, Vietnam
JACOB BAAL-SCHEM, Israel • JAAFAR H. BAKAR, Malaysia
DMITRIJ BOBROWSKIJ, Russia • ROBIN M. BRAUN, South Africa
MEHMET UFUK CAGLAYAN, Turkey • CHI-CHAO CHAO, Taiwan
MAHMOUD EL-HADIDI, Egypt • JAVAN ERFANIAN, Canada
JOAN GARCIA-HARO, Spain • DADANG GUNAWAN, Indonesia
RAM G. GUPTA, India • CARLOS HIRSCH, Mexico
ANDRZEJ JAJSZCZYK, Poland • HONGBEOM JEON, Korea
HIDEO KUWAHARA, Japan • ALGIRDAS PAKSTAS, Lithuania and Norway
GIANCARLO PIRANI, Italy • CRAIG SKINNER, Australia
K. R. SUBRAMANIAN, Singapore • ANUPAP TIRALAP, Thailand
DEFENG YU, China

A publication of the
IEEE Communications Society


**TELE-MEDICINE**/*(Continued from page 2)*

of Turin, and the Polytechnic University of Turin. Telecom Italia provided the optical network infrastructure, both outside and inside the user premises. Access to the JAMES network has been secured by ITINERA, the consortium that manages the Italian National Host, while Internet access has been provided to the users via a dedicated ISDN basic-rate line.

A number of experiments have provided the opportunity to evaluate the performance of the enhanced access system and to gain knowledge on how to assign network resources in an optimal way to provide the users with the required broadband multimedia services. An important achievement has been the implementation of emerging standards soon after their approval and a significant contribution to the standardization process in the area of the access networks on architectural aspects. Network operators are now in a better position, on one side, to specify requirements for access systems and to evaluate the various access products that will emerge on the market and, on the other side, to use their networks in an efficient way and to reduce operational and maintenance costs by adopting the integral management concept. Working in close cooperation with end users, the application developers have been able to understand the technical and "usability" requirements that allow an application to fit user needs. Meanwhile, users have been able to understand the opportunities offered by the new technologies and to become familiar with them.

In conclusion, the project has shown that ATM PONs are a flexible and powerful means to support the full-fledged set of multimedia services of the future. In achieving that, the project has contributed to the broadening of awareness on multimedia broadband communication.

**JOINT EUROPEAN RESEARCH**/*(Continued from page 3)*

The objective of the InfoWin project is to provide an open window to allow the work carried out within ACTS projects tobe visible to the ACTS community and to the outside world. At the same time, it implies that the information to be distributed be updated and relevant.

The InfoWin project, therefore, is focused around information gathering, editing, marketing, and dissemination, while providing information support via online services, as well as by other conventional media (print, CD-ROM, etc.).The main entry to the ACTS Information Window is provided by the following Web address: http://www.infowin.org, which allows an easy access point to several services, to information on ACTS, and to the InfoWin publications. The publications are periodically released and updated. They consist of ACTS news clips, bulletins, thematic issues, a handbook on communications services, information regarding the world telecom marketplace, and other telecom resources. One of the most recent publications included in the ACTS Information Window, as a thematic issue, is the second edition of *ATM in Europe: ACTS Trials.* It gives an overview of the European R&D in the ATM field and it is targeted mainly to researchers, consultants, network managers, and users interested in the current and future state of ATM. This second edition reports the status of key ATM standards, results from former research programs in broadband communications such as RACE and TEN-IBC, and a complete list and a description of the ATM projects in ACTS including the most recent ones in the area of IP and ATM internetworking. A selection of ATM references in Web sites with useful information is also covered.

The InfoWin project thus represents an interesting initiative toward the dissemination of European research programs in addition to stimulating European researchers to extract and publish relevant information from their joint work and experiences. It is only one more step but, hopefully, this time on the correct path.