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# Global Communications Newsletter

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June 1998

## *The Infoville Project: The Biggest Non-Corporate Intranet in Europe*

*By Joan Garcia-Haro, Spain*

**T**he Autonomous Government of Valencia (an autonomous region in Spain), along with the OVSI Foundation (the Valencia Office for the Information Society) and TISSAT, a Spanish company that specializes in advanced telecommunication services, are leading the deployment and implementation of the first digital city in Europe.

In particular, the city of Villena in Alicante (Spain) was selected as the first pilot city. Villena has some interesting economic and social figures; its population is around 32,000 inhabitants, 63 percent of whom are between 16 and 65 years of age. In addition, almost 50 percent of the active population works at the industrial sector, mainly composed of small- and medium-size companies, and the remaining 50 percent is employed at the services sector.

The initial idea consisted on the creation of a big intranet with more than 1,500 access points connected to the services offered by a management center called virtual town council. Following the European Union Bangemann report philosophy, the aim was to modernize the local administration and to promote the utilization of advanced technologies, services, and involved telecommunications to improve the grade of service of the citizens and to increase the competitiveness of the local enterprises.

The project has some more technological and institutional partners (national and multinational) coming from banking, software development, hardware manufacturers, and service providers.

The services offered by the virtual town council range from retrieval information services without interactive requirements to interactive services and conversational ones. Users have a multimedia personal computer and an N-ISDN network interface card to access the offered services and applications that are developed on top of the TCP/IP protocol stack. The global architecture will be made of several urban intranets, using firewalls to handle the required security, which will be interconnected through a backbone network extending the geographical coverage to the entire region and acting as a public internet.

Services are carefully selected by studying the most frequent activities of potential users. They are related to leisure and entertainment through access to digital games and generic internet navigation, tourism applications, electronic edition of newspapers and bulletins, education, health care, teleshop-

ping and electronic commerce, interpersonal relationships (virtual clubs, interest groups, chats, ...), access to the administrative services of the town council and regional government, telebanking, and teleworking, which provide the functionalities of a typical company LAN to the Villena intranet.

The formation of users in the manipulation of these new technologies is a key issue for the success of the project. The project, initiated in 1996, is now operative after a study and deployment phase. It is generating interesting results regarding network architecture, services, utilization, and so on, to face the information society and the global village paradigm from a competitive stage.

The success of the project has been proved by its extension to more than 6,000 users in four localities and the exportation of the experience to other environments under the names of:

- Infocole — to create an intranet linking 120 primary schools in all the Valencia community geography.
- Infomarket — to apply the same scheme to the regional companies and therefore stimulate the electronic commerce.
- Infocampus — to generate the services of a virtual campus around the Miguel Hernandez University of Elche in Spain.

However, the main recognition and support of the value of this project is the recent approval by the EU of the EuroInfoville project with a budget of 12 million of ECUs. This represents the largest R&D contract given to a consortium led by a Spanish company.

EuroInfoville is conceived to transfer the Infoville digital city experience to other European populations, since it is a de facto standard from which it is possible to export the know-how to provide access to services offered by their respective local and regional administrations to all EU citizens.

The Valencian Autonomous Government and TISSAT lead EuroInfoville, but it also has the active participation of five more regions from Germany, Italy, Denmark, and the United Kingdom. Twenty-eight additional cities and other non-European members act as observers.

In addition, TISSAT has signed some other agreements, including one with Sun Microsystems for the creation of a Java Center to develop applications and services using Java in the framework of Infoville. Another is an agreement with Oracle to invest on the construction of a center of excellence regarding network computing in the Valencia Community.

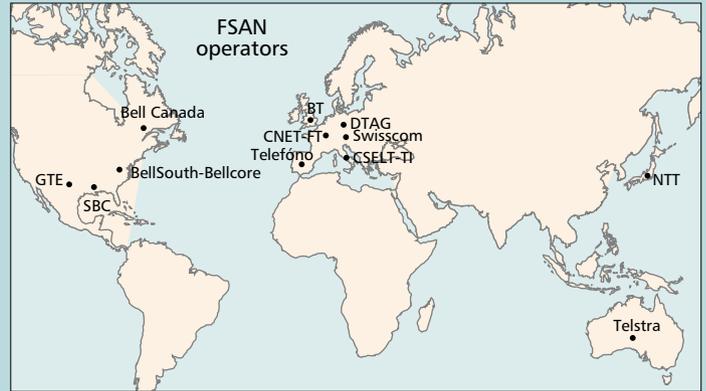
# FSAN Sails the Vehicle Lagoon

By Giancarlo Pirani, Italy

On 22 March 1998, the Third Workshop on Full Service Access Networks took place in Venice. Since July 1995, there has been an international effort on the part of nearly two dozen major world telecommunication operators and manufacturers (see figure) to maximize consensus with a consequent decrease of costs of the systems required in the local access network to deliver a full set of telecommunications services, both narrowband and broadband.

This initiative, called Full Service Access Networks (FSAN) aims to overcome existing economic barriers and to expedite the large-scale development and deployment of broadband optical access networks based on a common set of requirement specifications. These networks need to be able to deliver existing and future services, which in some cases are not yet completely identified. In fact, although it is recognized that the needs of operators differ because of the differing regulatory, business, and structural environment in each country, there is sufficient similarity concerning future access networks to suggest that significant benefits can be achieved through adopting a common set of requirement specifications.

Studies conducted by the FSAN group indicate that the



■ Figure 1. FSAN participants.

per-line cost of producing a full-service access network will slowly decrease with volume of production. Once a certain volume is reached, however, it will be justifiable to develop new technologies that can provide significant reductions in per-line equipment and installation costs. After completing the first two phases of work, FSAN has entered its third phase.

In the first phase (July 1995–June 1996) efforts were focused on consensus management and on the definition of a set of generic requirements that addressed services, architectures, and economics, including Operation and Maintenance (OAM) and component technology issues. An ATM-based Broadband Passive Optical Network (BPON) was recognized as the most promising solution to achieve large-scale full-service access network deployment capable of meeting the evolving service needs of network users, and supporting a wide range of FTTx access network architectures (Fiber-to-the-Exchange, Cabinet, Curb, Building, or Home).

The second phase (July 1996–February 1997) concentrated on devising a common set of requirement specifications. FSAN has attempted to incorporate applicable standards where they exist, and members of the FSAN group have been active in introducing elements of the FSAN results inside appropriate standards bodies like ITU, ETSI, and ATM Forum. In particular, they have contributed substantially to the issue of ITU-T Rec. G.983, High-Speed Optical Access Systems Based on Passive Optical Network (PON) Techniques, which is expected to achieve the final approval in October 1998.

The solutions proposed by FSAN encompass a two-fold flexibility: they refer both to architecture/topology and to bandwidth, with appropriate management tools. In order to test these solutions in the real world a third phase has been launched (March 1997–December 1998). In this phase, two subgroups (chapters) are carrying out a series of field trials focused on FTTCab and FTTH architectures, respectively. They address a number of different issues spanning service demonstration, installation procedures, OAM, testing, powering, and mechanics (e.g., cabinet

## The Chinese Institute of Electrical Engineering

By C. T. Hwang, General Secretary of CIEE, China

The Chinese Institute of Electrical Engineering (CIEE) was founded in October 1934 in Shanghai, with the Taiwan Local Chapter established in April 1974. CIEE was renamed Taiwan Provincial Electrical Engineering in July 1950, and has been reorganized and renamed Chinese Institute of Electrical Engineering since 1954.

To keep pace with the nation's policy, industry's development, and the economic perspective, CIEE has had a great success in building up the Taichung Local Chapter, the Kaohsiung City Chapter, and the Hualien Local Chapter in November 1953, October 1956, and September 1982, respectively. Initially, CIEE was set up by 50 members who are scholars and specialists in telecommunication and electrical engineering, and then expanded into the fields of radio, TV, and even electronics and computer information engineering. As of March 1998, CIEE has 9500 individual members and 56 group members.

CIEE consists of 12 committees: Committee on Awards, Committee on Election, Committee on Academic Lectures, Committee on Technical Papers, Committee on Electrical Engineering Terminology, Editor's Board for *Electrical Engineering Handbook*, Committee on Membership, Committee on Publications, Chief Editor for CIEE Periodical, Committee on Electrical Academic Lectures, Committee on Standard Profile, and Committee on the Taiwan Straits Electrical Academic & Industry Development.

Activities of CIEE are as follows:

- To plan and conduct conferences and meeting to discuss or present lectures on the science of electrical engineering.
- To study and report on the problems of electrical engineering at the request of public or private organizations.
- To collect books on engineering and to investigate and disseminate latest information on electrical engineering to national and international academic institutes and industrial firms for reference.
- To draft technical terms on electrical engineering and to set up the standards and specifications of electrical materials and equipment.
- To publish books, periodicals, and papers related to electrical engineering, issue notices related to electrical engineering, and issue notices related to Institute affairs.
- To assist members developing electrical industry businesses.
- To perform other activities related to electrical science and engineering.

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# The IEEE Communications Society European Operations Corner

By Jacques Kevers, Brussels Office

**D**r. Jacob Baal-Schem, Communications Chapters Coordinator for Region 8, is considering the organization of a Chapter Chairs meeting in 1998. The idea is to discuss activities as well as address problems involving both Region 8 and the Communications Society.

All R8 Chapter Chairs were contacted by the Brussels office, and a dozen of them answered that they definitely are interested, and would attend a meeting, if organized in the second half of September 1998. Budget aspects are now being investigated, and more details will be provided to R8 chapters shortly.

## Conferences

The Brussels office attended ISSLS '98 in Venice from Monday, 23 March through Thursday, 26 March with a booth next to the registration area and main conference room with an IEEE banner, posters, and Comsoc membership forms. Participants from most European telecom organizations as well as several important telecom companies worldwide attended. About 150 application forms were distributed.

The next conferences scheduled in 1998 are:

- MELECON '98 (18–20 May). Arrangements have been made with Israel's Comsoc Chapter to send Comsoc materials and arrange to have a local representative at the table.
- International Conference on Universal Personal Communications (ICUPC '98) (5–9 October).

## Senior Member Campaign

Nominate-A-Senior-Member, a new membership development program, was launched in March. Its goal is 2000 members elevated to Senior Member grade by December.

The grade of Senior Member is the highest for which application may be made and requires experience reflecting professional maturity. For admission or transfer to the grade of Senior Member, a candidate should be an engineer, scientist, educator, technical executive, or originator in IEEE-designated fields. The candidate must have been active in professional practice for at least ten years and must have shown significant performance over a period of at least five of

those years, such performance including one or more of the following:

- Substantial engineering responsibility or achievement
- Publication of engineering or scientific papers, books, or inventions
- Technical direction or management of important scientific or engineering work
- Recognized contributions to the welfare of the scientific or engineering profession
- Development and advancement of important scientific or engineering courses
- Contributions equivalent to those listed above in areas such as technical editing, patent prosecution, or patent law, provided these contributions serve to advance progress substantially in IEEE-designated fields

The Senior Member application and reference sheets are accessible by e-mail at [senior-member-forms@ieee.org](mailto:senior-member-forms@ieee.org) and may be submitted electronically to [senior-member@ieee.org](mailto:senior-member@ieee.org).

For more information, please contact the Brussels office.

## IEEE Membership

The membership growth for the first quarter is well ahead of IEEE's 2 percent annual goal. March membership totaled 304,272, a growth of 4.8 percent (13,837) when compared to March 1997. Society memberships totaled 349,008, up 12,384 or 3.7 percent. The most dramatic increase is the 14.8 percent growth rate among students. April statistics reflect that the number of members in Regions 8, 9, and 10 dropped for failure to pay 1998 dues. These statistics may give a better indication of how recent economic events in Asia are affecting membership growth in this region.

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## IEEE Communication Society Region 8: News, Activities, and Plans

By Horst Bessai, Director, EAME

**S**tarting on 1 January 1998 — in connection with our Society's new organizational structure — operations throughout the world were modified, and four Regional Directors were appointed by the President with the approval of the Board of Governors. It is my honor and pleasure to serve as ComSoc's first Director for the Europe, Africa, and Middle East (EAME) Region. In the past couple of years, our Region has seen increasingly significant growth. It accounts for 18 percent of total ComSoc membership, and we are looking forward to welcoming new Chapters, with an impressive number of 24 existing to date.

Among other tasks, my duties include regional chapter service development, membership development, management of member benefits programs, and development of new information services. An EAME Regional Board will promote Chapter activities and stimulate international participation in Technical Committees, meetings, and conferences; encourage international submissions to Society publications; and cooperate and liaison with national scientific and professional societies. I am particularly grateful to my colleagues Prof. Istvan Frigyes (Technical University of Budapest, Hungary), Dr.

Jacob Baal-Schem (Tel-Aviv University, Israel), and Prof. Trevor Clarkson (King's College London, UK) who are willing to serve — in addition to all Region 8 Chapter Chairs — as dedicated Members of this Board.

I will work diligently in the various facets of ComSoc to improve its visibility, thereby attracting more members in the years to come. To promote closer ties among academia, industry, and government institutions, we will propose and negotiate new conferences in our geographical area sponsored or co-sponsored by ComSoc. European Wireless '99 and EuroCom 2000 are new conference initiatives which have already reached concreteness.

Among other challenges ahead are:

- Improved partnership with industry and increased corporate support, including increased employee volunteer participation.
- Continuation and strengthening of our Student Travel Grants (STG) program. I will continue to administer and coordinate this very successful program, which provides

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# Communications Society Awards

The following article is extracted from "The ComSoc Community 1998" directory.

The Communications Society sponsors active programs to recognize technical achievements and service. To learn more about these awards or how to develop or sponsor new awards, please contact the ComSoc Awards Committee.

The Communications Society Career Awards are:

- IEEE Communications Society Edwin Howard Armstrong Achievement Award (originally Achievement Award, first presented in 1958; changed to present title in 1975)
- IEEE Communications Society Donald W. McLellan Meritorious Service Award (first presented in 1976; named in 1979)
- IEEE Communications Society Award for Public Service in the Field of Telecommunications (first presented in 1976)
- The Communications Society Best Tutorial Paper Award
- The Communications Society Leopard G. Abraham Prize Paper Award in the Field of Communications Systems (first presented in 1958; category defined in 1975)
- The Communications Society Stephen O. Rice Prize Paper Award in the Field of Communications Theory (first presented in 1975)
- The Communications Society William R. Bennett Prize Paper Award in the Field of Communications Circuits and Techniques (first presented in 1975)
- Fred W. Ellersick Prize (formerly the Communications Society Magazine Prize Paper Award; renamed in 1992)

## Nominations and Award Process

The Communications Society's Awards Committee retains responsibility for the ultimate selection of winning papers and for the functioning of the awards process. It coordinates the nomination and decision processes and orders and awards cer-

tificates, plaques, and checks.

Publications Editors-in-Chief have responsibility for generating short nomination lists for the Abraham, Bennett, and Rice prizes. These lists are the major basis for decisions of the Awards Committee. Nominations are solicited by each Editor-in-Chief from that publication's Editorial Board, from guest editors, and from the readership. Nominations may be solicited in a published notice. The nominations received are screened and reduced to a short list by a committee of the Editorial Board that is appointed by the Editor-in-Chief.

A short nomination list for the Ellersick Prize is prepared under the direction of the Editor-in-Chief of *IEEE Communications Magazine* and another under the direction of the Editor-in-Chief of *IEEE Network* (with consultation as appropriate). The short nomination list for the Best Tutorial Paper Award is prepared by consensus of the Editors-in-Chief and the Director of Magazines, based on recommendations from their prize paper committees.

The short nomination lists for all five prizes are to be submitted to the Communications Society Awards Committee no later than February 15th of the year following the year for which papers are considered. Under normal circumstances, award presentations will be made at ICC each year.

## IEEE Awards

The IEEE sponsors three paper awards, two of which overlap with the Communications Society awards. The W. R. G. Baker Award recognizes an outstanding original paper published in the past year in any IEEE journal, transactions, proceedings, or magazine. The Donald G. Fink Award recognizes an outstanding survey or tutorial paper published in the past year in any IEEE journal, transactions, proceedings, or magazine.

For an outstanding paper, there is no reason why recognition should not be given at both Society and Institute levels. Editors-in-Chief may wish to nominate automatically the winning Communications Society papers for appropriate IEEE awards.

## Global Communications Newsletter

[www.comsoc.org/pubs/gcn](http://www.comsoc.org/pubs/gcn)

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## REGION 8 NEWS AND ACTIVITIES/(Continued from page 3)

financial support to students who have difficulties traveling to and attending one of ComSoc's six major conferences. For example, 14 students from Region 8 received grants which enabled them to present their papers at ICC '98 in Atlanta.

- Maintaining and improving our Internet-based services, such as the regional Web page and e-mail aliases.

While we enjoy an enormous pool of talent within Region 8 ComSoc membership, there remains much work to be done in order to achieve greater participation of members in volunteer activities. To this end, let me know your needs. Please feel free to contact me at [bessai@nue.et-inf.uni-siegen.de](mailto:bessai@nue.et-inf.uni-siegen.de) and share your ideas.

## FSAN SAILS THE VEHICLE LAGOON/(Continued from page 2) design).

The Venice Workshop has represented a very good opportunity to present the results achieved so far and to discuss the future developments in the presence of more than 150 participants. Information on FSAN activities and results, also relevant to the first two phases, can be found on the Web at <http://www.labs.bt.com/profsoc/access/index.htm>