

INTERCONNECT

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INTERCONNECT



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SPECIAL POINTS OF INTEREST:

- ICFC Conference Success
- info well recieved by ITS members
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- At a Glance

Regulating and Restructuring European Telecommunications for the Next Millineum

The ITS European Regional Conference was held in Turin, September 2-4 1999. Turin also hosted the 26th Conference of The European Association for Research in Industrial Economics (EARIE), as this is traditionally held in conjunction with the European ITS meetings.

The picturesque city provided a splendid setting, allowing participants to benefit from the warm Northern Italian hospitality and cuisine. The event was hosted by Politecnico di Turino, an institution that has



ITS Board Meeting In Turin

long prided itself as one of the foremost engineering schools of Italy.

Conference participation was broad, as was the background of the 110 participants and 60 authors. It included well known experts such as Cristiano Antonelli, Martin Cave, Dieter Elixmann, Lester Taylor, Luigi Prosperetti, John Panzar and Peter Swan among the academics.

Also participating was as a large number of representatives from European (and overseas) telephone companies, as well as national and EU regulators from the ever widening field. Along with an impressive contingent of local experts from Northern Italy, there were many younger researchers and professionals. This added a special flair to the conference and its many sessions.

The theme of the conference, *Regulating and Restructuring European Telecommunications for the Next Millennium*, was clearly reflected through such topics as respective national experiences with:

- rate regulation
- rate rebalancing
- interconnection and unbundling
- universal service and access
- regulatory reform related to multi-media and convergence and
- antitrust vs sector-specific regulatory instruments.

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Message from the Chair

Dear Members,
ITS held its Annual Board Meeting in Turin on Sept 2nd.

The meeting was hosted by the Politecnico; and the Board extends its

thanks to Prof. Tommaso Valletti for the invitation and the hospitality.

Our meeting finished in time to commence the ITS European Regional Conference, "Regulating and Restructuring European Telecommunications for the Next Millenium" - an ambitious title since few laws or reorganizations ever last that long.

The Board discussed "renewal" (e.g., the election of new Board members and the preparation of a gentle procedure to encourage self-retirement by inactive members). It also endorsed an "ITS Mission Statement", which is highlighted in this issue.

The financial status of ITS is very positive, thanks to the success of ITS '98 in Stockholm which contributed enormously. The Executive again commends Board Member Bertil Thorngren and his Swedish colleagues.

Perhaps related to the financial health of our organization, the re-election of Lee Schmidt was unanimous and enthusiastic.

Also elected unanimously was Raul Fernando Borio of Telefonica de Argentina.

Fernando is putting together the next ITS Biennial in Buenos Aires, centered on the theme of Globalization and the Information Society. I extend my strong support for the conference and encourage you to submit an abstract based on the Call for Papers you received, to the relevant theme coordinator by the October 30th deadline.

The International ITS 2000 committee will meet in November to select the best papers and set the sessions.

There was good news from the Special Marketing and Promotions Committee. The Board especially thanks Don Romaniuk and his team. Through TELUS, they are designing a state of the art, interactive web site specifically customized for ITS. This will improve our communications, marketing and administrative capabilities enormously.

Finally, looking and planning forward, we pooled together our resources in terms of ideas and volunteer host organizations in preparation for ITS 2001 and 2002. There was a strong consensus to have an ITS event in China, whether Beijing or Hong Kong. As always, I welcome your suggestions, ideas and possible leads, and will pass them along to the ITS committees.

Loretta Anania

Executive Watch

Highlights from the Board Meeting

A Board of Directors meeting was held in Turin on September 2, 1999.

Dr. Adrian Figueroa, Telefonica de Argentina, a Conference Coordinator, reported on ITS 2000. The Board was pleased at how well plans are coming along for the conference, to be held in Buenos Aires next July.

The Board approved the appointment of two directors, Fernando Borio and Leland Schmidt. Dr. Borio, of Telefonica de Argentina, will join the Board as an official representative of that organization. He is a Chair of ITS 2000.

Leland Schmidt, a telecommunications consultant, serves as ITS Treasurer. He was previously the official representative of GTE.

The Board also endorsed the Mission Statement. The statement has been under review and revision during the past year.



ITS jointly sponsored a conference with the International Communications Forecasting Association in Denver last July. ITS Vice-Chair, David Cracknell, was pleased with attendance at this North American regional event.

Cracknell hoped that there will be additional regional events to complement the European regional conferences such as the one held in Turin, chaired by Juergen Mueller.

The Conference Committee, under the Chairmanship of Dr.

Koichiro Hayashi, is hard at work on the next biennial conference to be held in 2002.

Publications Committee Chair, Erik Bohlin, reported that the committee continues to focus on quality as well as the number of publications.

Don Romaniuk, Special Marketing & Promotions Committee Chair, reported on progress on the ITS Website. When developed, this major effort will assist, among other things, ITS member communications.

Upcoming Events

Call For Papers - ITS European Regional Conference 2000

The next ITS Regional Conference, to be held September 10-11, 2000 in Lausanne, Switzerland, will be hosted by the University of Lausanne, in association with the 27th annual EARIE conference. Papers are now being solicited in the areas of regulation, industrial policy, telecommunications infrastructure, the structure of the telecommunications industry, telecommunications services, and convergence. Other topics will also be considered. Abstracts of papers are to be sent to:

ITS c/o Juergen Mueller
FWW

Badensche Strasse 50-51
10825 Berlin Germany

Phone: +49-30-85789-145

Fax: +49-30-85789-199

E-mail: jmueller@FWW-Berlin.de

Papers should be in English and received no later than March 31, 2000. The text should be in Microsoft Word and tables and graphics should be in Microsoft Excel. A one page abstract of 250 words is also required. Papers and abstracts can be submitted by e-mail or, alternatively, three copies of the papers and abstracts, along with a floppy disk, can be mailed to Juergen Mueller.

Regulating and Restructuring continued

Even in the more market specific sessions dealing with mobile and information services, convergence or the Internet, authors often came back to the issue of regulation and the proper regulatory framework for the next millenium. Other popular topics included economy wide (and firm specific) consequences of telecom infrastructure, the forecasting of the nature of future telecom services and the restructuring of the sector in post socialist economies.

Regulatory issues were also front and center in two panel discussions. One was a sharing of different national regulatory experiences and the other addressed regulatory reform in the next millenium.

Participant participation in the discussions was high, both through formal discussants and in the more general discussions that followed.

The abstracts and many of the papers are posted at <http://userpage.fu-berlin.de/~jmueller/its.html>. Also posted is preliminary information on the next European regional conference, which will be held in Lausanne, Switzerland, September 10-11, 2000.



ITS Issues New Mission Statement

The ITS Board has issued a new mission statement to accurately reflect the goals and focuses of the organization into the new millennium. While encompassing the traditional mandate and values, the new mission statement expands the parameters and scope of ITS, so it can better address complex issues of converging technologies and social applications that no longer respect traditional frontiers.

The next issue of **Interconnect** will feature an in-depth look at the new mission statement, ITS goals and more specific areas of ITS interest.

The Leading Edge

Analysing the Evolution of Industry: The Relevance of the Telecommunications Industry

Instead of being a field for specialist, telecommunications is becoming an increasingly central issue to society, attracting perspectives from a number of different angles. Within economics, there is an expanding number of theories applied to telecommunications, such as those which have been promoted to the Nobel Prize: public choice (Buchanan), institutions (North) and auctions (Vickrey). We should expect other novel applications of additional economic theories, and we should expect that not only mainstream economics research would grow. Indeed, it is surprising that, given the high rate of technological change, there are not more contributions based upon the economics of technology, including evolutionary economics.

However, the paper "Analysing the Evolution of Industry: The Relevance of the Telecommunications Industry", presented by Martin Fransman at ITS '98, is one important exception in this vein. A major conclusion of this paper is that more discussion and analysis is needed on the conceptualisation of industrial dynamics, or the fundamental forces driving evolutionary industrial change, and the related issue of appropriate industry boundaries. Five dynamic driving forces are identified in the paper that in turn, influence the structure and boundaries of the telecom industry: quasi vertical specialisation and the presence of specialist suppliers; four processes of competition between technologies,

The International Telecommunications Society (ITS) is an association of professionals in the information sector with the aim of providing a forum where academic, private sector and government communities can meet to share research results and problem solutions, identify pressing new problems and issues, and form new relationships and approaches to address those issues. ITS focuses on the evolving applications, services technology and infrastructure of the converging communications, computing, Internet, information content and related industries. The goal of ITS is to further research and analysis of telecommunications issues emanating from the evolution toward next generation networks and toward a global information society while placing particular emphasis on the interrelationships among market, economic, technology, legal, regulatory, competitive, organizational, policy and ethical aspects of those issues. ITS is an independent, non-aligned and not-for-profit organization with a worldwide network of about 400 members.

networks, services, and firms; the role of financial institutions; the heterogeneity and change in consumer characteristic preferences (for both final and intermediate consumers); and the permeability of industry boundaries (as evidenced, for example, by the new role being played in the communications industry by firms from other industries such as computing, software, utilities, engineering, broadcasting, and retailing). But this raises the more general question of how "industry driving forces" are to be identified in any particular industry, how they influence industry structure, and how they define industry boundaries.

The paper's analysis of the evolving telecommunications industry suggests that there is no easy answer to this question. Certainly, there is no theoretical *a priori* that will solve the problem. Rather, a detailed empirical understanding of the specific history and changing circumstances of the industry is necessary, along the lines of Richard Nelson's notion of "appreciative theorising". Although difficult, this question is central for an evolutionary/institutional analysis of industry.

The conference version of the paper is available at www.its98.org. A revised version of the paper is forthcoming in the journal **Economics of Innovation and New Technology**.

In each issue of Interconnect features an executive summary by Publications Chair, Erik Bohlin, of what he deems to be superior literary contributions to current technical, regulatory and social issues.

ICFC Conference is a Successful Joint Venture for ITS

The 17th annual International Communications Forecasting Conference (ICFC) was held in Denver, Colorado, from June 15th to the 18th of this year. The theme was "Challenges for the New Millennium" and, for the first time, ITS acted as co-host with Illinois State University.

Keynote speeches focused on such topics as "The Evolution of Local Network Services", "Market Opportunities for Emerging Communications Providers", "Implications of New Valuation Techniques on Estimation", "Globalization and the Information Society" and "A futuristic Look at Residential Telecommunications Demand".

The working sessions covered the Internet, wireless / wireline substitution, predicting customer choice, market structure and segmentation, costing and technology forecasting, interconnection policy, econometric applications and new approaches to forecasting.

There were also detailed tutorial sessions on the impact of local competition, business forecasting techniques and neural networks, as well as demonstrations by a number of suppliers of software and business research.

ITS intends to maintain and develop its links with ICFC. Next year's conference is planned for Seattle, Washington, in late September or early October. Details will soon be posted on the ICFC web site at <http://www.icfc.ilstu.edu/> and will be regularly updated.

Buenos Aires 2000

Preparations for the Conference are progressing well, with many stages already having been successfully completed. Each time it has been with the cooperation of people closely related to ITS.

The Call for Papers was distributed to over 22,000 people worldwide. The deadline for the submission of abstracts is officially October 30, 1999. However late submissions may be considered in cases of particularly unique and high - quality abstracts. Telefónica de Argentina S.A., one of the major sponsors of the Conference, has internally spread the Call for Papers, reaching over 650 people in the head office.

Web site <http://www.its2000.org.ar> has been up and running since May, 1999; however, it is continually updated as information changes and events progress. Several links have been made with universities and various institutions interested in Buenos Aires 2000.

An Organizing Committee has been appointed with representatives from all over the world, including important representation from Argentina, Brazil and other Latin American countries.

In striving to make Buenos Aires 2000 the best ITS conference yet, we have added various innovations in contrast to previous biennial conferences. For the first time, two coordinators have been appointed for each sub-theme of the conference. We believe that their diverse origins will, undoubtedly, enrich the approach of each sub-theme.

A Program Coordinator has been named, leading and supervising the work of all the sub-theme-coordinators, giving unity and strong coherence to the academic development of the conference. This responsibility rests with Lorenzo Pupillo, from Telecom Italia.

A Scientific Committee has also been appointed, consisting of the sub-theme coordinators of the conference and other people closely affiliated with ITS. This special

committee will be in charge of assessing the abstracts, as well as the overall academic design of Buenos Aires 2000. This committee has scheduled its next meeting for November 21-23. As a result we expect to have a dynamic preliminary program by the end of the year.

Although much has been accomplished thus far, there is still much to do. We are encouraged as we now visualize the fruits of so much work by so many distinguished people at the turn of the new millennium.

We, the Organizing Committee of Buenos Aires 2000, encourage you to become involved with the first

ITS conference of its kind in South America. We invite you to become part of an open, colorful and imaginative team that sees no limits to possibilities arising from innovative ideas. We welcome you to expand your personal and professional networks to include this part of the world.



Connections

Nominations Committee: A year ago the ITS Board flagged the importance of more complete representation worldwide in its membership. The Nominations Committee is interested to receive notice of the most capable and committed candidates for balanced country/regional representation. The Board also maintains a rough balance between members from research institutions and those from industry and policy. For the procedures to submit candidates to the Nominations Committee, contact the Co-Chairs Bob Olley and David Allen at David_Allen_AB63@post.harvard.edu

Finance Committee: The Finance Committee has the responsibility of

handling all ITS funds and compliance functions. Assisting the ITS Treasurer, Lee Schmidt, in this activity are Mr. Hidenori Fuke, Tokyo, Japan, and Dr. Hans Levenbach, New Jersey, USA. Both sit on the ITS Board of Directors.

ITS' major revenue sources are from corporate and individual member fees, as well as any surplus resulting from ITS Biennial Conferences. The major sources of expense are the subscription costs of the journal, which is distributed to all current members, and the cost of administrative functions necessary for the Secretariat to operate the organization.

The compliance duties are mainly filing of income tax forms with the U.S. Government (ITS is incorporated under U.S. law) plus maintaining Bylaws and Operating Procedures to assure orderly functioning of ITS. (Note: ITS is a tax exempt organization under U.S. law; however, filing of tax forms outlining sources of revenue and expenditures and the general functions of the organization are necessary.)

Currently, the financial condition of ITS is good due to the successful operation of key committees, namely the Conference Committee, the Membership Committee and the Publications Committee.

Special Marketing & Promotions

Committee: The first of two undertakings highlighting this committee's activities is the creation of a custom-built web site that will put ITS at the leading edge of virtual and interactive services an organization is able to offer its members.

The second is an ITS promotional brochure that will be both informative and appealing to potential new members. The ITS Executive as a whole has now provided suggestions on the latest draft, and final changes are now being incorporated.

The objective is to have a brochure as an easily deployable marketing tool appropriate for distribution at any telecommunications or technology conference, as well as being a credible tool that each ITS member can use in promoting the organization through his or her individual networks.

Once the brochure is printed, copies will be distributed to all ITS members.

The Special Marketing & Promotions Committee is also responsible for the publication of **Interconnect**, the ITS newsletter, for distribution to ITS members three times yearly.

Member Profile



Leland Schmidt

Lee Schmidt is a graduate of the University of Minnesota with a degree in Economics. Immediately after graduation in July, 1959, he joined GTE, a major telecommunications services firm operating multi-nationally. His entire career, spanning almost forty years, was spent in various capacities with GTE, primarily in public policy, regulation and strategic planning matters.

From 1965 to 1984, Lee's primary focus was on the U.S. domestic public policy arena, dealing with various state and federal regulatory agencies and legislative bodies.

It was during this time that the philosophical paradigm was shifting from regulation of monopoly telecom services suppliers to one of competitive supply of services. Therefore, there was a transformation of the entire basis of public policy application to the telecom sector of the economy.

After 1984, Lee, in addition to continuing to oversee these matters within the U.S., added the international

scene to his portfolio. From 1989 through to his retirement from GTE in October, 1998, Lee was heavily involved in a wide range of international negotiations. He helped countries transform their telecom sectors from state ownership to private ownership. His long experience in telecom public policy matters was very useful in the negotiations in foreign nations.

Lee became involved in ITS activities in the early 1980's. After several years of attending and speaking at ITS conferences, Lee was appointed to the ITS Board of Directors at the Venice Biennial Conference in 1990. He was subsequently elected ITS Treasurer at the ITS Biennial Conference in Seville in 1996. Even after his retirement from GTE, Lee continues to be very active in ITS matters. He believes ITS activities keep him involved in critical telecom/information service public policy debates.

Besides, he likes to meet up with his many friends world-wide and (of course) travel to interesting places!

info Well Received by ITS Members

The launch of **info**, the journal of policy, regulation and strategy for telecommunications, information and media, has been very well received by ITS members. The journal provides a serious forum for discussion of information-age issues for both ITS members and a wider business, academic and policy making readership.

Now into its fifth issue, topics covered by **info** include: democracy, privatization and the governance of cyberspace; the web and the changing media economy; convergence -

navigating bottlenecks in digital pay-TV; can everyone profit from GMPCS; telecoms transition in Sri Lanka; the price of telecom competition; extending universal service; access to



the copper loop and availability of high bandwidth services; telecom demonopolization - why did India get it so wrong?; toward third generation mobile telecommunications; employment in the information age;

communications and the end of sovereignty; mining and mapping web content.

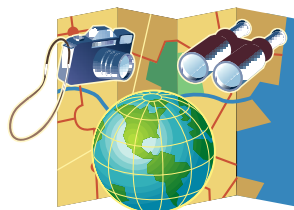
Colin Blackman, editor of **info**, said, "The reaction to the journal has been terrific from ITS members. There seems to be a real need for a serious yet readable publication in this field."

The journal is also available online to ITS members. For information on how to register, go to <http://www.camfordpublishing.com>.

At a Glance

The world's largest set of interconnected trials of advanced communications, The Advanced Communications Technology and Services Programme, simply known as ACTS, is the focus of the EU's research effort to accelerate deployment of advanced communications infrastructures and services.

ACTS brings together over 1000 bodies including leading edge users, service providers, network operators,



broadcasters, manufacturers, research and educational institutions and consultants. Other programmes such as Telematics, ESPRIT (information technology) and COST-Telecom (Co-operation in Science and Technology) complement the ACTS Programme. There is also close co-operation with other bodies including Eurescom and ETSI.

ACTS projects are grouped into five domains and one horizontal (supporting) domain:

- Multimedia Services

- Photonic Technologies
- High Speed Networking
- Mobility, Personal & Communications Networks
- Service Engineering, Security & Communications Management
- Horizontal Actions

For more information check the ACTSLINE website at <http://www.actslines.org> or email to info@actslines.org.

Interconnect

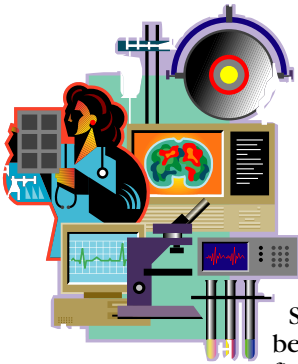
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Academic Alley

Tracking the Who's
and Where's of Research
& Development

Over the
past two
decades,
Charles
Steinfeld has
been a central
figure in

research on organizations and
emerging communication technologies,
with strong connections in Europe and
North America.

His work has helped to see beyond
the hype that characterizes much of
the public discussion about new
communications and information
technologies. He has been a frequent
speaker at various ITS events.

Charles Steinfeld began studying
information and communication
technology uses and impacts while a
doctoral student at the Annenberg
School for Communication at the
University of Southern California from
1977 to 1983. During this period,
Steinfeld also spent part of a year as a
visiting member of the technical staff
at Bell Telephone Labs in Murray Hill,
New Jersey, where he worked on
methods to assess organizational needs
for new information services. His
doctoral dissertation was a study of the
use of electronic mail in the Xerox
Corporation, renowned at the time for
their innovations in computer
networking and computer mediated
communications.

He joined Michigan State University in
1985, and for much of the 1980's, most
of Steinfeld's research emphasized the
way in which individuals used new
media in organizations, and the effects
this use had on organizational
processes. He helped develop new
theoretical perspectives, in particular
social influence models of
communication technology use, that

widely influenced organizational
communication and IT researchers. His
book with Janet Fulk, Organizations
and Communication Technology, was
widely adopted as a text in both
information systems programs and
communication programs.

In the late 1980's and early 1990's,
paralleling the emergence of
interorganizational networks, Steinfeld
began to study the use of information
technologies across organizations. A
particular focus was on the strategic
use by firms of public data networks
such as the Teletel in France, enabling
them to establish interfirm networks at
low cost. He began collaborating with
researchers at the Institut National des
Telecommunications (INT) in France,
as well as the Centre National d'Etude
des Telecommunications (CNET) on
research on professional uses of the
Minitel.

During a leave from MSU, Steinfeld
worked at the INT and then at Bellcore
from 1991 to 1993. With colleagues at
Bellcore and INT, he then began a
series of comparative U.S. - France
studies to investigate the effects of
public data networks such as the
Internet and Teletel on market
structures. In this research, involving
surveys of hundreds of firms across
different industries, Steinfeld and
colleagues examined the "markets
versus hierarchies" question,
investigating whether the Internet is
leading to more "market-like" relations
between firms in place of the
"hierarchical" or "tightly coupled"
relations promoted by earlier
proprietary systems. They were able to
demonstrate empirically that even on
such public and open data networks,
the "lock-in" effects of network-based
transactions remained strong.

On the Use of ICT: Profile of an Early and Leading Researcher - Charles Steinfeld

This stream of research has evolved in
the last several years to include a more
specific focus on electronic commerce.
Steinfeld's early work in
intermediation in e-commerce
questioned the early views about
disintermediation and stimulated
thinking about the role of new
Internet-based intermediaries. More
recently, his work has focused on the
role of physical presence in electronic
commerce, arguing that there can be
strong synergies between on and
offline businesses.

For references to Steinfeld's
publications, see <http://www.telecommunication.msu.edu/faculty/steinfield/>.

Editor's Notes

- Just a reminder to all ITS members
that we would like to have a
photograph of you for the photo
library. We also want to know what
you are up to...your projects, your
writings, your successes. Don't be shy.
ITS' strength is its members.

- Don't forget that Interconnect will
publish letters to the editor in "Forum".
Your letters can be on any matter of
interest or importance to you within
the telecommunications industry,
academia, the ITS itself or even
Interconnect. This is your
newsletter...so feel free to use it.

- The ITS Executive Committee and
the Editorial Board have agreed to
create a classified section for
Interconnect. We will be pleased to
design and publish small adds of ITS
members free of charge. Adds should
be limited to 40 words (maximum),
including a contact email address or
phone number.