IFIP newsletter

International Federation for Information Processing

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Message from the Acting President of IFIP to the Congress Delegates

The World Computer Congress is the most important single event in the **IFIP** program of activities. Up to now, 16 Congresses have been organized by **IFIP**. The 16th, held in Beijing, China, in August 2000, was by all standards very successful. The 18th will take place in Toulouse, France, in August 2004. **IFIP** is delighted to convene its 17th Congress in Canada. The choice of Montreal as the venue shows **IFIP**'s appreciation and recognition of the Canadian contributions to the development of information processing.

The organization of an **IFIP** Congress is not an easy task. I can say this from my own experience as co-chairman of the Organizing Committee of the 15th Congress, in Vienna and Budapest in 1998. Since the 1998 **IFIP** General Assembly selected Montreal as the site for Congress 2002, preparations have been under way with contributions from many **IFIP** volunteers and Technical Committees and from **IFIP** as a whole. We are convinced that these efforts will result in a successful Congress.

IFIP Congress 2002 and its specialized streams are focused on the latest developments in the IT field and offer a unique opportunity to discuss and contribute to subject areas having a critical impact on the use and application of IT in the future. The Congress theme, Information Technology for our Times: Ideas, Research and Application in an Inclusive World, was carefully chosen. It reflects the fact that all professionals, irrespective of their geographical regions, are offered the chance to join, contribute and benefit from the achievements and experience of their colleagues on the way towards the Information Society.

I take this opportunity to thank everyone who has contributed to the organization of Congress 2002. In particular, I express **IFIP**'s grateful thanks to the Program and Organizing Committees and the hosting organizations, the Canadian Information Processing Society (CIPS) and La Fédération de l'informatique du Québec (FIQ). I also wish to thank the Congress 2002 delegates for choosing to join us in Montreal.

Walter Grafendorfer

Acting President of **IFIP**

The IFIP Presidents

*by Mr. Plamen Nedkov**

[Early this year, **Mr. Plamen Nedkov**, Executive Director of **IFIP**, initiated a project to recognize the accomplishments of the former presidents of **IFIP** to record their visions of the future of the Federation, and to find out what they are doing now. This article contains his observations, the presidents' replies to his questions, and obituaries of the deceased presidents. — Editor]

IFIP, an organization with a dynamic field of activity, needs to be "on the go" in order to remain relevant, proactive and reactive to the external environment and to our Members' expectations. This, however, does not necessitate the reinvention of the wheel, as there are matters for which we can resort to the wisdom and experience of previous **IFIP** officers. **IFIP** is the result of the cumulative efforts of several generations of representatives of various professional and cultural backgrounds, which form the mold and backbone of a truly international organization. For this reason, it is important to look back and learn from our predecessors periodically as we stride forward.

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* **IFIP** Executive Director

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IFIP NEWSLETTER

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The Secretariat can also answer inquiries about **IFIP**.

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Reprinting in national and local information processing periodicals is encouraged. Acknowledgment to **IFIP** would be appreciated.

Kindly submit material for the *IFIP Newsletter* three months before the publication date.

Please send announcements of conferences, workshops, and other meetings directly to the Secretariat, which prepares the Calendar of Events. Calls for papers should be sent to both the Secretariat and the *Newsletter* editor.

IFIP on the Internet

IFIP information (including this *Newsletter*) is available through the Internet as follows:
WWW: http://www.ifip.or.at
anonymous ftp: ftp.ifip.or.at

PRESIDENTS *continued from page 1*

Twelve individuals have provided leadership to **IFIP** during a period of 41 years. [In addition, **Dr. Walter Grafendorfer** (AT) has served as Acting President since November 2001 for **Prof. Robert Aiken** (US), who was elected to serve from September 2001 to 2003 but was forced by personal and health reasons to resign.] The presidents are:

	Presidential Term
Isaac Auerbach † (US)	1960–1965
Ambros Speiser (CH)	1965–1968
Anatol Dorodnicyn † (RU)	1968–1971
Heinz Zemanek (AT)	1971–1974
Richard I. Tanaka (US)	1974–1977
Pierre A. Bobillier (CH)	1977–1983
Kaoru Ando (JP) †	1983–1986
Ashley W. Goldsworthy (AU)	1986–1989
Blagovest Sendov (BG)	1989–1992
Asbjørn Rolstadås (NO)	1992–1995
Kurt Bauknecht (CH)	1995–1998
Peter Bollerslev (DK)	1998–2001

Three of them — **Auerbach**, **Dorodnicyn**, and **Ando** — are no longer among us. For the remaining nine, **IFIP** presents an attraction of varied intensity. Irrespective of that intensity, they are and will remain an intrinsic part of the Federation.

In late January 2002, I was in contact with the nine living former Presidents and invited them to respond to the following four questions:

1. During your tenure as IFIP president, what, in your opinion, were the most significant IFIP developments and activities?

2. Are you currently interested in IFIP? If so, are there any developments you like in particular and you feel should be further encouraged?

3. Are there any specific issues you find important for IFIP to address?

4. Please share with us a few words about yourself at present: professional occupation, personal projects, hobbies, and other activities.

The presidents were candid and enthusiastic about this project. The interviews were done in February through May and were posted individually at

http://www.ifip.or.at/secretariat/presidentday.htm

in the order in which they arrived. Now the project is complete, and we are pleased to offer the full collection.

It was a pleasure to work with former Presidents **Ambros**, **Heinz**, **Dick**, **Pierre**, **Ashley**, **Blagovest**, **Asbjørn**, **Kurt**, and **Peter** on this project and to feel how faithful they continue to be to **IFIP** and its mission.

Prof. Ambros Speiser (CH)

(president 1965–1968)

Swiss exports? Medicine, technology, watches, chocolate. … What about presidents? **Prof. Ambros Speiser** was the first of the magnificent Swiss trio to lead **IFIP**. **Ambros** was the second **IFIP** president, from 1965 to 1968. Before that, he was appointed by the first **IFIP** Council meeting in 1960 as **IFIP** Secretary–Treasurer. What is **Speiser**'s story for us? He tells us how **IFIP** made bureaucrats in the Soviet Union and IBM–France more considerate and how Germany was united (and then separated) in **IFIP** three decades before the Berlin wall collapsed.

*Question 1 (significant **IFIP** developments):* In my presidency, important events included the increase in membership (Chile, Hungary and Yugoslavia were admitted). During my term as Secretary–Treasurer and prior to my assuming the Presidency, an important step was a change in the management structure: Previously the Federation was governed by a Council, which was an assembly of all delegates. As the number of participating countries and, accordingly, of the Council members increased, it became necessary to create the General Assembly (GA), consisting of all delegates and meeting once a year, and the Council, a smaller group including the officers and a selection of delegates, meeting twice yearly. In 1966, the Secretariat and

† deceased

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Prof. Wilfried Brauer Receives Auerbach Award

The fifth **IFIP Isaac L. Auerbach** Award, commemorating our founding president, was presented to **Prof. Dr. Dr. h.c. Wilfried Brauer** (DE), a former vice-president of **IFIP**, during **IFIP** Congress 2002 in Montreal, Canada in August. The Award is presented biennially "... to the individuals whose service in support of **IFIP** in its mission is deemed by their peers to be extraordinary." The recipients are nominated by Member societies of **IFIP**, and the selection is made by the **IFIP** Executive Board. **Prof. Brauer**, in addition to his major contributions to **IFIP** has made his professional mark in the area of theoretical computer science and in computer science education, in Germany and worldwide, as well as in the arena of professional-society organization. A medallion and cash award are conferred with the Award.

Early Career

Prof. Brauer was born in Berlin in 1937. While he studied mathematics, physics, and philosophy, from 1956 to 1961 at the Free University of Berlin, he worked in industrial laboratories. He wrote his master's thesis on Turing machines and Markov algorithms while working as a computer operator, programmer, and applied mathematician.

From 1964 to 1971, he worked in Bonn as a university assistant and at a research and development center. He concentrated on pure mathematics — algebra, in particular — and wrote his Ph.D. thesis on inverse limits of finite groups.

In the summer of 1967, **Prof. Brauer** gave a course on the theory of algorithms and recursive functions, from which the graduate curriculum in computer science was started at Bonn University, and in 1970 he presented the first undergraduate course in informatics, which formed the basis of the informatics curriculum in Bonn. In 1971, he became the first full Professor of Informatics in the University of Hamburg and served as head of the Department of Informatics several times. Since 1985, he has been Professor of Informatics at the Technical University of Munich.

Prof. Brauer has written text books, monographs, scientific papers, and many articles and reports, and edited several books. He is the editor of a number of technical journals and has served on the editorial boards of various publications.

Major Contributions

An idea of the significance of his contributions to theoretical computer science may be gathered by reading the following material taken from the preface of a book, *Foundations of Computer Science: Potential, Theory, Cognition* (a surprise gift presented at a ceremony celebrating his 60th birthday, published by Springer–Verlag in 1997 as part of the Lecture Notes in Computer Science series). The three editors, formerly assistants of **Prof. Brauer**, are now professors at Hamburg University. We quote here parts of their preface, which indicate the role he has played in computer science in Germany.

By their contributions to this volume (49 papers by 70 authors), the authors acknowledge the work of **Wilfried Brauer** on the occasion of his sixtieth birthday. **Wilfried Brauer** has devoted his scientific life to improving the foundations of computer science by opening up the view to new developments in the area and by critically reviewing the existing foundations. Having a background in pure mathematics (algebra and group theory), he was among the first authors contributing to the emerging field of computer science in the 1960s by publishing on the theory of finite automata ... This work is documented in his well known monograph on automata theory published in 1984.

In the 1970s, **Brauer** pursued his scientific work by studying various types of (non finite) automata and formal languages. In those days, he extended his field of interest to distributed systems, in particular to Petri nets. Already during his stay in Hamburg, ... he contributed to the foundations of artificial intelligence with numerous publications, ambitious research projects, and valuable advice to other researchers in the field. ... Through these activities, **Wilfried Brauer** has helped improve the exchange between the theoretical computer science and artificial intelligence communities considerably.

Further publications of **Wilfried Brauer** deal with the future development of computer science and its potential, with its place in the landscape of sciences, with an appropriate name for the discipline, and with educational issues. Last but not least, ... by his engagement in computer organizations, he successfully contributed to making computer science a mature discipline.

Another important impact of **Wilfried Brauer**'s work in the field is due to his students, about twenty of whom are professors today. In addition to students, friends and colleagues have contributed to this volume, thus reflecting — in some sense — the impact of **Wilfried Brauer**'s work in different areas of computer science.

We are grateful for the privilege of working with **Wilfried Brauer** and receiving his valuable advice....

Efforts in Education

Prof. Brauer is also concerned with problems of informatics in education. In addition to his work on the **IFIP** Technical Committee on Education (TC3), he was chairman of the Technical Committee on Education of the *West German Informatics Society (GI)* from 1972 to 1976, served on many other committees, organized several conferences, and wrote a number of papers on this subject.

He has also been involved in many other professional-society activities. He has served as vice-president (1975–1977) and president (1977–1979) of GI. He was elected vice-president of the European Association for Theoretical Computer Science (EATCS) in 1985 and president in 1994 and has been chairman or member of a large number of technical committees and conference program committees.

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Recipients of the IFIP Isaac L. Auerbach Award

1994: **Prof. Calvin C. Gotlieb** (CA)
1996: **Prof. Lubomir Ilev** (BG)
1998: **Prof. Heinz Zemanek** (AT)
2000: **Prof. Asbjorn Rolstadås** (NO)
2002: **Prof. Wilfried Brauer** (DE)

BRAUER *continued from page 3*

In 1996, **Prof. Brauer** was awarded the degree of Honorary Doctor of Sciences by the Department of Informatics of the University of Hamburg. He is the second recipient of this outstanding honor, the first being the late German computer pioneer **Prof. Konrad Zuse**, to whom **Prof. Brauer** handed the award in 1979. Since 1996, **Brauer** has been a member of the Bavarian Academy of Science.

IFIP Activities

Upon **Brauer**'s retirement from the **IFIP** General Assembly in 1999, **Prof. Kurt Bauknecht** (CH), then president of **IFIP**, thanked him for his service to the Federation with the following remarks.

> **Wilfried Brauer** is an **IFIP** Silver Core holder since 1986. His **IFIP** work started in 1974 as member of the Technical Committee on Education (TC3). He then served as member of the International Program Committee for the 2nd World Conference on Computers in Education, in Marseilles, France, in September 1975, vice-chairman of TC3, and co-author of *A Modular Curriculum in Computer Science*, a Unesco–**IFIP** curriculum, published by Unesco in 1984 and translated into several languages.
>
> He first participated in an **IFIP** General Assembly (GA) as TC3 vice-chair in 1984; since then, he attended all GA meetings and all Councils but one. For the period 1985–1990, he was chairman of TC3. Since 1985, he has been the representative of Gesellschaft für Informatik (GI, the German Member society) to the GA. He served as trustee, chairman of the International Program Committee for the 12th World Computer Congress (Madrid in 1992), and general chairman of the 13th **IFIP** World Computer Congress (Hamburg in 1994). He has been a vice-president since 1994 and also served as chairman of the Publications Committee and Treasurer Assembly.

On a lighter note, we report that **Prof. Brauer** and his wife and helpmate Ute are avid tourists and opera buffs. In his college days, he even performed on the Berlin Opera stage, as the third spear carrier from the left in *Nabucco*, as a moving tree in *König Hirsch* and in other, similar roles. □

PRESIDENTS *continued from page 2*

Treasury became more professional. Previously, my secretary and I had done this work in my office as Director of the IBM Research Laboratory in Zurich. As the workload increased, it was decided to move the Secretariat and Treasury to the British Computer Society in London. After the 1968 Congress in Edinburgh, these operations were transferred to Geneva and later to Laxenburg, Austria, in 1995.

Among the many events, there are a few episodes that come to mind — not very important, to be sure, but still worth being remembered. One was the preparation of the Council meeting in Tbilisi (Tiflis) in the Soviet Union in the spring of 1968. At the previous meeting in Mexico City, the Soviet representative, **Anatol Dorodnicyn**, had invited the Council to meet in the Soviet Union. Everyone agreed. When I asked whether a visitor's visa would be provided for all the delegates, the answer was, yes. "Really for everyone, without exception?" "Yes, of course." Two weeks before the meeting, the event that I had feared occurred: **Dov Chevion** called me from Israel, saying that his application for a visa had been rejected.

So I took the telephone and called **Dorodnicyn** in Moscow. I reminded him that he had promised visas for all members without exception, and I told him in no unclear terms that I would cancel the entire meeting if **Chevion** did not have his visa in time. I told him that I had asked my secretary to prepare a telegram for each of the members, calling the meeting off, and that these telegrams would be sent out within a week. At the last moment, **Chevion** called me, saying he had received word that he should travel to the Soviet Embassy in Vienna where his visa would be ready. Finally, after waiting in Vienna for a full day, he was allowed to travel, and the meeting could take place. Later, I learned that **Dorodnicyn**, in his fight with the Soviet bureaucracy, was almost driven mad before he finally was successful.

Another event worth remembering was our visit to the IBM Research Laboratory in La Gaude, France. We had scheduled a GA meeting in Nice, France, in 1968, and IBM had invited us to take half a day off for a visit to their Research Laboratory in nearby La Gaude. To my question whether all participating members would be welcome, the answer was, of course, yes. So when we arrived with our bus, we were cordially greeted and asked into the lobby. There we were politely told that the representative of the Soviet Union could not participate in the tour; he would have to stay in the lobby. My answer was straightforward: In that case nobody will participate. I said that I had instructed the bus driver to wait and that we were ready to go back to Nice and visit a museum. Understandably, this caused the utmost embarrassment to our hosts. Finally, after about a half an hour of waiting — during which time, as I learned later, there were frantic telephones calls going back and forth between Nice and IBM Headquarters in Paris — we were told that everyone, including **Dorodnicyn**, would be welcome. I could ask the bus driver to leave, and there followed a most interesting visit.

Political undertones became visible also on another level. At the time of my presidency, Germany was represented by Deutsche Arbeitsgemeinschaft für Rechenanlagen (DAFA), which insisted that it represented East Germany as well as West Germany. Accordingly, on the meeting table, the delegate's seat was marked "Germany." Then suddenly at one meeting, an overzealous secretary had prepared a sign that read "Federal Republic of Germany." Fortunately, I discovered the mistake before the delegates arrived, and the sign was replaced in time. Otherwise, this

From the Editor

This issue of the *IFIP Newsletter* is unique. Rather than including primarily news about our Federation, this issue concentrates on two major articles: one about **Prof. Wilfried Brauer** (DE), the recipient of the 2002 **IFIP** Isaac Auerbach Award, and the other, a long article honoring our twelve past presidents.

Some of our readers may have noticed that they have not received any issue of the *Newsletter* recently. I hereby point out to them that they have not been removed from our mailing list; in fact, there have been no issues since last September. We hope to resume regular publication with the December issue.

Jack Rosenfeld

would have been taken as an indication that, by reserving the seat for the Federal Republic of Germany, we were prepared to allow another seat for the German Democratic Republic. But the fiction of a unified Germany could not be maintained much longer. In 1968, the West German representation went to "Gesellschaft für Informatik," and a separate representation for East Germany had to be admitted.

Question 4 (personal activities):
I am one of the few **IFIP** Presidents (perhaps the only one?) who left the information processing field after his **IFIP** term. In 1966, I decided to make a complete change in my life and to accept the position of Director of Corporate Research of Brown Boveri, a large international corporation based in Switzerland, active mainly in the electric-power field. Accordingly, steam turbines and electric generators, rather than computers, became the objects of my daily work. The two years of **IFIP** Presidency, while an employee of Brown Boveri, did present some problems. While my company was generous in allowing me time (and also travel expenses) for my **IFIP** work, in my contacts with colleagues and with top management, I met little interest in **IFIP**. Certainly, the company is not to be blamed, as priorities were simply different. Of course, I found new and interesting challenges, not only in my main job, but also in national science policy and in professional societies, culminating in my Presidency of the Swiss National Academy of Engineering from 1987 to 1993.

My hobbies today are writing articles in professional journals and in the daily press, as well as books on scientific subjects for lay readers. Also, I give talks (on the history of computers, among other subjects), now of course with the help of my laptop computer and a beamer. My family, with ten grandchildren, is happy to find that their grandfather now has more time for them.

MONTREAL 2002
World Computer Congress
XVIth Edition

Prof. Dr. Heinz Zemanek (AT)

(president 1971–1974)

Prof. Dr. Heinz Zemanek was the fourth **IFIP** president. **Heinz** is a cultural ambassador of Austria, the region, and the **IFIP** community. There is so much to say about him that anyone who assumes the task to write extensively about him risks missing something substantial. His **IFIP** connections long preceded the day he attended his first **IFIP** meeting. They go back to 1936, when young **Heinz**, as a scout, mastered switch-box communications at a summer camp in Luxenburg. Did he suspect that the switch box he operated would connect him to a worldwide organization for the information age that would come to Luxenburg? Some 66 years after his scout camping experience, **Heinz** believes that tele-operation will trigger a new era. Will **IFIP** be the spearhead? He also gives us his visions and thoughts on

women in IT
the **IFIP** Congress
mausoleums and archives

*Question 1 (significant **IFIP** developments):*
The developments during my term (and during my vice-presidency while I was a kind of acting assistant to **President Dorodnicyn**) are described in extenso in *A Quarter Century of IFIP* (ed. Zemanek, North-Holland, Amsterdam, 1986, © **IFIP**). Here is only a list of keywords: Technical Committee (TC) 4 on Health Care and Biomedical Research, TC6 on Communication Systems , TC7 on System Modelling and Optimization, TC9 on Relationship between Computers and Society (and its First Conference on Human Choice and Computers), Congresses '71 and '74, MEDINFO '74, **IFIP** Summaries 1971 and 1974, Congress '80 held on two continents, **IFIP** Technical Day, **IFIP** Silver Core Awards, **IFIP** Annual Report, Five International Associations Coordinating Committee (FIACC), Activity Planning Committee (APC), Cognizant Persons.

*Question 2 (current interest in **IFIP**):*
Yes, I am still interested in **IFIP**, and I keep close relationships to the **IFIP** Executive Director and the Laxenburg office. In my archive, discussed later, I have an unusual collection of **IFIP** documents.

It is evident that the transition from the mainframe to the PC and further to a general network of them (the Internet) changed the character of **IFIP**'s subject, the nature of information processing. Consequently, the Federation has the duty to adapt to the new situation. Global interconnections increase the importance of global cooperation and so increase the significance and value of **IFIP**.

A future additional area of similar importance is tele-operation. He who dials a phone number or selects an Internet address triggers tele-operation: certain switches, real or virtual, establish the interconnection. It is easy to imagine the generalization to other kinds of distant action. It is less easy and will take some time (but it will happen) to standardize the actions and their commands. This will trigger a new era of information technology. TC6 of **IFIP** was instrumental in starting the Internet — **IFIP**, I am sure, will establish a TC to prepare for this new era.

*Question 3 (important issues for **IFIP**):*
The issue I would propose to the heart of **IFIP** is information technology for handicapped people. There are initiatives and some results, in **IFIP** itself and even more in some Member societies, but **IFIP** as a whole has not put enough stress on this subject, which is one of the most worthwhile and human issues that exist in our field.

We do not have enough women in our profession, and we need more female spirit. My idea is not to have women imitating men (men can do the male jobs better). We need more of the intuition, of the generality, of the user's view, of the female user's view (as specialists, men are good enough) that women are excellent at. That is not achieved by electing 50% women to our committees.

And this leads to the wish I expressed in *36 Years of IFIP* (ed. Zemanek, **IFIP** Secretariat, Laxenburg, Austria, 1996): **IFIP** should work to regain the universal nature of the **IFIP** Congress, which they had in the first years — not an agglomeration of specialist conferences. Information technology is all-embracing. Our specialists cannot have too much of an exposure to general concepts.

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PRESIDENTS *cont. from prior page*

Let me come back to the spirit of our founder: in a time of American predominance in computer technology and in an era of "cold war," **I.L. Auerbach** conceived and created an instrument of cooperation and mutual understanding (including the "enemy"), which was also a tool of peace. People who understand information technology know the importance of global cooperation and are workers for peace.

This idea of **Auerbach** is as valid today as it was in his time. **Auerbach** had to convince his contemporaries to join his tool for peace. **IFIP** has to detect the present nature of this Auerbach principle and to implement the tool necessary for our days.

The cooperation with the successor nations of the U.S.S.R. and with China is as urgent as it was 40 years ago. I think it is not powerful enough. And there are further gaps to be bridged. Here is only one idea (South America would be another): The Islamic world is not yet strong in information technology and has, because of its philosophical base, lots of obstacles to master before getting stronger. A cold war of a different nature may develop. People who understand information technology in those countries will be workers for peace for the same reason: they will recognize the need for global cooperation and mutual understanding. But without promotion by **IFIP**, this process may go much too slowly for all those involved.

Question 4 (personal activities):
I retired from IBM in 1985, but I not only continue to lecture at my Vienna University of Technology. I have taught there since 1947 — more than 50 years — and during all that time I have also had an office in the electrotechnical building. I publish, and I am an invited speaker (all too often). The subjects on which I lecture now are the same ones I would name as my present main fields of interest and as my hobbies: history of information technology and automata, with computers, of course, as the center of gravity; human aspects of our field (relationships between brain and computer); and the theory of design, which I call abstract architecture (what makes a design good?).

Over the last years, I suffered a sad defeat in my attempt to start an archive for the History of Information Technology in Austria (including its relationships to the world development, the U.S. in particular). In spite of the support by the Ministry of Research (an area of 2000 sq. ft. had been rented), the effort did not succeed, and I withdrew from it, saving my material — the main body of the archive element when I left — at my university, where I got (in two steps) the necessary space and furniture. But this is a mausoleum rather than an archive: a storage of dead material without custodians. There is too little interest for history in our time and, there are no people willing to contribute to the enterprise (even if paid).

I was appointed **IFIP** Historian. That is not a voluminous job. In my opinion, history is an elementary subject. Whatever topic one studies, understanding its nature is only possible by knowing its history. Our time ignores this fundamental truth, and my experiences (like the ones described above) inhibited the inclusion of the subject of history under your question 3 on important issues for **IFIP**. It would have been a useless repetition.

I trust in the life of **IFIP**, simply because it is important for all mankind to be aware of information technology, to foster it beyond the immediate technological nature, and to do this in international, global cooperation. (If there is any global village, **IFIP** is the global village.) The **IFIP** headquarters (I witnessed its growth from London and Geneva to Laxenburg) has been made an excellent tool and offers still much more than is actually used. Information Technology has a big future, and **IFIP** has a big future. Find the right people, and it will prosper.

Dr. Richard Tanaka (US)
(president 1974–1977)

Dr. Richard Tanaka is another brightly shining star in the **IFIP** presidential galaxy. He continues to this day to "turn around" companies, which IT giants like Microsoft are eager to acquire. In this exclusive interview, among many interesting episodes, **Dick** recalls TC6 meetings in South Africa and Brazil where first-time-ever demonstrations were made of possibilities to establish an open, global network based on the ARPANET (then primarily used by universities and the U.S. defense establishment). These demonstrations incorporated technological concepts that were the precursor of the Internet.

Question 1 (significant IFIP developments):
The time span of my comments might overlap the boundaries of my term as President, since I worked closely with both my predecessor and successor, **Heinz Zemanek** and **Pierre Bobillier**, respectively. We inherit, enhance, and then hand onward, so that achievements often become stepping stones. We had a memorable Toronto Congress, in spite of an airline strike and a potentially disruptive political demonstration aimed at one of our Members. Moreover, an international conference on medical informatics, then under the IFIP umbrella and held contiguously with the Congress, was successful, even though we had to replace the conference's management late in the planning cycle. We had increases in the level and span of TC and WG (Working Group) events, re-staffed the Geneva Secretariat, and measurably improved financial and administrative processes. These all moved **IFIP** to a better level, but, as with the technology itself, results, however noteworthy and useful, are briefly noted and then overtaken by later developments.

But, there is a more enduring record, shared by all — **IFIP**'s success in dealing with the tensions of the Cold War. **IFIP** was uniquely positioned to provide a common meeting ground for East and West. Every event in which both sides could participate carried underlying importance. A GA or Council meeting — in Tashkent or Dresden, in London or Tokyo — attended freely by a high percentage of delegates, was special. Every TC or WG event in one of the Socialist countries, held with relatively unrestricted access, was special. Every Congress, wherever held, for reasons of diversified attendance, was special. Personally, I felt some additional obligations, since I was also the U.S. delegate. While there were moments of pressure from various sources, plus the perennially unpredictable and capricious visa problems, **IFIP** continued to maintain a balanced posture respected by all.

Also, without slighting any of the considerable achievements of the other TCs, there was at least one event that I believe has had a unique and lasting significance. The TC6

charter encompassed various aspects of global communications, with digital technology as a foundation. However, for national and political reasons, defining a universal system would not have been practical. So, at the time, I understood that TC6 might work to define interface requirements so that systems in one country could communicate with those of another. However, the TC6 experts pointed the way to a better solution. A TC6 meeting in South Africa featured a first-time-ever demonstration, based on the Arpanet, of the possibilities of an open, global network. (Recall that the ARPANET was then being used primarily by universities and the U.S. defense establishment.) At a subsequent TC6 meeting in Brazil, a similar but improved linkage was demonstrated. Using a combination of land lines and satellite transmission, with linkages to two or three universities in the U.S. that acted as hubs, the demonstration incorporated technological concepts that were the precursor of the Internet. It's likely that not everyone understood at the time the significance of what was being demonstrated. (Many have claimed to be the inventors of the Internet. The participants in the demonstration, some as TC6 members and some as invited guests, are unquestionably associated with the development of the Internet; therefore, in my opinion, this event can appropriately be included in the chronicles of the invention of the Internet.)

Question 2 (current interest in **IFIP***):*
Working with **IFIP** was truly a worthwhile experience, not only because of the idealistic *principles underlying* **IFIP**, but for the joy and privilege of working with outstanding individuals. Naturally, my interest survives. However, many past members of WGs and TCs and, indeed, even past GA members have probably drifted away. Even though the excellent work of the Secretariat keeps me effectively updated, perhaps not everyone has the resources available to past presidents and Honorary Members. Maybe there are ways of maintaining linkages with the experience and talent embodied in the entity of past participants without compromising the ability of current participants to control and be responsible for the contemporary work of **IFIP**. Even something as simple as providing, at each Congress, a meeting place for past **IFIP** participants might re-establish some contacts.

Question 3 (important issues for **IFIP***):*
An important area of focus at the time was on the developing countries. I'm assuming that it is still true today. We operated, with a certain level of naiveté, on the assumption that information technology would help solve some of the economic problems of these countries. The task was large, the progress slow. We traveled frequently to Unesco in Paris to try to get funding for conferences and seminars, and to distant and sometimes uncomfortable locations to help stage them. Results, yes, but: nowhere near the level of resources needed!

Helping the developing countries is no less challenging than it was in the past, but with inexpensive PCs and Internet access, the tools today are much better. Unchanged is the fact that **IFIP** has access to the right kinds of technical experts. The sheer size of the task still defies a full solution, but I believe that **IFIP** must continue to keep this issue high on its agenda.

Question 4 (personal activities):
After my active years with **IFIP**, I was Chief Executive Officer and Board Chairman of four computer-related corporations — one at a time, of course — sometimes in the context of a "turn around," a euphemism for getting a company back onto a profitable growth path. After the last of these positions, I planned to retire, but that plan gradually evolved into one where I've become active as a member of Boards of Directors. Currently, I am on four boards of companies pursuing markets as diverse: as broadband telecommunications, high-resolution optical lithography, software services, and Internet-driven company management. Two other Board positions happily disappeared when the companies were acquired by other companies. These directorships allow me to work with experts who easily know much more about today's technology than I do and whose knowledge and expertise help keep me abreast of current developments.

As for hobbies, along with some minimal outdoor activities and keeping a couple of PCs updated, my latest project is to scan and transfer my large assortment of 35 mm slides onto CDs. Eventually, I'll find some of the pictures that **Heinz Zemanek** needed for **IFIP**'s historical records. Many of my photographs are the result of trips engendered by **IFIP** meetings, to places where business interests would never have taken me. For that, I am grateful.

Prof. Pierre A. Bobillier (CH)

(president 1977–1983)

Prof. Bobillier was the sixth **IFIP** President, with the longest period of service. Before his presidential term, **Pierre** served as **IFIP** secretary. Today, he is the keeper of the **IFIP** "Bible," as Chairman of the **IFIP** Statutes and Bylaws Committee. **Pierre** was one of the first to support our project by sharing with us his short account of a truly remarkable **IFIP** experience.

Question 1 (significant **IFIP** *developments):*
I was in charge as president from late 1977 (the end of the Toronto Congress) until the end of my second term in 1983. The main events or activities during this period are listed here by year.

1978: Launching the first issue of *IFIP News*; first joint meeting of TC/WG Chairmen with FPC, APC and Executive Board (afterwards repeated yearly); my attendance at the Unesco–IBI (Intergovernmental Bureau for Informatics) Conference on Strategies and Policies in Informatics, as **IFIP** representative (I convinced several official delegations to present a paper proposing Unesco–**IFIP** cooperation. Following these conference recommendations, **IFIP** established ICID (**IFIP** Committee on Informatics for Development).

1979: Euro **IFIP** '79 (organized in London as a large European event between Congresses '77 and '80); establishment of IMIA (International Medical Informatics Association), which replaced TC4.

1980: First "two-continents Congress," as **IFIP** Congress '80 was held in two consecutive weeks in Tokyo and Melbourne, a significant, nontrivial organization! An **IFIP** commemorative stamp was issued by the Japanese PTT.

1981: Closing the IAG (**IFIP** Administrative Data Processing Group) Foundation in

Amsterdam after many difficulties and in a very difficult climate; Third World Conference on Computer Education in Lausanne, a great success; publication of the *IFIP Information Bulletin* No 15, first special issue replacing the earlier "IFIP Summary."

1982: the South East Asia Regional Computer Confederation (SEARCC) was accepted as the first IFIP Regional Member; a new idea realized with the objective to better inform our Member societies and the public at large: publication by the journalist Ken Owen of papers on TCs 3, 6 and 10, reproduced in many Member societies' local journals.

1983 was a very important year for IFIP. Congress '83, the first in Paris (the first World Computer Congress actually took place in Paris in 1959, before the creation of IFIP); the first IFIP International Conference on Governmental and Municipal Data Processing, GAPP'83 (the first International Conference on Applications in Production and Engineering; IFIP/SEC'83 (the first IFIP Security Conference); TC11 (Security) was established; two new Affiliate Members were admitted: International Federation of Associations of Computer Users in Engineering (FACE) and International Joint Conference on AI, Inc. (IJCAII), bringing the number of Affiliate Members to six; publication of new articles by **K. Owen** on TCs 2 and 8 and on IMIA; and the creation of the *IFIP Newsletter* with **Dr. Jack Rosenfeld** as Editor, a very significant event.

Question 2 (current interest in IFIP):
I am interested in IFIP developments, especially in education, communications and human aspects, including ethics, which is going to play an ever-increasing role in our society. This relates especially to the use and practices of the Internet. I am, however, less directly involved since my "retirement" as the Swiss GA member and consider that new, younger people must grow in IFIP and contribute to its development with new ideas through its many committees.

Question 3 (important issues for IFIP):
These include:

- Education at all levels, acceptance of ICT (Information and Communication Technology) in all areas, including developing countries.
- IFIP has to do everything possible to ensure the correct utilization of all the means available today to establish, support and make new international laws and rules accepted in all countries.
- As the only truly international ICT organization, IFIP must continue to play its role among other international bodies.

GA and TC representatives in their countries and local communities should be reminded of their roles on a continual basis. This is the main communication channel between IFIP and the field. These representatives, among other duties, are in charge of communicating information from their countries to IFIP and from IFIP to their countries. Member societies should be reminded of the important duties of GA representatives and officers before every election.

Question 4 (personal activities):
Being retired in 1994 brought me the long-awaited time and freedom to select those activities most appealing to me, such as participation in professional associations, organizing and attending conferences, and writing articles.

I worked for several years in the Committee for Future Research Policy of the Swiss Science Council, where I contributed, among others, to two projects which I hope will be pursued: status and possible improvements of education and research in legal aspects of ICT in Swiss universities, and an interactive system for Swiss research projects where small and medium businesses could quickly find information on relevant research projects and activities. My many years of IFIP involvement have no doubt helped me in these activities, where international views are obviously essential.

I have been engaged for many years in several Swiss committees such as SARIT (Swiss Association for Researchers in Information Technologies), the SVI/FSI (Swiss Federation of Information Processing Societies), the Swiss Committee for IFIP (whose members are our TC delegates), the Swiss Informaticians Society and its Suisse romande section, where I chair the Activity Planning Committee. Some recent events were on digital signatures, e-voting, knowledge management, and e-learning.

My colleague **Raymond Morel** (Swiss GA member and vice-chairman) and I have pushed energetically during the last few years for a better government initiative, planning and support at the national level for the improvement of education and use of ICT in primary and secondary schools. Things have fortunately been moving recently and could, hopefully, improve our position among the other nations.

On the personal side, I stay in e-mail contact with many people around the world. I like reading (for example, T. Clancy, J. Grisham, F. Forsyth, E. Topol, P. Ouellette, etc..), and I have resumed playing tennis after 12 years interruption, and I now enjoy playing as much as possible, both outdoors and indoors. Some skiing, when snow allows, and sailing on my dingy in good weather fill the time left when I am not with my family — 3 grown-up children and 6 grandchildren — or maintaining and repairing the house, which keeps me somewhat busy. It is always stimulating to understand how things work and how to disassemble (and hopefully reassemble!) them.

Prof. Ashley W. Goldsworthy
(AU)
(president 1986–1989)

Prof. Ashley Goldsworthy is the 8th IFIP president. He is a Scorpio, and this fact speaks a million words. His interview presents an insider's reflections on IFIP. Most of the other presidents appear to have continued the path of very successful academic, business and political careers. **Ashley**'s interview surfaces us with how successful he is now on the business front.

Mr. Goldsworthy's responses address some intimate matters related to IFIP's operations, including

The IFIP engine room

Does IFIP need more Talking Committees as opposed to Technical Committees?

What is IFIP's vetting problem?

Would further IFIP specialization create technical isolation, and what can be done to overcome this?

Question 1 (significant IFIP developments):
Being elected in Tokyo as President-Elect, in 1985, was one of the high points of my professional career. **Kauro Ando**, the outgoing president, and I had been closely as-

sociated since 1975 in the organization of the joint 1980 Congress in Tokyo and Melbourne (the first joint Congress in IFIP history), and it was an honour to succeed him. He was a true gentleman. Kind, polite, and considerate, **Mrs. Ando** was a truly lovely lady with whom my wife Shirley had several delightful shopping trips in various cities around the world at IFIP events.

I was really looking forward to the three years as president, largely because it would give me the opportunity to work even more closely with some wonderful people. I had been fascinated by many of the "characters" when I attended my first GA in Stockholm in 1974, as President of the Australian Computer Society, to present our bid for the 1980 Congress. I well remember **N.J. Lehman**, a large bear of a man, thundering a protest at his country being referred to by another delegate as "East Germany" (remember, this was 1974). He reminded everyone in no uncertain terms it was the "German Democratic Republic," and everyone had better remember that. For someone far removed from the subtleties of European politics, it was a whole new world.

It takes years to really understand the workings of IFIP, and being president is a challenge, but a rewarding one. We came together only once a year at the GA, and I felt we could make better use of our time. We needed a lot more parallel processing. We spent too much time (three days) at the GA itself, with everybody in attendance in non-productive reporting. The GA was seen to be the supreme forum, and everybody wanted to discuss everything at the GA. We were not optimizing the opportunity to use the tremendous amount of experience and wisdom that sat around the table. We did not have a suitable forum to focus on the long term strategic growth and development of IFIP. The subsidiary meetings were treated as routine.

I decided we needed to create a forum that was seen as important as the GA, in which technical and strategic issues could be discussed in depth, and we would focus on organizational, administrative and governance issues at the GA. So, after much discussion at the GA in Delhi in 1988, the Technical Assembly (TA) was created. This led to consequential changes in several of the other committees and was undoubtedly one of the most significant organizational changes to IFIP since its inception. I appointed **Blagovest Sendov**, who was to be my successor as president, as the first Chairman of the TA. Other significant developments during my term were the creation of two new TCs: TC12 on Artificial Intelligence and TC13 on Human–Computer Interaction. These were the first new TCs created for six years. SG14 on Foundations of Computer Science (which would become TC1 in 1996) was also established in 1989..

Question 2 (current interest in IFIP):

After spending so long involved in IFIP, I find it hard not to remain interested. After all, I have attended every GA (except one) since Stockholm in 1974, and I hope to attend the one in Montreal. I also attended most Council meetings during those years, served as a vice-president for nine years, and had the unique honour of chairing the Organising Committees for two Congresses (1980 and 1996). Over a period of 28 years, it is the people who keep you interested, not just the organization. IFIP does not hold as much interest for me now as it did when I was actively involved, and that is to be expected. But the increasing specialization in the informatics field has also diminished the broader interests that IFIP used to have, and people now tend to have narrower interests than years ago. This leads to technical isolation, but this is a natural progression in any developing field. For this reason also, Congresses are no longer as stimulating for me as they were in years gone by.

Question 3 (important issues for IFIP):

The TCs and WGs remain the engine room of IFIP, and it is important that they be very proactive in identifying new and emerging areas. In the past IFIP has tended to be a little slow and conservative in taking the lead. We have yet to solve the vexing problem of how to get industry involved in IFIP activities. We need to broaden the interests of our TC's, which have been very technically focused over the years. I well remember when TC9 was established in 1976, **Dorodnicyn** referring to it as *Talking* Committee 9, because he felt it was outside the scope of what IFIP should be about and could achieve little. But it is these application related areas, such as the internet, e-commerce, "infoviroment," telemedicine, and so on that warrant IFIP attention.

Question 4 (personal activities):

I left Bond University, Australia's first private university, in 1997, after seven years as Dean of the School of Business, and reentered business. I still live in Brisbane, but have an office in Melbourne (a two hour flight) and go there a couple of days each week. I am currently chairman of several companies: Australia's largest provider of on-line property data, the subsidiary of an Indian software company, a human resources company, a foundation to nurture inventors, the Centre for International Research on Communication and Information Technologies (CIRCIT) at RMIT University, and the Digital Media Institute at Melbourne University. I am a member of the Government's Industry Research and Development Board and the Australian Fulbright Commission. Also, I am Executive Director of the Business/Higher Education Round Table, an organization of which I was a founder in 1990, which comprises the vice-chancellors (presidents) of Australia's universities, business leaders, and the CEOs of the major research organizations. Its purpose is to build stronger linkages between business, research and higher education.

I also teach leadership at Griffith University. Whenever we can my wife and I spend time in the bay on our cabin cruiser, generally with some of our eight wonderful grandchildren.

IFIP will always remain in my memory as a series of very pleasant and enjoyable activities with a kaleidoscope of wonderful people.

Acad. Blagovest Sendov (BG)

(president 1989–1992)

Academician Blagovest Sendov was the ninth IFIP president and the only living one from Eastern Europe. He is now serving as Vice-Speaker of the Bulgarian Parliament. In his interview, he tells us about the following:

what **Isaac Auerbach** advised him in 1989

whether he was a student or a rector in IFIP

whether he a politician or a mathematician

what he dreams of.

Question 1 (significant IFIP developments):

During my tenure as **IFIP** president, the equilibrium of responsibilities between the national and the technical-expert representation in the Federation was maintained. For a long time, there were repeated discussions on the need for a TA in addition to the GA, and the form of participation of TC chairmen in the GA.

I remember a lunch in San Francisco during the **IFIP** Congress 1989, when my tenure had just started. The late **LL. Auerbach** told me, "You will be a good president, if you now have an idea who will be your successor." My answer was "**Prof. Rolstadås.**"

During my tenure, **Mr. Plamen Nedkov** was involved in the **IFIP** affairs, a fact that speaks for itself.

Question 2 (current interest in IFIP):
Now I follow the activity of **IFIP** from a distance, as my occupation does not permit me to stay closer. As the only living former president from the former Eastern Bloc, let me note the fundamental role of **IFIP**, and some other scientific and technical NGOs, for the peaceful end of the Cold War. **IFIP** was for me not only a professional society, but also a unique opportunity to make friends in the other world, with which we are now integrated. I see the role of **IFIP** in the future as a powerful instrument for closing the so-called "digital gap" between the rich and the poor.

IFIP was my University, in which I was a student, teacher, and rector.

Question 3 (important issues for IFIP):
The ultimate tendency toward globalization of the world is mainly assisted by information and communication technologies. I believe that in the long term, the world is going to adopt universal values but will keep the diversity. From its early days **IFIP** has paid attention to social aspects of information processing. My feeling is that the two categories of information, knowledge and wisdom, are becoming increasingly unbalanced in the world. This could be dangerous. What should be **IFIP**'s role in this direction?

Question 4 (personal activities):
I just turned 70, and in my interviews on this occasion I was asked, "Why did you desert mathematics and become a politician?" My answer was, "It is not true. I am still active in mathematics, and I have been a politician for more than 40 years, without ever being a member of any political party." You have to be a politician, if you are the president of such a prestigious international structure as **IFIP**. A rector also has to be a politician.

As a Vice-Speaker of the Bulgarian Parliament, I now have interesting times with a close friend, **Georgi Parvanov** (the President of Bulgaria), and the former **King Simeon II** (the Prime Minister of Bulgaria).

My dream is to find time to participate in an **IFIP** GA, in order to measure the progress of the Federation.

Prof. Asbjørn Rolstadås (NO)

(president 1992–1995)

One sunny day in early March 1994, two men in Brussels entered the NATO Headquarters to meet with the top NATO brass for science and research. One man was from a NATO member country, while the other one was from a country that had been considered by NATO as a potential adversary only five years earlier. Both men were there to investigate whether the "peace dividend" could be extended to support participants in **IFIP** events. The previous day, the same two men met representatives of the European Commission. That meeting resulted in a contract that made it possible for 34 participants from central and eastern Europe to be financially supported to attend the 14th **IFIP** World Computer Congress in Germany that year. (Another significant contract followed in 1995 for the INTERACT Conference on Human–Computer Interaction.) One of the two men was **Prof. Asbjørn Rolstadås**, the tenth **IFIP** president, from 1992 to 1995. Following is our interview of **Prof. Rolstadås.**

Question 1 (significant IFIP developments):
My predecessors, **Acad. Bandov and Prof. Goldsworthy**, had started a process of change in **IFIP** by installing the TA and giving more power to the TCs. It was my privilege to follow in their footsteps and implement all this.

During my tenure, the **IFIP** Secretariat was moved from Geneva to Laxenburg. Accordingly, **Mr. Nedkov** was hired as head of the Secretariat (the position is now called Executive Director), and he started to build a new **IFIP** administration based on e-work and the use of the Internet.

I opened a dialogue with the Member societies by visiting a number of them and by inviting them to come forward with their requirements from and views of **IFIP**. That exercise revealed insufficient contact between the GA and the Member societies, and a process to improve this was initiated.

More power was given to the TCs. The TC chairmen became ex officio members of the GA, and they were given greater control over their own finances. With the help of **Mr. Aage Melbye** (DK), then the **IFIP** treasurer, the procedures for approving and organizing events were revised and improved.

With the kind help of **Prof. Zemanek**, the **IFIP** silver-anniversary summary was updated, in order to document **IFIP** history for future generations.

Question 2 (current interest in IFIP):
My heart is still with **IFIP**, and I would like to contribute to **IFIP** work to the extent time allows. Topics that I have an interest in relate to bridging the gap between industry and academia.

Question 3 (important issues for IFIP):
As I now can see things from a greater distance, it is easier to point to areas where **IFIP** must improve. I think there are three major challenges for the future **IFIP**:

- Obtain stronger collaboration with and commitment from the international ICT industry.
- Revitalize the Congress to become the major international ICT event.
- Prove useful to the Member societies and increase number of Members.

Question 4 (personal activities):
I am still a professor at the Norwegian University of Science and Technology. My main interest is in project management. Together with other universities, we have developed an international program for project management education, and we have started to offer a continuing-education curriculum in management of software projects in cooperation with the Norwegian Computer Society. I am also managing a large international project to develop a curriculum in manufacturing strategy using e-learning. The European part

is funded by the European Union. We established a Norwegian Center for Project Management, of which I am currently the chairperson.

My hobbies, which I find too little time for, are collecting Norwegian stamps and shooting and editing video films.

Prof. Kurt Bauknecht (CH)

(president 1995–1998)

Paris. Autumn, 1997. The embassy car picked up the **IFIP** president and executive director from their hotel and drove them close to Pont Alexandre III. The two men entered the Bulgarian Embassy, and the ambassador (at the time also Permanent Representative to Unesco and a member of Unesco's Governing Board) welcomed his visitors. The **IFIP** president introduced himself: "**Bauknecht**." "Ah," responded the ambassador, "Bauknecht weiss was Frauen wuenschen." ("Bauknecht knows what women want" — the well-known advertising slogan of a manufacturer [Bauknecht] of household appliances). We smiled. It was a good start. We then discussed the forthcoming reclassification of **IFIP** with Unesco and requested the Ambassador's assistance for **IFIP** to get a favorable hearing. In the following days and weeks, we contacted Unesco officials, and the Ambassador did all he could to help. **IFIP**'s reclassification was decided favorably.

Kurt remembers that visit to Paris. He recalls other important events during his term and has interesting things to tell in this interview.

*Question 1 (significant **IFIP** developments):*
During my presidency, **IFIP** established itself comfortably in Laxenburg and made a major transition from the classical "paper-based" organization to one that makes full use of ICT. The **IFIP** Telecom project was designed and implemented, and the **IFIP** Secretariat provided leadership in demonstrating the advantages of the Internet in the process of management. We had a successful 1998 Congress in Budapest and Vienna. Following our 1997 GA meeting in Natal, the Executive Director and I visited Paris to meet with Unesco officials in order to activate the relations between the two organizations. That visit helped set a course of proactive **IFIP** involvement in Unesco activities, and I am very happy to observe the many positive developments.

*Question 2 (current interest in **IFIP**):*
I continue to follow **IFIP** activities closely. I am a member of TC8, and recently I was the General Chair of the First **IFIP** Conference E-commerce, E-business, and E-government, organized jointly by TC6, TC8, and TC11 in October 2001 in Zurich. I will be in Montreal for the 17th **IFIP** Congress, and I look forward to meeting many good friends there.

As the last one to submit my responses to **Plamen**'s questions, I had the advantage of reading beforehand the interviews of my colleagues [I enjoy this project very much], and it is easy to agree with what was said. I am happy that **IFIP** continues to grow as an open, dynamic international federation of national computer societies. In my mind, **IFIP** is a great model for other international associations, especially now, when issues related to the Information Society and the Digital Divide are on the forefront.

*Question 3 (important issues for **IFIP**):*
No doubt, it is important for **IFIP** to continue to lead in the specialized areas covered by its TCs and WGs. However, there has to be a mechanism allowing **IFIP** to focus on long-term developments, which transcend the subject areas of one TC or a group of them. Forecasting IT developments would certainly position **IFIP** as an organization to which industry, government and the public sector could look to for guidance.

Question 4 (personal activities):
In the spring of 2003, I will retire and will have more time for my responsibilities as president of Infosurance Foundation, which is supported by the Swiss government and industry with the objective of improving information security. I intend to devote more time to the study of new developments in IT, such as ubiquitous and pervasive computing and the development of better and more adequate security measures in computing.

Mountaineering, skiing and golfing are my hobbies, and I have 3 grandchildren with unbelievable energy!

Dir. Peter Bollerslev (DK)

(president 1998–2001)

The former Inspector within the Education Ministry of Her Majesty, **Queen Margrethe** of Denmark, speaks in the following interview.

*Question 1 (significant **IFIP** developments):*
I was designated **IFIP** president-elect at the 1997 GA. My **IFIP** background was made up of six years as TC3 (on Education) chair and some years as Danish GA representative. But I had no experience as "Administrative Officer." However, the support I received from Executive Board colleagues, TC chairs, GA representatives, and, not least, the **IFIP** Secretariat made it easy for me to meet this interesting and challenging task.

Looking back, I consider the following activities from my three years as the most important: enhanced information to Member societies, the increased cooperation with Unesco, the successful **IFIP** publication activity, the start of a closer cooperation with industry, and the establishment of the IT-STAR (a regional association of national computer societies from middle Europe). Insofar as events are concerned, the **IFIP** World Computer Congress in Beijing in August 2000 once again proved that the WCC is the **IFIP** Flagship event. Of course, personally I especially remember meeting the President of the PRC, **Jiang Zemin**, who addressed the Congress in the opening session. Another meeting at the highest level to be remembered is the one with the Director General of Unesco in Paris in January 2001.

It was my fate in the year 2000 to commemorate **IFIP**'s 40th Anniversary, the Ruby Jubilee. This was done in a federation that is sup-

ported by a well-functioning secretariat, one that has developed a perfect home page providing on-line timely updated information and documents and a useful Power Point presentation for the benefit of GA representatives and TC chairs. The attractive pamphlet *This is* **IFIP** was also evolved from the pamphlet *What is* **IFIP**? in this period.

In relation to the GA/Council meetings, we succeeded in changing the structure of the meetings in order to avoid too much repetition (redundancy) and focussing on strategic issues rather than just reporting. Finally, with my own professional background, I take great satisfaction in noting that over the years education has come more and more into focus in **IFIP**.

Question 2 (current interest in **IFIP***):*
Yes, I am still active in **IFIP**, both in the GA and as a member of TC3 (and two WGs), and thus also involved in some of the developments that should be encouraged. This includes two new events: the World **IT FOR**um (WITFOR) is planned as a biennial international conference addressing IT issues in developing countries. The first WITFOR will take place in Vilnius, Lithuania, in August 2003. A conference on Meeting GLobal IT Skills Needs (GLITS) will take place in the autumn of 2002, the first in a planned series of conferences on The Role of IT Professionalism. Several international organizations like ACM, BJC, CEPIS, CIPS, IEEE-US, OECD, SEARCC, and WITSA are supporting this event.

Endeavors to establish a closer cooperation with industry, which started in my presidential period, thanks mainly to Vice-President **T. Miura**'s (JP) initiative, should also be pursued. Finally, **IFIP** should very soon come to a conclusion on the discussions concerning the **IFIP** Digital Library Project.

Question 3 (important issues for **IFIP***):*
The present very successful cooperation with Unesco should also be further encouraged. **IFIP** participates in the activities of the Unesco–NGO Liaison Committee and in the Advisory Group, which advises Unesco and the UN on issues related to ICT. Furthermore **IFIP**/Unesco have developed a number of curricula and collaborate on regular updating. I see **IFIP** as an important part in the global efforts to close the digital divide.

We should aim at getting a society from each of the nearly 200 nations in the world as a Member of **IFIP**. We are a truly international federation, but we would like to have a greater coverage. Some argue that **IFIP** is too much Europe-based. However, the newcomers to **IFIP** in my presidential period show that if there is a bit of truth in the previous statement that we are on our way to change. The new full Members came from Latin America, Africa and the Arab world. We should aim at getting more young people involved in the work of **IFIP** (GA, TCs, WGs), and we should also address the gender issue.

Question 4 (personal activities):
I left the Danish Ministry of Education in the autumn of 2000, after having served there for 30 years as Her Majesty's Inspector. I am at present a chief consultant in the leading publishing house in Denmark. I am heavily involved in many activities in the Danish Data Association, and I am still their representative to the **IFIP** GA.

In my spare time I like to attend theaters, cinemas, and art exhibitions, read, cook, and play golf and bridge. And every opportunity to travel with Hanne to experience foreign territory will be used.

Deceased Presidents

Here we present information taken from the obituaries of our deceased presidents.

Mr. Isaac L. Auerbach

(1921–1992, president 1960–1965)

IFIP's key founder, **Mr. Isaac L. Auerbach** (US), died of myelofibrosis (a bone-marrow disease and a precursor of acute leukemia) 24 December 1992. He was instrumental in the creation of **IFIP** and served as its first president, from 1960 to 1965.

"Ike" was born in Philadelphia in 1921 and received the B.S. degree in electrical engineering from Drexel University in 1943 and the M.S. degree in applied physics from Harvard University in 1947. Upon graduation, he worked as a research engineer with the Eckert Mauchly Corporation (later to become the Univac division of the Sperry Rand Corporation) and then, from 1949 to 1957, as director of the Defense and Special Products Division of the Burroughs Corporation.

In 1957, he left Burroughs to found Auerbach Associates, a computer design and consulting company, and Auerbach Corporation for Science and Technology, a holding company, in Philadelphia. Auerbach Publications, a publisher of information about computers and communication equipment, was incorporated in 1960. **Mr. Auerbach** served as president and chief executive officer of these companies and several others. Auerbach Consultants was founded in 1976, and he served as its president until his death.

Honors bestowed on him include Fellow of the Institute of Electrical and Electronics Engineers (IEEE), Fellow of the Association for the Advancement of Science, Distinguished Fellow of the British Computer Society, and member of the U.S. National Academy of Engineering and the U.S. honor societies Tau Beta Pi, Eta Kappa Nu, and Sigma Xi.

We quote the following material written by him for the book *A Quarter Century of* **IFIP** (ed. by **H. Zemanek** and published by Elsevier/North Holland in 1986, © **IFIP**) to memorialize his signal role in **IFIP**.

> I vividly remember when the original idea for the formation of **IFIP** came to me. I was attending the Eastern Joint Computer Conference in Boston, in November of 1955..... [Several colleagues and I] were talking about the state of the art of computers as if all of the developments were taking place in the United States, while little or nothing was happening elsewhere in the world. I suggested that it would be interesting and potentially very valuable to have an international meeting on information processing at which computer scientists and engineers from many nations of the world might exchange information about the state of the computer art. ...
>
> The next day, I presented my idea to the U.S. National Joint Computer Committee (NJCC) ... The chairman of the NJCC appointed me to chair an ad hoc committee to develop the idea and bring it back for subsequent discussion. ... [Eventually, we were] authorized to develop a formal proposal for submission to Unesco. ...
>
> In the fall of 1957, **Prof. Pierre Au-**

ger, the Director of the Natural Sciences Division of Unesco, extended an invitation to a few countries to send a representative to Unesco House in Paris to advise them on the feasibility and practicality of a conference on information processing. I was formally appointed by our State Department to be the official United States delegate. ... The invitation could not have come at a more difficult time for me personally. In June of 1957, I had resigned my position as Director of the Defense and Special Projects Division of Burroughs Research Laboratories to start a new company, then known as Auerbach Electronics Corporation. By December, we had seven employees, and I was working seven days a week and most nights. But the opportunity was too great to miss. ...

The first Committee of Experts, as we were called, met just before Christmas, and ... was able to convince **Prof. Auger** and his associate, **Mr. Jean A. Mussard**, ... that the subject of information processing was important enough for Unesco to convene an international conference as soon as possible. ... **Prof. Auger** had no difficulty in securing approval from Unesco to fund, organize and convene the First International Conference on Information Processing (ICIP), to be held at the Unesco House in Paris June 15–20, 1959. ... By far, the most important success of the conference was the co-mingling of people from all parts of the world, their making new acquaintances, and their willingness to share their knowledge with one another. ...

During the very first meeting of the Committee of Experts in December of 1957, **Prof. Auger** posed the question as to the existence of an international organization in the field of information processing that could convene international conferences in future years. ... At our next meeting in June of 1958 and at subsequent meetings, after completing Unesco business, a group of us would meet regularly in late afternoons and evenings to explore the creation of an organization for convening future information processing conferences....

We agreed that the federation would be a society of societies, and would not have individual members so as not to compete with national professional societies. ... It would be noted that in the Scandinavian countries, the Netherlands, Japan and Italy no professional technical society dealing specifically with information processing had yet been formed. ... The situation was similar in .... France and the Federal Republic of Germany. ... To join **IFIP**, ... each country had to either organize a national technical society, form a society of societies, or have its Academy of Science apply for membership. In each case, the desire to affiliate with **IFIP** was the driving force that stimulated the formation of umbrella organizations or professional technical societies.

On June 18, 1959, the fourth day of the ICIP, the final meeting of the **IFIP** Organizing Committee was held, and by the conclusion of the meeting, the following decisions had been taken: to create an international federation of information processing societies (IFIPS) if seven or more national technical societies agreed to ratify the statutes before January 1, 1960, and to authorize the Council to examine the possibility of holding a Second International Conference and Exhibition on Information Processing in 1963.... This was a most auspicious occasion, and all of us who had spent so many hours planning for this meeting were delighted with its results.... By January 1, 1960, thirteen national professional technical societies had formally agreed to adhere to the statutes proposed by the Organizing Committee, and **IFIP** legally came into existence.

Aware that politics can often get in the way of science and technology, **IFIP** established from the very beginning that the GA meetings were to be apolitical. People of vastly different cultural and political backgrounds have come together at **IFIP** GA meetings, Congresses, and Conferences, and there has never been a major outburst or rift due to national or political differences....

[**IFIP**'s] success was largely due to the unflagging energies of the early **IFIP** representatives and officers and their successors, all of whom had the foresight to recognize **IFIP**'s importance and the dedication to devote countless hours to its concerns.

Mr. Auerbach was also a co-founder of the American Federation of Information Processing Societies (AFIPS).

In addition to serving as **IFIP**'s president, he had many other roles, including Representative of the U.S. from 1960 to 1964, Individual Member from 1964 to 1970, and Council Member from 1966 to 1969. He was **IFIP**'s first Honorary Member (elected in 1969) and one of the first recipients of the Silver Core award in 1974. The **IFIP** community last saw him participating in 1989, when he attended the GA in San Francisco. He was clearly a man of great warmth and charm.

In addition to his technical interests, he was also a philanthropist. In particular, he was a benefactor of the Ben-Gurion University of the Negev (Israel), serving as vice-governor of the board of governors from 1968 to the time of his death.

He leaves his wife Carol and his five children.

[from the *IFIP Newsletter*, March 1993, © **IFIP**]

Acad. Anatol A. Dorodnicyn

(1910–1994, president 1968–1971)

After a heart attack on May 8, 1994, **Academician Anatol Dorodnicyn**, the Russian representative to **IFIP**, our third president, and the last of our founding fathers to represent his country in **IFIP**, died on June 7, surrounded by his children and his wife Valentina.

Born in 1910, he graduated from the Grozny Petroleum Institute in 1931 and began his career as an instructor in Moscow and Leningrad. From 1941 to 1955, he worked at the Central Aerodynamics Institute in Moscow and from 1945 on, belonged to the Computation Center of the U.S.S.R; Academy of Sciences in Moscow, where he served as Director from 1955 until his retirement in 1990. Beginning in 1947, he was a professor at Moscow University, but he liked even better a professorship he had in a small technical college a little bit outside the city. At the early age of 43, he became a full Academy member.

Acad. Dorodnicyn was on the committee for the 1959 first World Computer Congress in Paris and, together with **Acad. Panov**, was one of the two Soviet founders of **IFIP**. He served as the delegate of the U.S.S.R. (later, Russia) to **IFIP**, from its founding in 1960 until his death. Over this period, he missed very few Council and GA meetings. Holder of the Silver Core since its first awarding in 1974, he was **IFIP** trustee (1965–1967, 1973–1977, and 1980–1983), vice-president (1977–1980), and president (1968–1971). During his presidency, TC5 on Computer Applications in Technology was launched, and the first attempts were made to establish the **IFIP** Secretariat in Geneva. The first PROLAMAT conference (Rome, 1969)

marked the entry of **IFIP** into the industrial application area, and he was instrumental in bringing TC7 on System Modeling and Optimization into **IFIP**. His **IFIP** Congress was held in Ljubljana, Yugoslavia, in 1971.

The position of the U.S.S.R. delegate to **IFIP** was not easy, neither in **IFIP** nor at home. He had to live with the political system that existed, sometimes defending it, in order to reach the scientific and professional goals he had set for himself.

The Eastern computing community owes a lot to **Dorodnicyn**. He gave substantial support to many countries. A special case was China, where **Dorodnicyn** is considered the father of electronic computing. When politics stopped Russian–Chinese cooperation, all links were cut — but at our Council in Beijing, we could see that the friendships with **uorodnicyn** had not suffered.

Dorodnicyn had many travel adventures, and he could tell them in a fascinating way, which I can hardly reproduce. For the 1965 Congress, he came to New York — but not his luggage. For the 1969 Council in Brussels, the Belgian government, at the last moment, refused him the visa because of some diplomatic games not related to **IFIP** or him. In Melbourne in 1980, he invited the entire Soviet delegation at the Congress to the home of one of three cousin sisters who had escaped from the U.S.S.R., were married in Australia, and lived near Melbourne — proving to the Soviets that the emigrants were not the criminals the government propaganda called them. Some of the comrades started out sitting there with iron faces, but after two hours, they were all singing Ukrainian and Russian songs. For the **IFIP** Council in Zimbabwe in 1991, he traveled all the way down to the capital of Mozambique, but when he was unable to catch the interconnecting flight to carry him on, he had to return. His last **IFIP** meeting was in Buenos Aires at the 1990 GA.

Dorodnicyn was a mathematician and computing pioneer, and an irreplaceable **IFIP** representative.

[by Heinz Zemanek in the September 1994 *IFIP Newsletter*, © **IFIP**]

Dr. Kaoru Ando (JP)

(1914–1997, president 1983–1986)

Dr. Kaoru Ando passed away in November 1997, at the age of 83. He was formerly president of **IFIP**, director and member emeritus of the Information Processing Society of Japan (IPSJ), executive director of Fujitsu Limited, and president of Fujitsu FACOM Information Processing Corporation.

In his lifetime, he held a point of view and an abundance of experience that could be termed nothing less than "global," making him something of a rarity among his contemporaries. In 1937, after graduating from the Department of Management Studies of Indiana University in the U.S., he joined the Watson Statistical Accounting Machines Corp. of Japan (now IBM Japan, Ltd.), where he was involved in the sale of punched card systems. Immediately following the end of the Second World War, **Dr. Ando** became a consultant to the General Headquarters of the Allied Powers in such areas as social statistics, economic statistics, and social analysis and simulations.

He then returned to IBM Japan Ltd. and helped launch the Japanese general-purpose-computer business. Following this, he became an executive director and served as a special advisor to IBM Asia Ltd. After joining Fujitsu FAUM Information Processing Corporation in 1966, he was broadly successful in the information processing industry, not only in Japan but also on an international scale. In the autumn of 1974, he was awarded the Medal with Blue Ribbon from the Japanese Government for his contribution to industrial computerization in Japan.

In 1977, the IPSJ appointed him to be the Japanese representative to **IFIP**, and during his first General Assembly, he was elected **IFIP** trustee. The next year, he was elected vice-president, and in 1983 he became the first Japanese president of **IFIP**.

Following this successful career, he was quite active as the chairman of the international committee of the IPSJ.

While meeting his obligations in the highly responsible role as president of **IFIP**, **Dr. Ando** was also involved in establishing and running such international organizations as the Japan-America Institute of Management Science (JAIMS). His work helped to encourage more internationally oriented viewpoints and attitudes among the people in the Japanese information processing industry.

With his great, magnanimous personality, **Dr. Ando** advocated, from early on, the importance of information literacy and cross-cultural understanding — through **IFIP**, JAIMS, and his personal computer network. I cannot help but admire him all the more for the visionary ideas he shared with us.

Dr. Ando worked very hard to realize the information processing society of the future. He was a global citizen about whom Japan could proudly boast, and a man who was still very much needed by his country.

[by Takuma Yamamoto, President Emeritus, Fujitsu Limited, in the March 1998 *IFIP Newsletter*, © **IFIP**]

Presidential Photo Gallery

First three presidents: (from left to right) Spaiser, Auerbach, Dorodnicyn

President Bollerslev with Chinese president Jiang Zemin in 2000

Five past presidents with trustee Q. Wang in 2000: (from left to right) Rolstadäs, Bollerslev, Bobillier, Bauknecht, and Zemanek

Presidents Tanaka and Zemanek in front of IFIP Secretariat in Laxenburg, Austria

Presidents Goldsworthy, Aoido, and Sendov with vice-president G. Lhuser, in 1985

FUTURE IFIP MEETINGS

GENERAL ASSEMBLY AND COUNCIL (and related meetings)

GA	30 Aug – 3 Sep 2002 (Fri–Tue)	Montreal, QU, Canada
Council	1–5 Mar 2003 (Sat–Wed)	Bilbao, Spain
GA	30 Aug – 3 Sep 2003 (Sat–Wed)	Lithuania
Council	29 Feb – 4 Mar 2004 (Sat–Wed)	Portugal
GA	11–15 Sep 2004 (Sat–Wed)	Toulouse, France

TECHNICAL COMMITTEE AND WORKING GROUP MEETINGS

TC1	1–4 Sep 2002	Montreal, QU, Canada
WG1.1	2002	Minneapolis, MN, US
	2002	Dagstuhl, Germany
WG1.3	22–24 Sep 2002	Chiemsee, Germany
WG2.1	Mar 2003	Stony Brook, NY, US (tentative)
WG2.4	10–15 Nov 2002	Dagstuhl, Germany
	August 2003	Houston, TX, or Santa Fe, NM, US
	July 2004	Paderborn, Germany
WG2.5	15–21 Jun 2003	St. Wolfgang, Austria
WG2.8	autumn 2002	New York State, US
TC3	5–6 Jul 2003	Pori, Finland
	Jul 2004	Cape Town, South Africa
WG3.1	Jan 2003	Melbourne, Australia
WG3.2	2003	Gold Coast, Australia
WG3.3	Jul 2003	Pori, Finland
WG3.4	Jul 2003	Pori, Finland
WG3.6	Feb 2003	Geelong, Australia
	2004	the Netherlands
TC6	5–6 Oct 2002	Lisbon, Portugal
	16–17 Oct 2003	Sultanate of Oman
WG6.1	11 Nov 2002	Houston, TX, US
WG6.8	24 Oct 2002	Singapore
WG6.10	3 Feb 2003	Budapest, Hungary
WG6.11	9 Oct 2002	Lisbon, Portugal
TC7	2002	Sophia Antipolis, France
WG8.2	Dec 2002	Barcelona, Spain
WG9.2	18–19 Jan 2003	Namur, Belgium
	Aug 2003	Karlstad, Sweden
WG9.3	Apr 2003	Irvine, CA, US
WG9.6/11.7	16 Nov 2002	London, UK
WG9.7	Jan 2003 (tent.)	Northern California, US
WG9.7	25–26 Aug 2002 (tentative)	Montréal, QU, Canada
WG10.4	4–8 Jan 2003 (tent.)	Cape Verde
	Jun 2003	Northern California, US
	Mar 2004	Moorea, French Polynesia
	Jun 2004	Italy
WG11.7	see WG9.6	

This information is furnished to the *Newsletter* by the Secretariat. Will TC and WG chairs kindly keep the Secretariat advised of the dates and locations of their future administrative meetings and also send a copy of the minutes to the Secretariat.

Some meetings are scheduled in conjunction with Working Conferences, for which the conference dates are listed. □

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Proceedings of the

17TH WORLD COMPUTER CONGRESS • MONTREAL 2002

STREAM 1 — ***TC1***

Foundations of Information Technology in the Era of Network and Mobile Computing

Ricardo Baeza-Yates, *Universidad de Chile*, Ugo Montanari, *Università di Pisa, Italy*, Nicola Santoro, *Carleton University, Ontario, Canada*

Hardbound, ISBN 1-4020-7181-7, August 2002
~~Price: 219.00 EUR / 199.00 USD / 137.00 GBP~~
IFIP Price: 150.50 EUR / 136.50 USD / 96.00 GBP

STREAM 2 — ***TC2***

Software Architecture

System Design, Development and Maintenance

Jan Bosch, *University of Groningen, The Netherlands*, Mamun Gentleman, *Dalhousie University, Halifax, Nova Scotia, Canada*, Christine Hofmeister, *Lehigh University, Bethlehem, PA, U.S.A.*, Juha Kuusela, *Lenger Oy, Finland*

Hardbound, ISBN 1-4020-7176-0, August 2002
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STREAM 3 — ***TC3***

TelE-Learning

The Challenge for the Third Millennium

Don Passey, *Lancaster University, Lancaster, UK*, Mike Kendall, *Northamptonshire County Council, Northampton, UK*

Hardbound, ISBN 1-4020-7219-8, August 2002
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STREAM 4 — ***TC6***

Communication Systems

The State of the Art

Lyman Chapin, *BeerTop Technologies, Hopkinton, MA, U.S.A.*

Hardbound, ISBN 1-4020-7168-X, August 2002
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STREAM 5 — ***TC8***

Information Systems

The e-Business Challenge

Roland Traunmüller, *University of Linz, Austria*

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STREAM 6 — ***TC9***

Human Choice and Computers

Issues of Choice and Quality of Life in the Information Society

Klaus Brunnstein, *University of Hamburg, Germany*, Jacques Berleur, *Facultes Universitaires Notre Dame de la Paix (FUNDP), Belgium*

Hardbound, ISBN 1-4020-7185-X, August 2002
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IFIP Price: 123.00 EUR / 112.00 USD / 78.50 GBP

STREAM 7 — ***TC10***

Design and Analysis of Distributed Embedded Systems

Bernd Kleinjohann and Lisa Kleinjohann, *C-LAB, Universität Paderborn, Germany*, K.H. (Kane) Kim, *University of California, Irvine, USA*, Achim Rettberg, *Universität Paderborn, Germany*

Hardbound, ISBN 1-4020-7196-6, August 2002
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IFIP Price: 115.50 EUR / 105.00 USD / 73.00 GBP

STREAM 8 — ***TC12***

Intelligent Information Processing

Mark Musen, *Stanford University, CA*, Bernd Neumann, *Universität Hamburg, Germany*, Rudi Studer, *University of Karlsruhe, Germany*

Hardbound, ISBN 1-4020-7171-X, August 2002
~~Price: 176.00 EUR / 160.00 USD / 112.00 GBP~~
IFIP Price: 123.00 EUR / 112.00 USD / 78.50 GBP

STREAM 9 — ***TC13***

Usability

Gaining a Competitive Edge

Judy Hammond, *University of Technology, Sydney, Australia*, Tom Gross, *Institute for Applied Computer Science, Austria*, Janet Wesson, *University of Port Elizabeth, South Africa*

Hardbound, ISBN 1-4020-7187-6, August 2002
~~Price: 176.00 EUR / 160.00 USD / 112.00 GBP~~
IFIP Price: 123.00 EUR / 112.00 USD / 78.50 GBP

STREAM 10 — ***TC11***

Certification and Security in E-Services

From E-Government to E-Business

Enrico Nardelli, *Università di L'Aquila, Italy*, Maurizio Talamo, *Università di Roma "La Sapienza", Italy*, and Sabina Posadziejewski, *Alberta Information and Science, Canada*

Forthcoming December 2002

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Formal Methods for Open Object-Based Distributed Systems V

edited by **Bart Jacobs**, *University of Nijmegen, The Netherlands*, **Arend Rensink**, *University of Twente, Enschede, The Netherlands*

Formal Methods for Open Object-Based Distributed Systems V brings together research in three important and related fields: • Formal methods; • Distributed systems; • Object-based technology.

Such a convergence is representative of recent advances in the field of distributed systems, and provides links between several scientific and technological communities. The wide scope of topics covered in this volume range in subject from UML to object-based languages and calculi and security, and in approach from specification to case studies and verification. This volume comprises the proceedings of the Fifth International Conference on Formal Methods for Open Object-Based Distributed Systems (FMOODS 2002), which was sponsored by the International Federation for Information Processing and held in Enschede, The Netherlands in March 2002.

Hardbound, ISBN 0-7923-7689-8, February 2002

TC6

~~Price: 175.00 EUR / 160.00 USD / 111.00 GBP~~

IFIP Price: 122.50 EUR / 112.00 USD / 77.50 GBP

Testing of Communicating Systems XIV
Applications to Internet Technologies and Services

edited by **Ina Schieferdecker**, *Fraunhofer Research Institute for Open Communication Systems, Berlin, Germany*, **Hartmut König**, *Computer Science Dept., Brandenburg University of Technology, Cottbus, Germany*, **Adam Wolisz**, *Dept. of Electrical Engineering, Telecommunication Networks Technical University of Berlin, Germany*

Testing of Communicating Systems XIV presents the latest international results in both the theory and industrial practice of the testing of communicating systems, ranging from tools and techniques for testing to test standards, frameworks, notations, algorithms, fundamentals of testing, and industrial experiences and issues. The tools and techniques discussed apply to conformance testing, interoperability testing, performance testing, Internet protocols and applications, and multimedia and distributed systems in general.

The topics covered in this volume include: • Testing TCP/IP; • Testing Internet systems; • Interoperability testing; • Test automation; • Test generation and selection; • Testing ultra-layered systems; • FSM-based testing; • Applications of TTCN-3; and • Industrial sessions.

This volume contains the papers presented at the 14th International Conference on Testing of Communicating Systems (TestCom 2002), which was sponsored by the International Federation for Information Processing and held in Berlin, Germany, in March 2002. The conference program presents the state of the art in research concerning the testing of communicating systems. This is an important research area in the development of computer networks and distributed applications where much activity is currently in progress. The TestCom series of conferences is one of the main international forums where these important findings are reported. ***Testing of Communicating Systems XIV*** is essential reading for engineers, designers, managers of IT products and services, and all researchers interested in advancing the technology of engineering Internet frameworks, systems, services, and applications for reliability and quality.

Hardbound, ISBN 0-7923-7693-1, March 2002

TC6

~~Price: 219.00 EUR / 195.00 USD / 135.00 GBP~~

IFIP Price: 149.00 EUR / 136.50 USD / 94.50 GBP

Integrity, Internal Control and Security in Information Systems

TC11

Connecting Governance and Technology

edited by **Michael Gertz**, *University of California at Davis, USA*, **Erik Guldentops**, *University of Antwerp, Belgium*, **Leon A.M. Strous**, *De Nederlandsche Bank NV, Amsterdam, The Netherlands*

This fourth volume in the series ***"Integrity and Internal Control in Information Systems"*** is a state-of-the-art collection of papers in the area of integrity within information systems and the relationship between integrity in information systems and the overall internal control systems that are established in organizations to support corporate governance codes.

This volume represents a continuation of the dialogue between information security specialists, internal control specialists and the business community. The objectives of this dialogue are: • To present methods and techniques that will help business achieve the desired level of integrity in information systems and data; • To present the results of research that may in future be used to increase the level of integrity or help management maintain the desired level of integrity; • To investigate the shortcomings in the technologies presently in use, shortcomings that require attention in order to protect the integrity of systems in general.

The book contains a collection of papers from the Fourth International Working Conference on Integrity and Internal Control in Information Systems (IICIS), which was sponsored by the International Federation for Information Processing and held in Brussels, Belgium in November 2001. It will be essential reading for academics and practitioners in computer science, information technology, business informatics, accountancy and IT-auditing.

Hardbound, ISBN 1-4020-7085-5, March 2002

~~Price: 148.00 EUR / 135.00 USD / 94.00 GBP~~

IFIP Price: 103.50 EUR / 94.50 USD / 66.00 GBP

Smart Networks

TC6

edited by **Olli Martikainen** and **Jenni Hyvärinen**, *Lappeenranta University of Technology, Finland*, **Kimmo Raatikainen**, *Dept. of Computer Science, University of Helsinki, Finland*

Smart Networks comprises the proceedings of Smartnet'2002, the seventh conference on Intelligence in Networks, which was sponsored by the International Federation for Information Processing and organized by Working Group 6.7. It was held in Saariselkä, Finland, in April 2002.

The conference series closely reflects the developments in networking. Currently we are facing two conflicting trends: the increasing popularity of the Internet and the growth of mobile communications. The traditional Internet approach is to regard a network as a dummy pipe of bits and place all the intelligence to the end-devices. The traditional telecom approach is to regard the end-devices as dummy senders or receivers of bits and to put all the intelligence in the network. For fixed-line access to the Internet using a powerful PC, the Internet approach is plausible. However, for a nomadic user, who sometimes accesses services through a fixed-line Internet connection and, at other times, through a wireless connection using a restricted-capability access device, the situation becomes intolerable. Intelligence needs to be distributed and partially replicated in end user devices, access networks, and the core network.

The presentations in this volume consider these new trends and cover three major topics: platform software, services, and protocols. The sessions on platform software address various aspects of software infrastructure in networks including object orientation, components, agents, and plug-and-play. The session on services includes interactive TV, group communication, and location awareness. The session on protocols discusses bandwidth brokers, authentication, and protocol testing.

Hardbound, ISBN 1-4020-7068-5, March 2002

~~Price: 169.00 EUR / 150.00 USD / 105.00 GBP~~

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Collaborative Business Ecosystems and Virtual Enterprises

TC5

edited by **Luis M. Camarinha-Matos**, *Universidade Nova de Lisboa, Portugal*

New collaboration mechanisms and organizational forms supported by networking tools not only induce new business domains but "invade" all traditional sectors and organizations, which requires thinking of each business as part of a wider economic ecosystem and environment.
The virtual enterprise / virtual organization developments, although initially technology-driven, are gathering more and more contributions of a multi-disciplinary nature, namely from the socio-economic and organizational areas. New behavioral forms, new cooperation agreements and social contracts, new liability agreements and risk negotiation practices, new ways of generating value for common developments, and correspondingly new challenges on intellectual property and ownership identification are among the major trends.

This book contains selected articles from PRO-VE'02, the third working conference on Infrastructures for Virtual Enterprises, which was sponsored by the International Federation for Information Processing and held in Sesimbra, Portugal in May 2002. The included articles represent relevant examples of the current state of the art in virtual enterprises and other collaborative and networked organizations, and provide valuable insights on future trends and challenges. The book contents clearly reflect a growing maturation and diversification of the area. Important development directions are well represented, such as: modeling and reference architectures, formation of virtual organizations, including contract management and negotiation, operation support functionalities, infrastructures and interoperability, virtual communities and new collaboration forms, best practices and strategic planning, economic aspects and performance metrics, training and new ways of working.
Collaborative Business Ecosystems and Virtual Enterprises is essential reading for researchers, engineers, managers, practitioners, sociologists, and students in production engineering, computer science, electrical engineering, mechanical engineering, organizational science, and industrial sociology.

Hardbound, ISBN 1-4020-7020-9, March 2002

~~**Price: 220.00 EUR / 200.00 USD / 140.00 GBP**~~

IFIP Price: 154.00 EUR / 140.00 USD / 98.00 GBP

Security in the Information Society
Visions and Perspectives

TC11

edited by **M. Adeeb Ghonaimy**, *Ain Shams University, Waad, Egypt*, **Mahmoud T. El-Hadidi**, *Dept. of Electronics and Electrical Communications, Cairo University, Egypt*, **Heba K. Aslan**, *Dept. of Electronics and electrical Communications, Cairo University, Egypt*

Recent advances in technology and new software applications are steadily transforming human civilization into what is called the Information Society. This is manifested by the new terminology appearing in our daily activities. E-Business, E-Government, E-learning, E-Contracting, and E-Voting are just a few of the ever-growing list of new terms that are shaping the Information Society. Nonetheless, as "Information" gains more prominence in our society, the task of securing it against all forms of threats becomes a vital and crucial undertaking.

Addressing the various security issues confronting our new Information Society, this volume is divided into 13 parts covering the following topics: • Information Security Management; • Standards of Information Security; • Threats and Attacks to Information; • Education and Curriculum for Information Security; • Social and Ethical Aspects of Information Security; • Information Security Services; • Multilateral Security; • Applications of Information Security; • Infrastructure for Information Security; • Advanced Topics in Security; • Legislation for Information Security; • Modeling and Analysis for Information Security; • Tools for Information Security.

Security in the Information Society: Visions and Perspectives comprises the proceedings of the 17th International Conference on Information Security (SEC2002), which was sponsored by the International Federation for Information Processing, and jointly organized by IFIP Technical Committee 11 and the Department of Electronics and Electrical Communications of Cairo University. The conference was held in May 2002 in Cairo, Egypt. This volume is essential reading for scholars, researchers, and practitioners interested in keeping pace with the ever-growing field of Information Security.

Hardbound, ISBN 1-4020-7039-6, March 2002

~~**Price: 215.00 EUR / 195.00 USD / 137.00 GBP**~~

IFIP Price: 150.50 EUR / 195.00 USD / 96.00 GBP

Database and Application Security XV

TC11

edited by **Martin S. Olivier**, *Rand Afrikaans University, Johannesburg, South Africa*, **David L. Spooner**, *Rensselaer Polytechnic Institute, Troy, NY, USA*

Database and Application Security XV provides a forum for original research results, practical experiences, and innovative ideas in database and application security. With the rapid growth of large databases and the application systems that manage them, security issues have become a primary concern in business, industry, government and society. These concerns are compounded by the expanding use of the Internet and wireless communication technologies.
This volume covers a wide variety of topics related to security and privacy of information in systems and applications, including: • Access control models; • Role and constraint-based access control; • Distributed systems; • Information warfare and intrusion detection; • Relational databases; • Implementation issues; • Multilevel systems; • New application areas including XML.

Database and Application Security XV contains papers, keynote addresses, and panel discussions from the Fifteenth Annual Working Conference on Database and Application Security, organized by the International Federation for Information Processing Working Group 11.3 and held July 15-18, 2001 in Niagara on the Lake, Ontario, Canada.

Hardbound, ISBN 1-4020-7041-1, May 2002

~~**Price : 171.00 EUR / 155.00 USD / 109.00 GBP**~~

IFIP Price: 120.00 EUR / 108.50 USD / 76.50 GBP

Visual and Multimedia Information Management

TC2

edited by **Xiaofang Zhou**, *School of Computer Science and Electrical Engineering, University of Queensland, Brisbane, Australia*, **Pearl Pu**, *Dept. of Computer Science, Database Laboratory, Swiss Institute of Technology in Lausanne, Switzerland*

Current research in Visual Database Systems can be characterized by scalability, multi-modality of interaction, and higher semantic levels of data. Visual interfaces that allow users to interact with large databases must scale to web and distributed applications. Interaction with databases must employ multiple and more diversified interaction modalities, such as speech and gesture, in addition to visual exploration. Finally, the basic elements managed in modern databases are rapidly evolving, from text, images, sound, and video, to compositions and new annotations of these media, thus incorporating ever-higher levels and different facets of semantics.
In addition to visual interfaces and multimedia databases, Visual and Multimedia Information Management includes research in the following areas: • Speech and aural interfaces to databases; • Visualization of web applications and database structures; • Annotation and retrieval of image databases; • Visual querying in geographical information systems; • Video databases; and • Virtual environment and modeling of complex shapes.

Visual and Multimedia Information Management comprises the proceedings of the sixth International Conference on Visual Database Systems, which was sponsored by the International Federation for Information Processing, and held in Brisbane, Australia, in May 2002. This volume will be essential for researchers in the field of management of visual and multimedia information, as well as for industrial practitioners concerned with building IT products for managing visual and multimedia information.

Hardbound, ISBN 1-4020-7060-6, May 2002

~~**Price: : 200.00 EUR / 180.00 USD / 126.00 GBP**~~

IFIP Price: 140.00 EUR / 126.00 USD / 88.00 GBP

"IFIP Price" reflects a 30% discount off the list price.

Published in 2002 by Kluwer Academic Publishers on behalf of the

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Networking the Learner

TC3

Computers in Education

edited by **Deryn M. Watson**, *School of Education, King's College London, UK*, **Jane Andersen**, *IT University of Copenhagen, Denmark*

This book provides a powerful analysis of the role that Information and Communication Technologies can have in teaching and learning. Networking the Learner: Computers in Education explores how new communication capability through the Internet, Web and email changes the nature of the teacher-learner interface itself, as well as the learner-technology interface.

The book is derived from selected contributions to the Seventh World Conference on Computers in Education (WCCE), which was sponsored by the International Federation for Information Processing, held in Copenhagen, Denmark in July/August 2001.

Networking the Learner: Computers in Education is presented in three parts: • Papers organised around themes: open and distance learning, ICT in learning, new pedagogic ideas, teaching mathematics, teaching computer science, forms of assessment, management and resources, teacher education, and national initiatives; • Professional groups providing reflections and perspectives on issues from social and ethical concerns, virtual universities, and the next generation of programming languages, to the interface between virtuality and reality in schools, and the role of large multi-national projects to stimulate change; • Reports of the lively discussions during panel sessions, such as providing new images of research and practices, experiences of e-learning and e-training, and the future platforms in educational technology.

Keywords provide readers with different conceptual slices that can be found across the chapters, such as collaborative learning, problem solving, cognition and interactions. Teachers and lecturers, policy makers and researchers, learners and authors, educational technologists and curriculum developers will find here a wealth of insights that do justice to this important topic.

Hardbound, ISBN 1-4020-7132-9, June 2002

Price: 190.00 EUR / 173.00 USD / 120.00 GBP

IFIP Price: 133.00 EUR / 122.50 USD / 84.00 GBP

SOC Design Methodologies

edited by **Michel Robert, Bruno Rouzeyre** and **Christian Piguet**, *LIRMM*

The current trend towards the realization of complex Systems On Chips (SOCs) required the combined efforts and attention of experts in a wide range of areas including embedded hardware/software systems, specific IP cores, reconfigurable architectures, signal and image processing architectures, low power design techniques, design methods and CAD tools, test and verification, modeling, timing issues. Thus the papers presented herein address a wide range of SOC design topics. ***SOC Design Methodologies*** comprises a selection of the best papers presented at VLSI-SOC'01, the Eleventh International Conference on Very Large Scale Integration of Systems-on-Chip, which was sponsored by the International Federation for Information Processing (IFIP) Technical Committee 10 / Working Group 10.5, and held in Montpellier, France in December 2001. This volume is essential reading for researchers working on microelectronics system integration, design, and CAD of integrated circuits and systems on chips.

Hardbound, ISBN 1-4020-7148-5, August 2002

TC10

Price: 209.00 EUR / 195.00 USD / 137.00 GBP

IFIP Price: 156.50 EUR / 146.50 USD / 96.00 GBP

Organizational Semiotics

TC8

Evolving a Science of Information Systems

edited by **Kecheng Liu**, *The University of Reading, UK*, **Rodney Clarke**, *Wollongong University, Australia*, **Peter Bogh Andersen**, *Aalborg University, Denmark*, **Ronald Stamper**, *University of Twente, UK*, **El-Sayed Abou-Zeid**, *Concordia University, Montreal Quebec, Canada*

Organizational Semiotics regards organizations as the real information systems in which technologies have an essential role to play. It develops this perspective using the established discipline of semiotics, the theory of signs. A sign is anything that stands for something else within a certain community. This fundamental notion supports a unified treatment of human and technical aspects of information systems.

Organizational Semiotics: Evolving a Science of Information Systems covers such issues as: • Fundamental concepts such as 'information', 'data', 'message', 'communication', 'knowledge', 'organization', 'system' and so on; • Properties of signs vital to organizational functioning, such as their meanings, the intentions they express and the valuable social consequences they produce; • 'Architecture' of organizations when they are viewed as information systems, based on their semiotics features; • Understanding language in organizational contexts, for example, the limitations on the language used to conduct business affairs; • The empirical study of communications for requirements elicitation; • Applying semiotic categories (e.g. physical, empiric, syntactic, semantic, pragmatic, social) to various problems; • Organizational knowledge representation; • Business process re-engineering methods and the design of e-commerce systems. This volume comprises the proceedings of the Working Conference on Organizational Semiotics: Evolving a Science of Information Systems, which was sponsored by the International Federation for Information Processing (IFIP) and held in Montreal, Quebec, Canada in July 2001. This Working Conference, the initiative of IFIP Working Group 8.1, was preceded by related workshops over a period of six years; the proceedings of the 1999 and 2000 meetings were published by Kluwer Academic Publishers. ***Organizational Semiotics: Evolving a Science of Information Systems*** will be of prime interest to all those working in information systems, especially researchers, lecturers, and students, as well as industrial practitioners.

Hardbound, ISBN 1-4020-7188-4, September 2002

Price: 176.00 EUR / 160.00 USD / 112.00 GBP

IFIP Price: 123.00 EUR / 112.00 USD / 78.50 GBP

Education and Information Technologies

Journal

The Official Journal of the IFIP Technical Committee on Education

Editor-in-Chief: **Deryn M. Watson**, *School of Education, King's College London, UK*

Associate Editors: **John Olson**, *Queen's University, Kingston, Canada* **Brian Sumwalt**, *Northeast Education Centre, Birmingham, UK*

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Education and Information Technologies, the official journal of the IFIP Technical Committee on Education, publishes papers from all sectors of education on all aspects of information technology and information systems. As users are aware, the new technologies can liberate the learner and teacher and allow their time to be used more efficiently. Topics covered include: changes in teaching and learning, as well as examples of good practice and innovative ideas.

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From Geometric Modeling to Shape Modeling

TC5

edited by **Umberto Cugini**, *Università di Parma, Italy;*
Michael J. Wozny, *Rensselaer Polytechnic Institute, Troy, NY, USA*

IFIP Working Group 5.2 has organized a series of workshops aimed at presenting and discussing current issues and future perspectives of Geometric Modeling in the CAD environment.

From Geometric Modeling to Shape Modeling comprises the proceedings of the seventh GEO workshop, which was sponsored by the International Federation for Information Processing and held in Parma, Italy in October 2000. The workshop looked at new paradigms for CAD including the evolution of geometric-centric CAD systems, modeling of non-rigid materials, shape modeling, geometric modeling and virtual prototyping, and new methods of interaction with geometric models.

The seventeen included papers provide an interesting overview of the evolution of geometric centric modeling into shape modeling. Also included is an invited speaker paper, which discusses the foundation of the next generation of CAD systems, where shape and function enhance geometric descriptions.

The main topics discussed in the book are:

- Theoretical foundation for solids and surfaces;
- Computational basis for geometric modeling;
- Methods of interaction with geometric models;
- Industrial and other applications of geometric modeling;
- New paradigms of geometric modeling for CAD;
- Shape modeling.

Hardbound, ISBN 0-7923-7635-8, November 2001, 256 pp.
EUR 169.00 / USD 150.00 / GBP 104.00
IFIP Price: 115.00 EUR / 105.00 USD / 73.00 GBP

From Knowledge Intensive CAD to Knowledge Intensive Engineering

TC5

edited by **Umberto Cugini**, *Università di Parma, Italy;*
Michael J. Wozny, *Rensselaer Polytechnic Institute, Troy, NY, USA*

In this series of workshops organized by IFIP Working Group 5.2, the concept of intelligent CAD is extended to the concept of "knowledge intensive engineering". The concept advocates that intensive life-cycle knowledge regarding products and design processes must be incorporated in the center of the CAD architecture. It focuses on the systematization and sharing of knowledge across the life-cycle stages and organizational boundaries.

From Knowledge Intensive CAD to Knowledge Intensive Engineering comprises the Proceedings of the Fourth Workshop on Knowledge Intensive CAD, which was sponsored by the International Federation for Information Processing and held in Parma, Italy in May 2000. This workshop looked at the evolution of knowledge intensive design for the product life cycle moving towards knowledge intensive engineering.

The 18 selected papers present an overview of the state-of-the-art in knowledge intensive engineering, discussing theoretical aspects and also practical systems and experiences gained in this area. An invited speaker paper is also included, discussing the role of knowledge in product and process innovation and technology for processing semantic knowledge.

Main issues discussed in the book are:

- Architectures for knowledge intensive CAD;
- Tools for knowledge intensive CAD;
- Methodologies for knowledge intensive CAD;
- Implementation of knowledge intensive CAD;
- Applications of knowledge intensive CAD;
- Evolution of knowledge intensive design for the life-cycle;
- Formal methods.

Hardbound, ISBN 0-7923-7619-6, November 2001, 264 pp.
EUR 169.00 / USD 150.00 / GBP 104.00
IFIP Price: 115.00 EUR / 105.00 USD / 73.00 GBP

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Advances in Network and Distributed Systems Security

TC11

edited by **Bart De Decker**, *Katholieke Universiteit Leuven, Belgium*
Frank Piessens, *Katholieke Universiteit Leuven, Belgium*
Jan Smits, *Technische Universiteit Eindhoven, The Netherlands*
Els Van Herreweghen, *IBM Research Laboratory, Zürich, Switzerland*

The more our society relies on electronic forms of communication, the more the security of these communication networks is essential for its well-functioning. As a consequence, research on methods and techniques to improve network security is extremely important.

Topics in this volume include the latest developments in: Security protocols; Secure software engineering; Mobile agent security; E-commerce security and; Security for distributed computing. **Advances in Network and Distributed Systems Security** contains the proceedings of the First International Working Conference on Network Security (I-NetSec 01), which was sponsored by the International Federation for Information Processing, and held in Leuven, Belgium in November 2001.

Hardbound, ISBN 0-7923-7558-0, November 2001, 218 pp.
EUR 150.00 / USD 135.00 / GBP 100.00
IFIP Price: 118.50 EUR / 101.50 USD / 70.00 GBP

Published by Kluwer Academic Publishers on behalf of the

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Digital Enterprise Challenges

TC5

Life Cycle Approach to Management and Production

edited by **George L. Kovács**, *Computer and Automation Institute, Hungarian Academy of Sciences, Budapest, Hungary;*
Peter Bertók, *School of Computer Science and Information Technology, RMIT University, Bundoora, Australia;*
Géza Haidegger, *Computer and Automation Institute, Hungarian Academy of Sciences, Budapest, Hungary*

Digital Enterprise Challenges comprises the proceedings of the Eleventh International PROLAMAT conference, which was sponsored by the International Federation for Information Processing and held in Budapest, Hungary in November 2001. This volume contains case studies, theoretical papers and project development reports on one of the greatest challenges facing the new digital enterprises: Life Cycle Approach to Management and Production. In an increasingly environment-conscious world, manufacturing and production are seen as part of a larger picture: the product life cycle (production - use - disposal), and are looked at from three different aspects: technology, economy and ecology (environmental impact). The PROLAMAT conference focuses on technology while also embracing the other two aspects; various solutions for the different activities are presented in the papers.

Main issues discussed in the book are:

- CAD/CAM/CIM/CAE, Reverse Engineering;
- SCM, ERP, Networking, Web Based Applications;
- Decision Support Systems, Intelligent Manufacturing;
- Modelling and Simulation;
- Virtual and Real Enterprises, Life-Cycle Approach, Management;
- Control and Robotics Applications.

Hardbound, ISBN 0-7923-7556-4, November 2001, 568 pp.
~~EUR 207.00 / USD 192.00 / GBP 134.00~~
IFIP Price: 145.00 EUR / 133.00 USD / 92.00 GBP

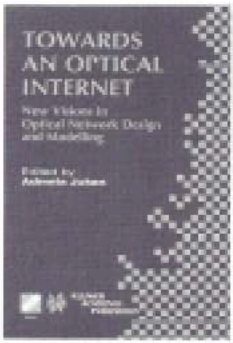
Towards an Optical Internet

TC6

New Visions in Optical Network Design and Modelling

edited by **Admela Jukan**, *Institute of Communication Networks, Vienna University of Technology, Austria*

This is the age of networked information, where more than ever in the history of technological progress, society's reliance on communication networks for health care, education, scientific data transfer, commerce and many other endeavours dominates everyday life. We are facing quotidianly progressing developments in communication techniques, the rapid implementation of new technologies, a standardisation process, emerging markets and carriers in permanent motion.



Towards an Optical Internet comprises the proceedings of the Fifth Working Conference on Optical Network Design and Modelling, which was sponsored by the International Federation for Information Processing. Presenting the most recent progress in optical network architectures, design, operation and management, the conference took place in Vienna, Austria in February 2001. In the tradition of the previous conferences (Athens '00, Paris '99, Rose '98, and Vienna '97), which brought together university researchers, technology leaders and network operators, this book addresses new optical network engineering aspects to be pursued, implemented, and discovered.

Hardbound, ISBN 0-7923-7541-6, November 2001, 416 pp.
~~EUR 165.00 / USD 150.00 / GBP 105.00~~
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Calendar of Events

(continued from page 24)

Event	Date	Location	Sponsored by	Contact
Int'l Conf on Personal Wireless Communications	23-25.10.2002	Singapore, SG	IFIP WG6.8	pomidyer@ewe.nus.edu.sg, http://www.ewe.nus.edu.sg/pwc2002/, Fax: +65 7795441
Work Conf on Meeting: Global IT Skills Needs - The Role of IT Professionalism	25-27.10.2002	London, GB	IFIP, CEPIS	rjohnson@bcs.org.uk, http://www.globalITskills.org, Fax: +44 20 76316727
14th Symposium Computer Architecture & High Performance Computing	28-30.10.2002	Vitoria, BR	IFIP WG10.3, IEEE	alberto@inf.ufes.br, http://www.inf.ufes.br/sbac2002/, Fax: +55 27 3335 2690
Asia-Pacific Conf on Computer-Human Interaction	4-11.2002	Beijing, CN	IFIP TC13, Nat Sci Found of CN	guozhong@admin.issas.ac.cn, Fax: +86 1062562513
5th IFIP WG11.5 Work Conf on Integrity and Internal Control in Information Systems	1-12.11.2002	Bonn, DE	IFIP WG11.5, GI	adrian@cs.uni-bonn.de, http://sirius.cs.uni-bonn.de/ICIS2002/, Fax: +49 228 734382
Int'l Conf on Formal Techniques for Networked and Distributed Systems	1-14.11.2002	Houston, TX, US	IFIP WG6.1	vardi@ice.edu, http://www.ece.utexas.edu/FORTE/, Fax: +1 713 3485930
Is Theory Any Use for Information Security Managers?	5-15.11.2002	London, GB	IFIP WG9.6/11.7, ISE, CSRC	corc@ise.ac.uk, Fax: +44 207 9557335
5th Int'l Work Conf on Design of Information Infrastructure Systems for Manufacturing	8-20.11.2002	Osaka, JP	IFIP WG5.3, Osaka Univ, NIST	ami@mapse.eng.osaka-u.ac.jp, Fax: +81 6 6879 7570 http://www.mapse.eng.osaka-u.ac.jp/DISM2002/
5th Smart Card Research & Advanced Application Conference	20-22.11.2002	San Jose, CA, US	IFIP WG8.8, USENIX	ellie@usenix.org, http://www.usenix.org, Fax: +1 510 5485758
Work Conf on Global and Organizational Discourse about Information Technology	2-14.12.2002	Barcelona, ES	IFIP WG8.2	andrew@iese.edu, http://is.lse.ac.uk/staff/whitley/resources/iscourse/, Fax: +3- 93 2534343
Int'l Conf on High Performance Computing	8-21.12.2002	Bangalore, IN	IFIP WG10.5, ACM, IEEE	prasanna@usc.edu, http://www.hipc.org/hipc2002/, Fax: +1 213 7404418
Work Conf on Quality Education at a Distance	1-6.2.2003	Geelong, VIC, AU	IFIP WG3.6	cstacey@deakin.edu.au, http://www.deakin.edu.au/education/QED/, Fax: +6 393446834
HOT 2003	4-8.4.2003	Irvine, CA, US	IFIP WG9.3	avenkate@uci.edu, http://www.erita.uci.edu/acah/hoit2003/, Fax: +1 949 8248091
18th IFIP Int'l Information Security Conference	26-28.5.2003	Athens, GR	IFIP TC11	dgritz@aueb.gr, http://www.aue2003.org, Fax: +30 10 8203597
Int'l Conf on Testing of Communicating Systems	26-29.5.2003	Sophia-Antipolis, FR	IFIP WG6.1, ETSI, GI	anthonywiles@etsi.fr, http://www.testcom2003.org, Fax: +33 49 3654716
Conf on E-Training Practices for Professional Organization	7-11.7.2003	Pori, FI	IFIP WG3.3/3.4, FEA	maltisli@pori.tut.fi, http://www.pori.tut.fi/etmin/, Fax: +358262 72727
21st IFIP TC7 Conf on System Modelling & Optimization	21-25.7.2003	Sophia Antipolis, FR	IFIP TC7, INRIA	jean-paul.zolesio@sophia.inria.fr, http://www.devinci.fr/cs11p/, Fax: +33 4 92387980
World IT Forum	27-29.8.2003	Vilnius, LT	IFIP, UN/UNESCO/UNU/OECD	renaldasgudauskas@if.vu.lt, Fax: +370 2 366104
9th IFIP TC13 Int'l Conf on Human-Computer Interaction	1-5.9.2003	Zurich, CH	IFIP TC13	g.w.m.rauterberg@tue.nl, http://www.interact2003.org, Fax: +5 40 2431930
1st Latin-American Symposium on Dependable Computing	21-24.10.2003	Sao Paulo, BR	IFIP WG10.4, IEEE, SADIO	jean.camargo@poli.usp.br, http://www.pcs.usp.br/~LADC2003, Fax: +5 1130915294

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Calendar of Events

Event	Date	Location	Sponsored by	Contact
EUNICE 2002 & IFIP WG6.7 Workshop on Adaptable Networks & Services	2-4.9.2002	Trondheim, NO	IFIP WG6.7	eugesen@item.ntnu.no, http://www.item.ntnu.no/eunice2002/
Intl.Conf.on Advances in Production Management Systems 2002	9-11.9.2002	Eindhoven, NL	IFIP WG5.7, Bass, PTC	h.j.pels@tm.tue.nl, http://tmitwww.tm.tue.nl/apms2002/, Fax: +31 40 2452612
Conf.on Formal Techniques in Real-Time and Fault-Tolerant Systems	9-12.9.2002	Oldenburg, DE	IFIP WG2.2	damm@offis.de, http://www.informatik.uni-oldenburg.de/fbrtf02/, Fax: +49 441 7982145
Symposium on Integrated Circuits and System Design	9-14.9.2002	Porto Alegre, BR	IFIP WG10.5, SBMicro	reis@inf.ufrgs.br, http://www.ufrc.org.br/sbcci
Conf.on Analysis & Optimization of Differential Systems	9-14.9.2002	Constanza, RO	IFIP WG7.2, Rom.Acad.of Sc.	ofribu@imar.ro
Conf.on Mobile Wireless Communications Networks	10-11.9.2002	Stockholm, SE	IFIP WG6.2/6.8, Inst.f.Comm.Res., SGP	gorridyar@cwc.rms.edu.sg, http://www.cwc.rms.edu.sg/mwcn2002/, Fax: +65 7795441
21st Intl.Conf.on Computer Safety, Reliability & Security	10-13.9.2002	Catania, IT	IFIP WG10.4/13.5	mas@dcs.ed.ac.uk, http://www.safecomp.org, Fax: +44 1316677289
4th Intl.Symp.on Human Computer Interaction with Mobile Devices	18-20.9.2002	Pisa, IT	IFIP TC13, ACM, BCS	fpaterno@cnuce.cnr.it, http://giove.cnuce.cnr.it/mobilehci02.html, Fax: +39 050 3138091
Intl.Conf.on Parallel Architectures and Compilation Techniques	22-25.9.2002	Charlottesville, VA, US	IFIP WG10.3, ACM, IEEE CS	skadron@cs.virginia.edu, http://www.pactconf.org, Fax: +1 434 982 2214
World Telecommunications Congress 2002	22-27.9.2002	Paris, FR	IFIP TC6, SEE	prosper.chemouil@francetelecom.com, http://www.wtc2002.org/
IFIP WG7.3 Intl.Symp.on Computer Modeling, Measurement & Evaluation	23-27.9.2002	Rome, IT	IFIP WG7.3, Univ.Roma	a.tucci@governo.it, http://perf2002.uniroma2.it, Fax: +390672597468
Forum on Specification & Design Languages	24-27.9.2002	Marseille, FR	IFIP WG10.5, ACM, GI	villar@teisa.unican.es, http://www.ecsi.org/fdl02, Fax: +34 42201873
5th IEEE/IFIP Intl.Conf.on Inf.Technology for Balanced Automation Systems in Manufacturing and Services	25-27.9.2002	Cancun, MX	IFIP WG5.3	matik@labe.felk.cvut.cz, Fax: +420 2 24357224
Work.Conf.on Engineering Information Systems in Internet Context	25-27.9.2002	Kanazawa, JP	IFIP WG8.1	saeki@se.cs.titech.ac.jp, http://www.se.cs.titech.ac.jp/ifip-we, Fax: +81 3 57342917
Work.Conf.on Communication and Multimedia Security 2002	26-27.9.2002	Portoroz, SI	IFIP TC6/TC11, DS	centro@setece.org, http://www.setece.org/cms2002/, Fax: +386 14232118
5th Intl.Conf.on Management of Multimedia Networks and Services	6-9.10.2002	Sta.Barbara, CA, US	IFIP WG6.6, IEEE ComSoc	almeroth@cs.ucsb.edu, http://www.cs.ucsb.edu/conferences/MMNS02/
2nd IFIP Conf.on E-Commerce, E-Business and E-Government	7-9.10.2002	Lisbon, PT	IFIP TC6/8/11, API, APDC, ACEP	lavr@civil.ist.utl.pt, Fax: +351 218409884
Workshop on Internet Technologies, Applications and Societal Impact	18-11.10.2002	Wroclaw, PL	IFIP WG6.4	grzech@ists.pwr.wroc.pl, http://www.ists.pwr.wroc.pl/witasi/, Fax: +48 71 320 332848
6th Intl.Symposium on Communications Interworking	13-16.10.2002	Perth, AU	IFIP WG6.2	cantoni@ee.uwa.edu.au, http://www.ee.uwa.edu.au/~iflp2002/, Fax: +61 8 93887254
13th IFIP/IEEE Intl.Workshop on Distributed Systems: Operations & Management	21-23.10.2002	Montreal, CA	IFIP WG6.6, IEEE	kropf@iro.umontreal.ca, http://www.dsom2002.org, Fax: +1 514 3435834
Conf.on Network Control and Engineering	21-25.10.2002	Paris, FR	IFIP WG6.2, IEEE	rigsidel@enst.fr, http://www.net-con.org
4th Intl.Workshop on Mobile Agents for Telecommunication Applications	23-24.10.2002	Barcelona, ES	IFIP WG6.7	jaime.delgado@tecn.upf.es, http://www.upf.es/mata-ma2002/, Fax: +34 93 5422517

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