40th ANNIVERSARY ISSUE

IFIP Newsletter

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IFIP Is Now 40 Years Old

Recollections of the Founding President

[In 1985, the late **Mr. Isaac Auerbach** (US), founding president of **IFIP**, wrote an article about the first World Computer Congress and the founding of **IFIP** for the book *A Quarter Century of **IFIP**: the **IFIP** Silver Summary*,* edited by **Prof. Heinz Zemanek** (AT). Because 2000 is the 40th birthday of **IFIP**, we print below the part of **Mr. Auerbach's** article, "Personal Recollections on the Origin of **IFIP**," that deals with the founding of **IFIP**. The start of the article, describing the first Congress, in 1959, was printed in the December 1999 ***IFIP** Newsletter* (page 1). Photographs can be found on pages 12 to 15 of the present issue. — Editor]

Founder Auerbach

During the very first meeting of the Committee of Experts [for the First International Conference on Information Processing (ICIP)] in December of 1957, **Prof. Auger** [of Unesco] 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. He advised us that Unesco's policy was to initiate such activities, but not to continue them. It was the sense of the Unesco advisors, all of whom were attending in an individual capacity, that an organization to convene international conferences would be highly advantageous. We agreed that we would each confer with our own countries and national professional societies so that we could discuss the organization of a federation when we met again.

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. The members of the Organizing Committee were:

I.L. Auerbach, Chairman	USA
J. Carteron	France
S. Comet	Sweden
A. Ghizzetti	Italy
C. Manneback	Belgium
D. Panov	USSR
C.S. Scholten (for A. van Wijngaarden)	Netherlands
M.V. Wilkes	UK
H. Yamashita	Japan

...One of the first issues to be discussed was whether the organization should consist of governmental or non-governmental bodies. By this time I had become well aware of the ponderous procedures of governmental bureaucracy and also of the negative sentiments in the U.S. towards the organization of another multi-national United Nations type of organization. Without much debate, we agreed to form a non-governmental federa-

continued on page 9

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Council Meets in Washington

Excellent Financial Situation and Stable Activity Level

The **IFIP** Council met in Washington, DC, USA, for 1½ days 8–9 March, preceded by three days of meetings of committees and other **IFIP** bodies. This Council heard reports about the satisfactory status of the Federation; however, few new technical initiatives were reported. The meetings were jointly hosted by the two **IFIP** Member societies from the

continued on page 17

CONTENTS

IFIP Is Now 40 Years Old 1
Council Meets in Washington 1
Namur Award to Prof. Simon Rogerson 2
UNESCO's Director General Meets with NGO Liaison Committee 2
SADIO Resumes Membership in **IFIP** 3
Conf. on Intelligence in Networks 3
International Olympiad in Informatics 4
Intl. Student Design Competition 5
Who's Who: Mr. George Boynton 6
Who's Who: Mr. Jan Wibe 6
World Congress on Formal Methods 7
Obituary: Dr. Joseph Raviv 7
Commo. and Multimedia Security 7
The **IFIP** Logo 8
40th Anniversary Reception 8
40th Anniversary Photographs 12–15
Commo.-Protocal Spec. & Testing 16
IFAC 1999 Congress in Beijing 17
Youth Forum at **IFIP** Congress 2000 17
Obituary: Prof. Donald Davies 24

National Abbreviations 22
Calls for Papers 22
Future **IFIP** Meetings 23
Calendar of Events 28

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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. Acknowledgement 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:
anonymous ftp: ftp.ifip.or.at
WWW: http://www.ifip.or.at

Fifth **IFIP** WG9.2 Namur Award Presented to Professor Simon Rogerson

*by Mr. Jan Holvast(NL)**
*and Prof. Colin Beardon(GB)***

The **IFIP** Working Group 9.2 on Social Accountability and Computers reports the presentation of the fifth Namur Award to **Professor Simon Rogerson** (GB) at a ceremony in Namur, Belgium, on 14 January.

Simon Rogerson is one of the most important researchers on the ethics of computing and of information and communication technology (ICT) in the United Kingdom. He is director and teacher at the Centre for Computing and Social Responsibility (CCSR) at De Montfort University, Leicester, UK, which he founded in 1995.

As Director of CCSR, he has pioneered ethics of computing research and education. He conceived and directs the ongoing ETHICOMP conference series, which began in 1995 and provides a European forum to discuss the ethical and social impact of ICT development and applications. He has connections with the recently created Australian Institute for Computer Ethics and several North American institutions working on the ethics of computing. CCSR's web site, http://www.ccsr.cms.dmu.ac.uk/, which he launched in 1996, is now recognised as one of the leading reference sites on the subject and is visited each month by many thousands of people from around the world.

* WG9.2 chair
** past WG9.2 chair (1997–1999)

Simon Rogerson also leads the Advances in Social Responsibility in the Information Age programme that is funded by the Economic and Social Research Council, UK, with further sponsorship by Royal Mail.

His recent book, *Ethical aspects of information technology: Issues for senior executives* (Institute of Business Ethics, London, 1998), is one the few to address ethics of computing from a corporate perspective.

He was recently appointed as Professor in Computer Ethics at De Montfort University within the Faculty of Computing Sciences and Engineering. It is believed to be the first professorship of its kind in the UK and recognises the field as an important area for research.

The biennial **IFIP** WG9.2 Namur Award is granted for an outstanding contribution with international impact to the awareness of social implications of information technology. The purpose is to draw attention to the need for a holistic approach in the use of information technology in which the social implications have been taken into account.

By giving **Simon Rogerson** the fifth **IFIP** WG9.2 Namur Award, the Working Group emphasises the need to place the study of ethics on the agenda of international ICT research and practices. •

UNESCO's Director General Meets with the NGO Liaison Committee

Nedkov Represents **IFIP**

In February, the new Director General (DG) of UNESCO, **Mr. Koichiro Matsura** (JP), met with the NGO-UNESCO Liaison Committee, a body of nine organizations elected in 1998 by the NGO conference for a three-year term, with the mandate to represent the interests of over 400 international NGOs with UNESCO. The DG assured the Liaison Committee that he was dedicated to decentralization of activities and strengthening partnerships with professional organizations. NGOs will have an important role in UNESCO's future strategy, and **Mr. Matsura** was personally committed to assist cooperative initiatives of the Liaison Committee. Representatives of the nine organizations (including **IFIP**, represented by Executive Director **Plamen Nedkov**) were invited to present the activities of their organizations and to discuss plans and initiatives of the Liaison Committee.

Another item on the Liaison Committee agenda was a project for a Joint NGO/UNESCO

continued on page 22

SADIO Resumes Full Membership in **IFIP**

Several **IFIP** Activities in Argentina

*by Dr. Cecilia Berdichevsky **

SADIO, the Argentine Society for Informatics and Operations Research (Sociedad Argentina de Informática e Investigación Operativa), is a scientific association whose aim is to promote the development and free interchange of knowledge and experience in Computer Science, Information Technology, Management Science and Statistics. At present it has approximately 700 members and several patrons. Among its members are university lecturers, practitioners and students. It was established in 1960, three months before SAC, the Argentine Society of Calculus, which was the Argentine **IFIP** Member society until 1974. In 1979, SADIO replaced SAC as the **IFIP** Member.

Because of financial problems, SADIO requested to become a Corresponding Member of **IFIP** in 1993. Since conditions have now improved, SADIO requested restoration of its previous status, and the 1999 General Assembly, in Kuala Lumpur, voted unanimously to reinstall SADIO as a Full Member. SADIO is actively working to nominate representatives to **IFIP** Technical Committees; three well-known experts have already been nominated and accepted by the TC chairs in TC2, TC3 and TC7.

In addition to its **IFIP** Membership, SADIO is the Argentine Member of IFORS (the International Federation of Operations Research) and is one of the founding members of CLEI, the Latin American Center of Informatics Studies. SADIO has a joint membership agreement with the ACM and joint activities with the Argentine Chapter of the IEEE.

Activities

SADIO organizes professional seminars and forums about technical problems, publishes a regular Newsletter, and supports a Web page, an electronic journal and a library (a joint activity with the Argentine Chapter of the IEEE).

But the main activity of SADIO is the JAIIOs**,** the Argentine Congresses on Informatics, which attract 700–1000 participants. The JAIIOs currently comprise several symposia: Theory, Software Engineering, Artificial Intelligence, Communications and Networks, and so on. Well-known international personalities in the field participate, giving tutorials, plenary conferences, panels and other activities.

***** representative of SADIO to the GA

IFIP Lecturers at the 28th JAIIO

JAIIOs have been held since 1961, but this year, during our 28th Congress, an important **IFIP**-related activity took place, sponsored and organized by the **IFIP** Technical Committee on Communication Systems (TC6) and coordinated by one of its members, **Ing. Ramón Puigjaner** (ES). It consisted of three tutorials on New Technologies in Networks and Distributed Systems and three invited lectures by TC6 experts: **Prof. André Danthine** (BE), a former TC6 chair, **Prof. Lorne G. Mason** (CA), and **Ing. Puigjaner.** Attendance at the tutorials ranged from 30 to 50 and at the lectures from 80 to 100.

A panel was also held, organized as a working breakfast. It was on New Challenges in Telecommunications and had the participation of the three **IFIP** experts in networks named above, together with people from telephone companies and from other companies interested in communication services.

WG2.3 Activities in Argentina

Dr. Natarajan Shankar (US), chair of WG2.3, **Dr. Armando Haebarer** , Argentine representative and secretary of TC2, **Prof. Gabriel Baum** (AR), and **Dr. Rafael Lins** (BR) are organizing an 8-day school/semi-

continued on page 5

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Conference on Intelligence in Networks Held in Bangkok

*by Prof. Otto Spaniol (DE)**
*and Prof. Finn Arve Aagesen (NO) ***

The **IFIP** Conference on Intelligence in Networks, SMARTNET'99, was held in Bangkok, Thailand, from November 22 to 26, 1999. More than 120 researchers from 10 countries participated in the conference. Some 70% of the attendees were from Thailand; the remaining participants came from Austria, Belgium, Canada, Finland, France, Germany, Japan, Norway and the UK. The number of participants in the tutorials was 326. SMARTNET'99 was the fifth in a series of conferences on Intelligence in Networks under the auspices of the **IFIP** Technical Committee on Communication Systems (TC6), Working Group 6.7. This is the first time the SMARTNET conference was held outside of Europe.

Fireworks with **IFIP** logo mark SMARTNET finale.

The main objective of SMARTNET'99 was to be a forum for academics, researchers, practitioners and service providers for the discussion of the research and development in the area of network intelligence (the set of actions by which more and more functions, decisions, responsibilities, etc. are transferred from the computer [i.e., from the outside] into the network, e.g., into the routers, switches, etc.) The first two days were devoted to seven tutorial sessions. The following three days had 16 sessions following the opening session. Five of these were keynote and invited-paper sessions. The remaining 11 technical sessions, containing 34 papers, consisted of nine ordinary technical sessions and two special sessions.

Technical Sessions

The papers in the ordinary technical sessions were arranged in four sessions on Teleservices, two on Application of Mobile Agents,

* TC6 correspondent to the ***IFIP** Newsletter* and former TC6 chair

** TC6 contact for SMARTNET'99 and Norwegian TC6 delegate

continued on page 22

The International Olympiad in Informatics — after 11 Years

*by Stanislaw Waligorski (PL)**

The eleventh International Olympiad in Informatics (IOI) took place October 2–9, 1999 in Antalya, Turkey. Some 257 contestants from 65 countries competed for 22 gold, 41 silver and 64 bronze medals. Five other countries sent observers. The **IFIP** floating trophy for the student with the best score was presented by a representative of the **IFIP** Technical Committee on Education (TC3), **Peter Waker** (ZA), to **Hong Chen** from China, the eleventh person in the world to win this cup.

The idea of the IOI was proposed by **Prof. Blagovest Sendov** (BG), president of **IFIP** from 1989 to 1992, to the 24th General Conference of UNESCO in Paris in October 1987. UNESCO accepted it, and the first IOI, held in Pravetz, Bulgaria, May 16–19, 1989, was attended by contestants from 13 countries. At the second Olympiad, in Minsk, Belorussia, there were contestants from 25 countries, i.e., almost twice as many as there were a year before. During the 11 years of the IOI, over 1300 contestants have taken part, more than 240 of them participating two or more times.

The Rules

According to its regulations, the IOI is an annual international informatics competition for individual contestants from various invited countries, which have an officially recognized relationship with the United Nations or UNESCO, or which have already taken part in one or more past IOIs. A contestant must not be older than twenty years on the first of July of the year of a competition and must be enrolled at a secondary school during the period from September to December in the preceding year. Each national team consists of not more than four contestants and up to two adults, a leader and a deputy leader, who take care of the contestants and are members of the General Assembly of the competition.

The travel costs to and from the venue of the competition are covered by the national sponsors of the participants. Costs for board and lodging during the IOI are at the expense of the organizers.

There are no common rules of selection of the students for IOI national teams. The regulations of the IOI recommend selecting them by merit. Several countries organize national Olympiads in Informatics or national contests under other names, but details of selection of the IOI contestants vary greatly from country to country. There are also a few regional Olympiads in Informatics and a few international contests in problem solving and programming on the Internet. All of them may influence in some way national preparations of contestants.

The main objectives to be accomplished by the IOI are

- to discover, encourage, bring together, and give recognition to young people who are exceptionally talented in the field of informatics
- to foster friendly international relationships among computer scientists and informatics educators
- to bring the discipline of informatics to the attention of the young people
- to promote the organization of informatics competitions for students at schools for secondary education.

The typical IOI takes 8 days, including the days of arrival and departure. The contest itself takes place during two competition days, each directly preceded and followed by a noncompetition day. During each competition day, contestants are given a few (usually three) tasks of algorithmic nature. Solutions must be programs written in one of a list of widely used programming languages. The list of these languages is announced at least one year before the competition. No knowledge of any other specific software is needed.

The entire evaluation of results is computer aided and is supervised by the IOI Scientific Committee. The final decisions are taken by the General Assembly, one vote for each country delegation present. About one twelfth of all contestants receive a gold medal, about one sixth a silver medal, and about one quarter a bronze medal. (Thus, approximately half of the contestants receive medals.)

IFIP Involvement

IFIP TC3 supports the IOI, having created, in 1993, a floating **IFIP** trophy that is awarded annually, as agreed with the IOI organization. At its meeting during IOI'93, the international jury decided that the trophy should be awarded to the student (or students) with the highest overall score.

The trophy has been won by contestants from China (twice), Czech Republic (twice), Iran, Republic of South Africa, Romania (twice), Russia (four times), and Sweden. **Victor Bargatchev** and **Vladimir Martianov** of Russia have each won it twice. Two times, in 1993 and 1998, it was won by four contestants with the same highest score, so that now, in the seventh year of the existence of the **IFIP** trophy, there have been 11 winners.

The next five hosts will be China in 2000, Finland in 2001, Korea in 2002, the USA in 2003, and Greece in 2004.

On the IOI Web page,

http://olympiads.win.tue.nl/ioi/,

one can find IOI-related material, such as competition tasks of past IOIs, literature recommendations for self-study, guidelines for IOI participants, links to Web sites of regional and national Olympiads of Informatics, and links to pages of past IOIs with their detailed information about particular contests. Also, one can see a list of other international science Olympiads. •

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TC13:	J. Hammond	AU	98–01

* member of TC3, waligor@mimuw.edu.pl

IFIP Member Society Sponsors International Student Design Competition

Dr. Bruce Shriver Leads IEEE–CS Effort

In October 1999, the IEEE Computer Society (IEEE–CS), a Full Member of **IFIP**, announced the first annual Computer Society International Design Competition (CSIDC). CSIDC 2000 is challenging students around the world to design a special-purpose computer device. The goal of the contest, which has a $25,000 total first prize, is to advance excellence in computer-design education.

"There are a number of system-design competitions in other science and technology fields. However, there is currently no substantive system competition in computer science and computer engineering. The Computer Society International Design Competition addresses this void," said **Dr. Bruce Shriver** (US), chairman of the inaugural CSIDC, a past Computer Society president, and the former IEEE–CS representative to the **IFIP** General Assembly. "The CSIDC gives teams of undergraduate students in computer-related fields an opportunity to apply what they've learned to a real-world problem. The number one goal of the CSIDC is to advance excellence in education."

The CSIDC's goals have convinced major corporations to provide financial support for the competition. Other sponsors are providing state-of-the-art technology components for the competition's project kit.

Each competing team received the same kit of resources and a description of an existing situation that could be improved through technology. CSIDC project kits consisted of a high-performance, embedded-computer development system, donated through the generosity of numerous technology sponsors. The kits also contained a single-board computer with a color-LCD monitor, dual USB ports, a parallel port, a serial port, and several levels of varying size and performance memory in its storage hierarchy. Teams selected one of four operating systems and three software-development environments to use as a basis of the software components in their designs. To prevent an unfair advantage in favor of schools with greater economic resources, students were restricted in what they could add to the elements from the kit.

The teams were asked to create a working model of a device to address a particular challenge. Part of the specification of the device was as follows:

> The Health Care Information-Appliance Project requires the team to develop an informal functional specification for and then design and implement a prototype Information Appliance that is aimed at improving public health by helping people become more directly involved in their own health care. [IAs are devices designed primarily to create, send, retrieve, and manipulate information via a network of computers, such as the Internet. IAs are easy to carry, simple to operate, reliable, and competitively priced.] The IA should help people enter, access, display, store, and manipulate information about health-related issues.

Some 180 teams of three to five undergraduate students applied initially. Fifty of them were then selected and sent the project kits. Forty of these teams turned in projects by the May deadline. Late in May, the Judging Panel selected the top twenty, which comprised six teams from the US, three from Canada, and one each from eleven other countries around the world. The Panel will meet early in June to narrow the choice down to the top ten teams.

IEEE COMPUTER SOCIETY

At the CSIDC World Finals, in Washington, DC, 25–27 June, the Computer Society will bring together the top ten teams, from all over the globe, to meet and compete with their peers in an intensive, three-day contest. The judging process will be rigorous. Students will be judged on their prototype's creativity, usability, and marketability. Students will be challenged to demonstrate how they addressed highly dependent trade-offs when designing and implementing a solution to the problem and will be required to defend their decisions in front of a panel of distinguished expert judges.

Prizes for CSIDC winners range from a total of $25,000 for first place ($15,000 as a team prize and $10,000 as a financial-aid fund) to $2,000 for fifth place, plus honorable mention awards of $1,000. The top three winning teams' schools will each receive a financial aid component of up to $10,000. The students will determine how the team prize money is distributed among the team members.

"This competition is benefitting institutions as well as students," said **Dr. Shriver.** "Faculty members could plan projects courses around the competition's theme, and the donated project kit will provide a valuable educational tool. But the longer-term benefit will be that students will emerge from their academic preparation better able to do the kinds of team projects that characterize work in our field."

More information can be found at the CSID Web site: http://computer.org/CSIDC/. •

SADIO continued from page 3

nar on the state of the art in Program Design Using Logic. This activity will take place in Tandil in the Province of Buenos Aires. Five lecturers have been chosen among the WG2.3 membership: **Prof. David Gries** (US), **Dr. Pamela Zave** (US), **Prof. Rick Hehner** (CA), **Prof. John Reynolds** (US), and **Prof. Ralph Back** (FI). Participants in the school will include young researchers and postgraduate students from Argentina and Brazil. About 60 participants are expected. At the same time and in the same location, a two-day WG2.3 workshop will be held and is expected to gather WG2.3 members and Latin American experts.

[In April, **Dir. Peter Bollerslev** (DK), president of **IFIP**, visited the SADIO office in Buenos Aires. He commented on this visit as follows. — Editor

> ...it was a great pleasure to note how well organized our Member society is, how well their secretariat functions and to learn about all the conferences and activities they deal with. The SADIO representative to **IFIP**, **Cecilia Berdichevsky**, takes care of her tasks in a very careful and efficient manner. It was a very positive experience to participate in a panel session, which was arranged as a part of SADIO's celebrations in relation to their ruby anniversary. We are happy that this important society is back as an active Full Member of **IFIP**. SADIO is very promising for **IFIP**'s future activities and appearance in Latin America.] □

Chairs Appointed for IFIP Congress 2002

Mr. George Boynton

In March, **Dir. Peter Bollerslev** (DK), president of **IFIP**, named **Mr. George Boynton**, who is the Canadian representative to **IFIP**, as chair of the Organizing Committee for the 17th World Computer Congress, to be held in Montréal in 2002.

Mr. Boynton was born in Montréal in 1946. He obtained the B.A. degree in Mathematics from McGill University in 1968, and after graduation, he began working in the information technology industry — the first 18 years in the life insurance industry and the remainder as co-owner of a computer-systems consulting firm specializing in financial systems. He retired last year as Chairman and CEO but still remains involved.

He served as National President of the Canadian Information Processing Society (CIPS) in 1996–1997. During his tenure, he

- promoted better methods of communicating with and reporting to sections across the country as well as new programs to encourage member retention and interest students
- reversed the trend of declining membership

- initiated discussions that eventually led to the merger of CIPS and la Fédération de l'Informatique du Québec (FIQ), the organization that represents CIPS in Québec.

In addition, he is presently chair of the CIPS Marketing Committee and a member of several other CIPS committees. He also plays major roles in other organizations, including the Information and Communications Technology (ICT) sector of Trade Team Canada, Centraide of Greater Montréal (known as The United Way in the rest of North America), the Software Human Resources Council (a body created to ensure that Canada has the systems in place to guarantee a continuing supply of software workers with the up-to-date skills and attitudes employers require to make Canada successful in the global marketplace), and the Management Advisory Board of the Superintendent of Bankruptcy.

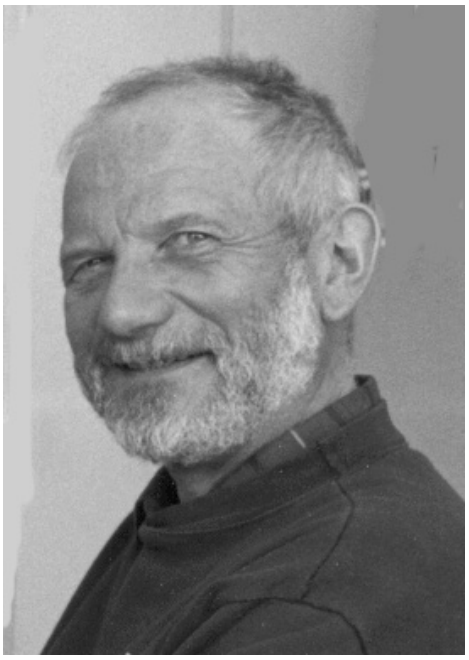
Mr. Boynton was appointed as CIPS representative to **IFIP** in 1998 and was the spearhead behind the winning bid to bring **IFIP** Congress 2002 to Montreal.

When asked what he does in his spare time, he answered, "My wife, Christine, and I enjoy travelling (**IFIP** events are helping us to see some countries that we have not yet visited), good food (Christine is a great chef), and good wine (I'm the sommelier). All this food and wine requires a lot of exercise, and my favorite activities are cycling and rowing — and hibernating during our cold winters." •

Mr. Jan Wibe

Last year, **Mr. Jan Wibe** (NO) was appointed chair of the International Program Committee for **IFIP** Congress 2002, the 17th World Computer Congress, by **Dir. Peter Bollerslev** (DK), president of **IFIP**. The Congress will be held in Montreal, Canada, 25–30 August 2002.

Mr. Wibe, a veteran **IFIP** worker, was born in Trondheim, Norway. He received his Master's degree in mathematics at the University of Oslo in 1965, after which he lectured in mathematics and science at Norwegian secondary schools. In 1973, he became Lecturer in Mathematics in the School of Education at the University of Trondheim and later Lecturer in Computer Science. From 1985 to 1992, he worked for the Norwegian Ministry of Education on a task force concerned with introducing computers in education. Since 1992, he has been Advisor on Distance Education at the Norwegian University of Science and Technology in Trondheim. He is currently working on a project called The Virtual University for Mathematics and Science, a cooperative project involving the universities of Oslo and Trondheim and a regional university. The project will develop two main products, a Web site for the virtual university and a model course in mathematics. **Mr. Wibe** is the author of many papers, especially in the areas of distance education and education via the Internet.



He has been active in **IFIP** since 1993, as the Norwegian member of the Technical Committee on Education (TC3) and in the Working Group on Telelearning (WG3.6), as chair from 1993 to 1999. He is also a member of WG3.1 on Informatics and ICT in Secondary Education. He has served as the chair of the International Program Committees for several **IFIP** conferences, including Teleteaching '93 and Teleteaching '98 (part of **IFIP** Congress '98). He received the **IFIP** Distinguished Service Award in 1994 and the Silver Core Award in 1998.

He and his wife, Marie, have two children, Hilde and Gro. In his spare time, he enjoys walking in the Norwegian mountains — in both summer and winter. He is also an experienced brewer of homemade beer. •

First World Congress on Formal Methods in the Development of Computing Systems

*by Ute and Wilfried Brauer (DE)**

Not only did **IFIP** co-sponsor the first World Congress on Formal Methods in the Development of Computing Systems, which was held in Toulouse, France, from September 20 to 24, 1999, but **IFIP**'s presence was also demonstrated by two of its Working Groups: WG1.3 (Foundations of Systems Specification) and WG2.2 (Formal Description of Programming Concepts). Each presented its own session. By this means, **IFIP** demonstrated some of its scientific potential and could take part in the great success of FM'99.

This congress was initiated by **Dines Bjørner** (DK) — still well known in **IFIP** circles as the successful Program Committee chair of the 1986 **IFIP** World Congress in Dublin. Although FM'99 was the first world congress in its field, FM'99 follows in a long and famous tradition. It is the successor of four FME (Formal Method Europe) symposia, which were preceded by four VDM (Vienna Development Method) Europe symposia.

This widening of the congress activities reflects the growing importance of formal methods in research and application. Formal method techniques and related tools are increasingly used by industry for program development, both for hardware and software. Therefore the enthusiasm in this field is great, as is indicated by the following numbers:

• 259 papers from 35 countries were submitted, from which the international program committee accepted 92, along with 15 abstracts describing work in progress and industrial applications.

• Seven well known leaders in the field agreed to give invited lectures: **G. Kahn** (FR), **C.A.R. Hoare** (GB) [who will be one of the four keynote speakers at **IFIP** Congress 2000 in Beijing in August], **C. B. Jones** (GB), **A. Pnueli** (IL), **J. Rushby** (US), **J. Sifakis** (FR), and **M. Jackson** (GB). They covered topics ranging from theories of programming, robust software construction, deduction of program properties, and characteristics of VDM to views on the integration and role of formal methods in the practise of computing systems development.

• 12 user group meetings with workshops took place

• 12 industrial tutorials were presented

• there were 32 commercial and academic organisations from 11 countries at the software-tool exhibition.

• The attendance of FM'99 was much larger than expected: 520 participants from 35 countries. Nevertheless, the splendid organising team managed everything perfectly well.

Also, an exhibitors' competition was held, which turned out to be an excellent idea. The task was to design a "cash-point service" whose functionality was described verbally; to specify it by using the contestants' own formalisms; and to demonstrate, by the help of their own tools, that the solution met the requirements in the best possible way. The winning team was "AutoFocus with Quest" by the Technical University of Munich, from the department chaired by **M. Broy**.

No one who attended FM'99 will forget this outstanding event. The congress proceedings, *FM'99 — Formal Methods*, edited by **J.M. Wing** (US), **J. Woodcock** (GB), and **J. Davies** (GB), were published as two volumes (1708 and 1709) of the Lecture Notes in Computer Science series published by Springer–Verlag. •

* former ***IFIP** Newsletter* correspondent for TC3; and former **IFIP** vice-president and chair of TC3, respectively

Dr. Joseph Raviv

(1934–1999)

Dr. Joseph Raviv, who represented the Israel Association for Information Processing (IPA) in **IFIP** from 1981 to 1986, and his wife, Joanna, died in an automobile accident in New Zealand on 14 October 1999.

Born in Poland in 1934, **Dr. Raviv** moved to Israel when he was four years old. He received his basic education in Israel and his higher education in the US. He led the IBM research activities in Israel as head of the IBM Israel Scientific Center. He served as president of IPA from 1986 to 1990. **Dr. Raviv** is widely regarded as a pioneer of the Israeli hi-tech industry.

We extend our condolences to his children and his colleagues.

Conference on Communications and Multimedia Security

*by Mr. Joris Claessens (BE)**

The fourth working conference on Communications and Multimedia Security (CMS'99) was held in Leuven, Belgium, from September 20 to 21, 1999. The conference, arranged jointly by the **IFIP** Technical Committees on Security and Protection in Information Processing Systems (TC11) and Communication Systems (TC6), was organized by the research group COSIC (COmputer Security and Industrial Cryptography) of the Department of Electrical Engineering of the Katholieke Universiteit Leuven.

The conference aimed to provide an international forum for presentations and discussions on protocols and techniques for providing secure information networks. The contributions reviewed the state of the art in communications and multimedia security and discussed practical experiences and new developments. They covered a wide spectrum of topics, including network security, applied cryptology, entity authentication and key agreement protocols, mobile applications, watermarking, smart cards, legal aspects of digital signatures, and Web security.

In addition to the full paper presentations, a recent-results session was held, in which a number of short talks were given on recently obtained results in the area of communications and multimedia security. An invited talk was given by **Whitfield Diffie** (US) on Upcoming Threats to Secure Communication.

Although there were only approximately 30 participants, this number permitted a good interaction and lively discussions. Moreover, most of the participants were experts in their fields.

The Program Committee, chaired by **Prof. Bart Preneel** (BE)**,** selected 21 of the 30 papers submitted. The proceedings, *Secure Information Networks* edited by **Prof. Preneel,** were published by Kluwer. The detailed program, and contents of the proceedings, can still be found on the CMS'99 Web site:

http://www.esat.kuleuven.ac.be/cosic/cms99/ •

* member of conference Organizing Committee

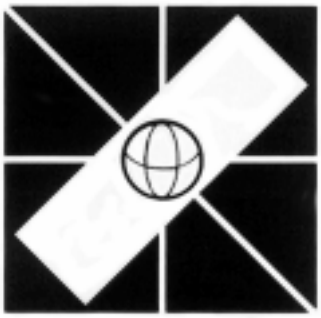
The **IFIP** Logo: Its History and Proper Display

[This article, which appeared in the March 1989 ***IFIP*** *Newsletter*, is reprinted here in celebration of the 40th anniversary of **IFIP**.]

At a meeting of the **IFIP** Activity Development Board (ADB), instances of the **IFIP** logotype being printed incorrectly on announcements of **IFIP** events were displayed by **Mr. George Glaser** (US), then chairman of the ADB and **IFIP** vice-president. This encouraged the ***IFIP*** *Newsletter* to investigate the origin of the logo.

Mr. Isaac Auerbach (US), founder and first president of **IFIP**, wrote us that **Mr. Evan Herbert** (US) was its originator:

> During the first two World Computer Congresses (Paris in 1959 and Munich in 1962), **Evan** chaired the U.S. Public Relations Committee and organized many news conferences during and following the conference, to publicize the creation of **IFIP** and the importance of computers to society. He did an outstanding job. The logo came about as a result of our discussions about the need for a graphical symbol. It is a superb symbol that, I believe, should continue to be used, since it is a clear identification of **IFIP** and our global interest and activity.



Scissors and Paste

Mr. Herbert wrote us the following brief history:

> It is a simple story of pragmatism. The power of the computer had been perceived across all international boundaries, and Unesco was about to provide a common ground for an exchange of information and yearnings. The First International Conference on Information Processing (ICIP) was to be held in Paris in 1959. **IFIP** was given birth there.
>
> I was an editor of *Automatic Control* magazine in 1958 when **Isaac Auerbach** asked me to work on public information aspects of ICIP. Outside of a small part of the technical community, few people would appreciate the potential outreach of computers and information processing across many disciplines. More practically, few editors would think the conference agenda might touch their readership.
>
> I thought, "Maybe if we looked universally important, we would get good press coverage." I decided that an international conference needed posters and press release headers with an international-looking logo. But there wasn't much of a budget to get a professional designer.
>
> So I wandered up and down New York's Fifth Avenue collecting travel posters, until one design struck my fancy. It had a doughnut-looking world that reminded me of a magnetic core [magnetic material, usually toroidal in shape, used for random access memory in computers from the 1950s to the 1970s — Editor].
>
> Strictly an amateur, I used photocopying and reverse prints to generate some stark representations of core arrays. I pasted one over the world on the poster and added printed material. When I took on similar tasks for the newly formed **IFIP**, I tried to use the symbol on everything in sight — letterheads, bookmarks, badges, etc. — hoping that it would become a recognizable symbol for universal use as **IFIP** grew.
>
> That's how it happened: high aspirations; low budget; scissors and paste.

Proper Display

Just as there are rules for the proper display of national flags, there is a rule for the proper display of the **IFIP** logo. The magnetic core symbol must slant from lower left to upper right, and the "globe" in the center must appear as if viewed from north of the equator. (There are no provisions for those who live in the Southern Hemisphere to print the globe as if viewed from below the equator.)

The logo should appear on all **IFIP** literature (including posters, calls for papers, and conference announcements), as well as on similar literature for events **IFIP** co-sponsors. The **IFIP** Secretariat will gladly supply the logo, in a variety of sizes.

Over the past decade, there has been thought about whether the magnetic core should be replaced with a more modern symbol of the computer and information processing. Some argue that the core labels **IFIP** as an organization out of touch with modern times. Others think that anachronistic symbols (e.g., the shaving pan that is used as the symbol of the barber shop in some European countries) should be retained and cherished because they represent charming ties with the past. In this era of unbelievably swift scientific evolution, it may be desirable to cling to a symbol of a technology that is now virtually obsolete.

The ***IFIP*** *Newsletter* had considered holding a contest for the design of a new **IFIP** logo, with the grand prize to be a lifetime subscription to the *Newsletter*. On second thought, we decided that we liked the logo as it is (as long as it is oriented properly). •

40th Anniversary Reception

*by Mr. Plamen Nedkov**

A reception celebrating **IFIP**'s 40th Anniversary was held in Washington during the Council meeting in March (see the article on page 1). At this **IFIP**-sponsored event, Council participants and representatives of the two US Member societies had the honor and pleasure to meet with four attending **IFIP** Past Presidents: **Professors Heinz Zemanek** (AT, 1971–1974), **Pierre Bobillier** (CH, 1977–1983), **Asbjørn Rolstadås** (NO, 1992–1995) and **Kurt Bauknecht** (CH, 1995–1998). As an **IFIP** doyen, **Heinz Zemanek** shared views and experiences, some very entertaining, of the early **IFIP** years.

A highlight during the reception was a surprise gift presentation to **IFIP** from China, consisting of a large (over 15 kg.) vase, which is a masterpiece of ceramic art. The vase was presented by the Chinese GA representative and **IFIP** Trustee, **Prof. Q. Wang**.

The reception was followed by an elegant dinner hosted by the ACM and the IEEE Computer Society. •

* Executive Director of **IFIP**

President Bollerslev (left) introduces Prof. Heinz Zemanek

Prof. Wang (in foreground) presents vase to **IFIP**. Past presidents Rolstadås (left), Bollerslev (current president), Bobillier, Bauknecht, and Zemanek stand behind..

FOUNDING OF IFIP continued from p. 1

tion of national professional technical societies, acknowledging that financing such an activity would pose severe hardship as compared to getting grants from governments. In spite of this difficulty, the decision turned out to be superbly correct.

During these sessions, some of the academics on the Organizing Committee questioned the value of an international federation, stating that its sole purpose should be to convene a few international conferences, there being no other activity worthy of international effort. They felt that we should agree in advance that if we were to organize a federation, it should have a maximum life of ten years. They doubted the need for a federation in the field of information processing, since the subject matter was not on-going, like astronomy or geology or a similar science where international cooperation is essential. They were involved in academic pursuits in their own fields and wanted a computer to enable them to solve their particular problems. They perceived the computer as a means to an end, not a field of study unto itself.

My perception of the computer was quite different. For me, it was a universal tool enabling the solution of thousands of problems and could be a way of extending the capacity and ability of our brains just as the Industrial Revolution extended our brawn. I was convinced that the computer would be the most important technical development of the twentieth century, whose impact on society would be boundless. I expressed these sentiments to the Organizing Committee rather strongly; however, the issue continued to be discussed for about a year. Fortunately, the majority of the members of the Organizing Committee supported my position that the federation should be permanent, and we were able to continue with our plans.…

Dr. Harold Chestnut of the United States, the first President of the International Federation of Automatic Control (IFAC), was an excellent source of information and guidance in our proceedings.…He made me aware of the feeling in a number of countries that there were too many international federations being formulated, and that the British were particularly reluctant to participate in new international federations.…He encouraged me to explore with the Organizing Committee the option of becoming a part of IFAC and subsuming our computer activities within IFAC.…

During the meetings of the Organizing Committee in October 1958, I reported on the very positive response I had received by letter from individuals and national societies not represented on the Organizing Committee to the formation of a federation dealing with information processing. The members of the committee also reported a definite interest in their countries for us to proceed with the formation of our own federation. We then discussed the IFAC proposal, and, recognizing that our field of interest was much broader than IFAC's, we were unwilling to have information processing subsumed under control systems. Thus, we decided to thank them for their generous offer and to proceed independently to form our own federation.

The Structure

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. Furthermore, the Federation would have only one national technical society per country as a member, and certain Eastern European countries could register their National Academies of Science as the representatives. The rationale for this decision was that one society for each country would keep the voting balanced and controlled.

It should be noted that in the Scandinavian countries, Netherlands, Japan and Italy, no professional technical society dealing specifically with information processing had yet been formed. Even though these countries had National Academies, each country was triggered by the formation of **IFIP** to organize its own professional computing society to be its representative in the new Federation.

At first, the Federation was incorporated in Belgium, which supposedly had the most liberal regulations for a not-for-profit professional society. Later we learned that the laws in Switzerland, and in particular the Canton of Geneva, were more advantageous, and the Federation is currently registered there. The name that we had decided upon for the Federation was the *International Federation of Information Processing Societies (**IFIPS**)*. We proceeded with this name, even though my hand-written notes as of December 1958 say that the name of the Federation should be the *International Federation for Information Processing (**IFIP**)*. Hereafter, to avoid confusion I will refer to the Federation as **IFIP**, even though the Council did not change the name until October of 1961.

Mr. Jean Mussard of Unesco and his assistant, **Mme. C. Philippot**, were very supportive and encouraging throughout our deliberations, and without their help and secretarial support, we would have had much greater difficulty in bringing an international federation into existence. **Mr. Mussard** furnished me with constitutions of other international federations, summarized our discussions, and was responsible for the first draft of the statutes for the Federation. He was truly a tower of strength, and I would like to thank him here for his assistance and support.

It was our goal to create a set of statutes that would provide the Federation with a solid foundation for operation and, at the same time, provide the officers with maximum flexibility for adjusting to the needs and unknown contingencies which might arise during the early years. We must have been successful, because the statutes stood for twelve years without major refinement. The statutes contained the aims of the Federation to be as follows:

- To organize other international conferences on the subject of information processing.
- To establish international committees to undertake special tasks.
- To advance the interests generally of member societies through international cooperation in the field of information processing.

These basic aims enunciated twenty-seven years ago continue to be the main objectives of **IFIP**.

During this period, we submitted two successive drafts of our statutes to each national technical society or academy represented in the Organizing Committee for their reactions. Finally, we invited all of the national technical societies or academies worldwide to attend the Organizing Committee meetings during the Unesco-sponsored ICIP in June.

On June 18, 1959, the fourth day of the ICIP, the final meeting of the **IFIP** Organizing Committee was held, and twenty-eight people from eighteen countries attended. …Many of these people were meeting each other for the first time, which caused the meeting to be somewhat more fractious than any heretofore. ...

East vs. West

I chaired the meeting and, after an introduction and discussion of our purpose, circulated for discussion a copy of the proposed statutes for the formation of **IFIP**. Two issues of

continued on following page

substance were raised for the very first time. The first was a request from the observer from the Polish Academy of Sciences that the voting rights in the Federation's Council be modified to permit a veto right for the representatives from the nations which had similar veto rights in the [Security] Council of the United Nations. The second issue was that all national societies of recognized scientific or technical merit should be automatically admitted as members of the Federation, independent of a decision by the Council members.

It was during this meeting that I learned the tremendous value of a coffee break to enable people with differing viewpoints to discuss them informally rather than debate them in an open forum. During the coffee break, I met **Acad. A.A. Dorodnicyn** of the Soviet Union for the first time and was able to explain to his satisfaction that we were not proposing a United Nations type body, but a professional society of societies that would conduct its affairs in a more democratic way. Once he fully understood that the proposed Federation was to be a non-governmental organization, we were able to resolve both issues. It was finally agreed that the statutes be presented for ratification to each national professional technical society or Academy of Science.

From then on, **Acad. Dorodnicyn** and I established a mutually cordial and effective working relationship, each respecting the political polarization of our countries, but working together for a common goal. In later years, when I chaired the Nominations Committee for the President of **IFIP** and discussed with him his willingness to be a candidate for President, he agreed on one proviso. Namely that since his knowledge of finances was so meager, based on his experiences in the Soviet Union, that I must agree to be his advisor on all financial matters during his term of office. I so agreed, and we worked effectively together during his three years in office.

By the conclusion of the meeting of the Organizing Committee, the following decisions had been taken: 1) 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; 2) to establish a provisional committee consisting of President **I. L. Auerbach**, Vice Presidents **A.A. Dorodnicyn** and **Dr. A. van Wijngaarden**, and Secretary **J.A. Mussard**; 3) to authorize the Council to examine the possibility of holding a Second International Conference and Exhibition on Information Processing in 1963; 4) to study the financial arrangements for the Second International Conference and report on it to the Council at its first meeting; 5) to have member societies bear the expenses of their representatives' participation at the first meeting of the Council; 6) to select the place and date of the first meeting of the Council; 7) to publicize the decision to create **IFIP** and the names of the members of the Provisional Committee.

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. I was ecstatic.... In three and a half years from the moment of the original concept, I had convinced Unesco to sponsor a most successful international conference, had helped program it, and had simultaneously organized an international federation. I had made many new and worthy acquaintances in countries around the globe, some of whom became close friends. This was indeed a thrilling period in my life.

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....

The First Council Meeting

The **IFIP** Council met for the first time in Rome June 16–17, 1960. ... Ten representatives from the then fifteen societies which had approved the statutes plus many observers assembled:

M. Linsman	Belgium
N.I. Bech	Denmark
R. de Possel (for J. Carteron)	France
A. Walther	Germany
H. Yamashita	Japan
J.G. Santesmases	Spain
S. Comet	Sweden
A.P. Speiser	Switzerland
M.V. Wilkes	United Kingdom
I..L. Auerbach	United States

The following representatives were unable to attend:

C.C. Gotlieb	Canada
J. Kryze	Czechoslovakia
A. van Wijngaarden	Netherlands
A.A. Dorodnicyn	U.S.S.R.
P. Laasonen	Finland

One of the first actions of the Council was to modify the statutes, changing the titles of Chairman and Vice Chairman to President and Vice President, and electing the first President for a three-year rather than two-year term so he would serve through the next **IFIP** Congress. Later the statutes were modified so that all of the officers were elected for staggered three-year terms. I was elected President, **Dr. A. Walther** Vice President, **Dr. A. Speiser** Secretary-Treasurer, and I appointed **Mr. J. Mussard** as Technical Advisor.

In the early years, the Council was the only official body of **IFIP**. However, as the Federation grew in size and the Council meetings became unwieldy, we created a General Assembly for all of the representatives to meet once a year and a new, smaller Council consisting of only the officers and six members elected from the General Assembly to meet twice a year. Annually thereafter, two representatives and appropriate officers were elected for a three-year term.

The Next Congress

To avoid conflicting dates of international conferences, particularly with IFAC, we agreed to schedule **IFIP** Congresses every three years, the next to be held in 1962. **...**

Most of the time during the Council meeting was spent discussing the next international Congress, our first Congress as **IFIP**. We solicited invitations from all of the member societies and Academies of Sciences, but received only one written invitation. It was from **Prof. A. Walther**, Chairman of the Deutsche Arbeitsgemeinschaft für Rechgenanlagen (DARA) of the Federal Republic of Germany, to convene our Congress in September of 1962 in Germany. Apparently, the information processing societies either did not take us seriously or did not feel confident enough to extend invitations. We accepted **Prof. Walther's** invitation and agreed that the city would be decided upon at the next Council meeting. After **IFIP**'s First Congress, we rarely received fewer than two invitations, and there has been active international competition to host the next Congress.

To continue the international flavor of the Congress, we established a policy that the Chairman of the Program Committee and the Chairman of the Arrangements Committee from the host country would each report directly to the President of **IFIP**. The Program Committee was appointed by the President to insure its international constituency and its independence from the host country. For our first Congress, we agreed that the Council members would constitute the Program Committee. Thereafter, the Program Committee was selected from international experts with care taken to ensure national representation. The Chairman of the Arrangements Committee generally selected the

chairmen of the subcommittees, which included Finance, Exhibition, Proceedings, Printing, and Spouse Activities. This structure for organizing **IFIP** Congresses continues to this day.

For our first Congress, called **IFIP** Congress 62, I appointed **Prof. A. Walther** as General Chairman of Arrangements and **Niels I. Bech** Chairman of the Program Committee. In discussing the technical content of the Congress, the Council members pressed for papers of both higher quality and greater currentness than those presented at the ICIP, with less attention paid to the national distribution of the authors. The Council strongly recommended more symposia and panel discussions to further increase participation and currentness of the program. The Council agreed that its operating language would be English and that Congresses would be conducted in English. Permission was granted to the local Arrangements Committee to provide competent technical interpretation at no cost to **IFIP**.

Financing the New Federation

To finance the federation, each national technical society was asked to make an annual contribution of $1000, $500, or $250 per year. The NJCC [National Joint Computer Committee — the initial U.S. Member society] from the U.S. and the Academy of Sciences from the U.S.S.R. both agreed to contribute $1000. All of the other professional societies except DARA from the Federal Republic of Germany, which gave $500, selected the $250 option. In later years, the Finance Committee insured more equitable distribution of contributions. [At present, dues range from 1 600 to 12 800 eur.] At the time of our first Council meeting, our treasury held a mere $2,758.13 (the odd amount was due to the conversion of foreign currencies into U.S. dollars). It was clear from the beginning that we would have to take heroic measures to insure our financial viability. The officers agreed that their companies would underwrite the expenses of their activities and all of the representatives would pay their own expenses to attend the Council meetings. Our first annual budget totalled $2200. [The budget for 2000 is nearly 400 000 eur.] The Director General of Unesco generously contributed $5000 to **IFIP** to assist us in organizing and defraying the costs of the next Congress. Indeed, it took tremendous *chutzpah* [audacity] to plan an international conference with such a meager treasury. We addressed the problem by arranging to have either the host city or country or local industries agree to underwrite any losses that the **IFIP** Congress suffered. Based on the successes with our 1962 Congress, I was charged with the responsibility for these negotiations for the next three Congresses. Thereafter, the responsibility fell to other members of the General Assembly.

In retrospect, one of the most amusing items in the minutes of the first Council meeting was a discussion of the fees to be charged for the first Congress. For attendance at the technical sessions, the fee was to be between fifteen and twenty dollars, with students paying only five dollars. The proviso was that "this fee will entitle participants to receive all pre-printed Congress papers, but not the Proceedings." The registration fee for **IFIP** Congresses continued to be an issue for the first three Congresses. Those familiar with the current registration fees will be aware that the fees are significantly higher and include a copy of the Proceedings. [The regular registration fee for Congress 2000 in Beijing is $650.]

One of the major legacies I left **IFIP** was the establishment of sound fiscal policies, creating a positive net worth, that in twenty-five years have never put the Federation in financial jeopardy. I attribute this to three factors. First, my working experience was in industry and not academia or government. Second, I was intimately familiar with the finances of the professional societies in the U.S. and in particular with the financing of computer conferences. Each conference had to generate a surplus to provide adequate funds for the other activities of the societies during the intervening years. Third, I showed patience and perserverance during the conduct of these discussions and was willing to devote endless hours enlightening my peers about fiscal management.

Over the next three years, I was able to put into place a set of financial policies that made **IFIP** one of the few international federations that, after the first contribution from Unesco, never had a major financial problem or had to borrow money to conduct its affairs. The axioms are relatively simple: 1) each Congress has to be financially self-sufficient with registration fees adequate to cover all normal expenses and produce a surplus derived principally from fees charged exhibitors and casual attendee to the exhibition; 2) **IFIP** must derive a royalty from all of its publications; 3) we conduct the affairs of **IFIP** in a prudent manner throughout a three-year fiscal cycle.

Of these policies, the only one that caused dissension was that of establishing a royalty on publications. This particular idea was my own. Some representatives from the academic community objected strongly, for they felt the royalty would increase the price of the proceedings and other **IFIP** publications and make them prohibitively high. This has not been borne out by our historic results. In reviewing the financial statements of **IFIP** over a quarter of a century, I am happy to report that, even though the royalty percentage has been quite modest, it has generated income which on occasions was equal to or greater than the annual contribution from the member professional societies. In later years, many other professional societies adopted this same practice.

Other Actions of First Council

Another noteworthy action of the first Council meeting was the recognition of the need for greater standardization of terminology throughout the industry. Since I was responsible for this activity within the NJCC, it was my intent that **IFIP** should have a similar technical activity, and I drafted the goals accordingly. The Council authorized the establishment of our first Technical Committee — Terminology (TC-1), whose objectives were to establish a terminology of digital computers and data processing devices, and to compile a multilingual glossary for information processing systems and related subjects. We were indeed fortunate to find **Geoffrey C. Tootill** (U.K.) to serve as its first Chairman and **A. R. Wilde** (U.K.) to be committee secretary.

To increase the awareness of **IFIP** within the member societies and in professional circles, the Council authorized the publication of a bulletin. The original circulation of approximately two hundred was through members of the Council… [The current Bulletin has a circulation of 2600.]

Our host for the first Council meeting… initiated a practice that we continue, providing for an excursion or outing for the entire Council and its guests. The excursions proved to be invaluable, enabling the representatives to mingle informally, to get to know each other better, and to conduct Federation business that was formalized during subsequent meetings.…

Looking to the Future

All of the lofty goals that were set forth in the original proposal to Unesco, which began with that first flash of an idea during our conversation in the winter of 1955, were brought to successful fruition. The visionar-

continued on page 16

Forty Years of

Mr. Isaac Auerbach (US)
1960–1965

Prof. Ambros Speiser (CH)
1965–1968

Acad. Anatol Dorodnicyn (SU)
1968–1971

Prof. Dr. Heinz Zemanek (AT)
1971–1974

Dr. Richard Tanaka (US)
1974–1977

Prof. Pierre Bobillier (CH)
1977–1983

The first Congress, June 1959, Paris

IFIP Presidents

Dr. Kaoru Ando (JP)
1983–1986

Prof. Ashley Goldsworthy (AU)
1986–1989

Acad. Blagovest Sendov (BG)
1989–1992

Prof. Asbjørn Rolstadås
1992–1995

Prof. Kurt Bauknecht (CH)
1995–1998

Dir. Peter Bollerslev (DK)
1998–2001

The first **IFIP** Council Meeting, June 1960, Rome

IFIP Is Treated Royally

King Gustav of Sweden addresses **IFIP** Congress ’74 in Stockholm, September 1974.

Emperor Akihito of Japan (center, then Crown Prince) and Empress Michiko visit **IFIP** Congress ’80 in Tokyo, September 1980.

IFIP President Blagovest Sendov meets with Indian Prime Minister Rajiv Gandhi during 1988 General Assembly in New Delhi, September 1988.

King Juan-Carlos of Spain (at very center) meets with Organizing Committee of **IFIP** Congress ’92 in Madrid, September 1992.

Secretariat

Mme. Gwyneth Roberts, Administrative Manager of the **IFIP** Secretariat, in Geneva, for half of **IFIP**’s life: 1975–1995.

Mr. Plamen Nedkov, current Executive Director.

Ms. Dorothy Hayden, current Event Facilitator and Administrative Assistant.

First Executive Board

From left to right: A.P. Speiser (Secretary–Treasurer, CH), I.L. Auerbach (President, US), and A. W. (Vice-President, DE).

Theme

"Allegretto **IFIP**iense," written by Prof. Erich Neuwirth (AT) for IFIP Congress 1998.

Flotilla

Flotilla of three Danube cruise boats, lashed together, that carried **IFIP** Congress 1998 from Vienna to Budapest.

Logo

IFIP logo displayed on elephant.

Newsletter

Dr. Jack Rosenfeld (US), Editor of the ***IFIP** Newsletter* since 1983.

Conference on Communication-Protocol Specification and Testing Held in Beijing

*by Prof. Otto Spaniol (DE)**

The **IFIP** Joint International Conference on Formal Description Techniques for Distributed Systems and Communication Protocols (FORTE) and Protocol Specification, Testing and Verification (PSTV) was held in Beijing, China, from October 5 to 8, 1999. (Since 1996, the two Conferences have been combined into a single joint meeting, FORTE/PSTV.) Sponsored by **IFIP** Technical Committee 6 and Working Group 6.1 (Architecture and Protocols for Computer Networks), the Conference addressed formal description techniques applicable to distributed systems and communication protocols.

More than 130 researchers from 16 countries participated. Some 70% of the attendees were from China. The remaining participants were approximately evenly divided between other Asian countries, on the one hand, and "the rest of the world," on the other. In the latter category, France was particularly well represented. Other countries (USA, UK, Germany, etc.) had virtually no more participants than authors.

Twenty-two full papers and 5 short papers (selected from 78 submitted manuscripts) were presented in 9 sessions of the single-track program. The papers covered theory, application and case studies of protocol engineering and distributed systems, using formal methods. Eight of the 25 papers were supplemented by posters, which were shown in the registration hall. Approximately 50% of the presentations came from Europe, 30% from North America, and 20% from Asia.

Session topics included Testing, Formal Description Techniques, Model Checking, Verification, and Case Studies. Aspects like SDL (Specification Description Language) extensions and translation to programming languages were included, as well as how to test software systems using stress testing, fair testing or probabilistic testing. Furthermore, methods for verifying systems and specifications, both at the software and hardware levels were presented, with the use of formal description techniques. A case study session was devoted to demonstrating methods for specification and execution of tests. Another intensively discussed topic was model-checking software.

* TC6 correspondent to the ***IFIP*** *Newsletter* and former TC6 chair

Prior to the Conference, three tutorials were held, on the following topics: Stochastic Process Algebras: Linking Process Descriptions with Performance by **Prof. Ed Brinksma** (NL), Model Checking and Software Verification, by **Dr. Gerard Holzmann** (US), and Traffic Control and Quality-of-Service Management in the Internet, by **Prof. Hui Zhang** (US).

Excellent Invited Talks

Particular highlights of the event were the invited talks by **Prof. Dr. Roger Needham** (GB) and **Dr. Holzmann**. **Prof. Needham's** humorous talk (enriched with many anecdotes from his Cambridge experience) was on "reasoning about distributed systems." His outstanding presentation gave a good insight into why reasoning about distributed systems is extremely difficult or even impossible without taking into account many aspects of the global system.

The second invited talk, by **Dr. Holzmann**, presented the software model-checking approach that was used in the development of a new telephony switch. The call-processing software of the switch was implemented from scratch by two programmers, and methods to check the software were integrated into the code. **Dr. Holzmann** outlined in a extremely well structured and well presented talk that more than 90% of software errors were automatically discovered by this technique! Some of the undiscovered errors (found by user tests at later stages) were due to missing or wrong requirement specifications. **Dr. Holzmann's** talk was a convincing proof that software model-checking techniques may be applied even in large projects and that the resulting software is highly reliable. (Not very long ago, such techniques were considered as completely impractical.) **Dr. Holzmann's** talk was considered by many participants to be the best invited talk they ever heard. A full manuscript is included in the Conference proceedings.

The proceedings, entitled *Formal Methods for Protocol Engineering and Distributed Systems*, have been edited by the co-chairs of the programme committee, namely **Prof. Jianping Wu**, **Dr. Samuel Chanson,** and **Dr. Qiang Gao**. The proceedings were published by Kluwer Academic Publishers (ISBN 0-7923-8646-9) and were available on time for the Conference itself! The general chairpersons of the event were **Dr. Chanson**, **Dr. Chengwei Wang**, and **Prof. Guanqun Gu**. All the chairs were from China.

The Conference participants appreciated the excellent organisation very much. From this experience, we can strongly recommend that everybody attend the 16th **IFIP** World Computer Congress in Beijing (August 21–25, 2000). •

IFIP FOUNDING continued from page 11

ies among us recognized the significance and importance of the computer and information processing, and how significant an impact it would have on our lives. Eventually, others joined in our vision, and today the computer industry has become the most exciting, dynamic, and rapidly expanding field of the century. Today, as the computer becomes ever more essential to the smooth running of every aspect of our lives, it is difficult to believe how reluctant people were to understand, appreciate and involve themselves in one of the greatest technological developments of all times.

IFIP has had a great impact on bringing together scientists, engineers, mathematicians, academicians, and computer professionals worldwide, providing an opportunity to exchange ideas and enhance the advancement of information processing. Its success has been largely due to the devotion of its national representatives and the members of the Technical Committees and Working Groups, all volunteers who have given freely of their knowledge and time to insure the progress of the Federation.

The future of **IFIP** should be devoted to reaching out to developing nations, holding regional Congresses and conferences in countries in Africa, South America and Southeast Asia, which have been slow to integrate data processing into their societies. We have worked in the past to educate and disseminate knowledge, and we have shown that a meeting of the minds is essential in dealing with the complexities of a technical revolution. With information processing such an integral aspect of everyday life around the world, **IFIP** can continue to be an important force in shaping the future. •

Sister Federation Held '99 Congress in Beijing

The International Federation of Automatic Control (IFAC) is a sister federation to **IFIP**, and the two organizations cooperate in many ways. We recently read an article in their newsletter about their 14th World Congress, which was held in Beijing last July. We include here a couple of paragraphs from that article so that we can anticipate the type of reception **IFIP** Congress 2000 may receive in Beijing in August.

For the first time in IFAC history, the World Congress was convened on the Asian continent. And this Congress and all the related meetings were outstanding in many respects. The facilities provided and the scientific level of the Congress were excellent, and participation did not lag behind previous IFAC Congresses....

The Opening Ceremony took place in a very festive frame at the Beijing International Congress Centre [the venue for **IFIP** Congress 2000]. IFAC Congress participants had the great honour to be addressed by outstanding representatives of Chinese public life: Mr. Lanqing Li, **Vice Premier of China**, Prof. Ruwei Dai, **Co-President of the Chinese Association of Automation**, Congress Co-Chair, Ms. Wenyi Lin, **Vice-Mayor of Beijing**, Prof. Yongxiang Lu, **President of the Chinese Academy of Sciences**, NOC Chair, Prof. Yongzai Lu, President of IFAC, Prof. Hanfu Chen, Congress Co-Chair, Chairman of the IPC. The keynote speech was given by Prof. Jian Song, **President of the Chinese Academy of Engineering**, who has been connected to IFAC from the first days when the Federation was founded. □

Youth Forum to Be Held in Beijing

One of the novel activities of the 15th World Computer Congress, **IFIP** Congress '98, which was held in Vienna and Budapest, was the Youth Forum, which brought together 40 young people from 14 countries to deliberate social issues related to IT. They presented their resolutions at the closing session of the Congress.

Another Youth Forum is planned for Congress 2000, to be held in Beijing, China, 21–25 August — this time with 50 young adults. Potential participants are carefully screened. Part of the application includes a brief essay on the question, "How can today's IT-literate generation shape the global society of tomorrow?"

They have a busy schedule, beginning the day before the Congress opens and ending the day after the Congress ends. Most of the activity takes place from Monday to Friday of the Congress week. First they are assigned to one of five committees, each dealing with a unique topic of discussion.

Team building is the first activity of the five committees. It involves a day of communication and problem-solving exercises, to allow the delegates of the committees to get to know each other before they start the hard work. Team building creates a favourable work environment, in which committees can work together as a unit.

A white paper will be created by each committee, from Tuesday to Thursday. This is a document stating the beliefs of the committee regarding the current state of their topic and how they think it will develop in the future. A white paper serves as a basis for resolution writing, as discussed below.

On Thursday, the white papers produced earlier will be presented by each committee to the others. This allows a committee to gauge the reaction to their work and to contribute to the work of the other committees.

The remainder of Thursday and part of Friday will be devoted to the creation of resolutions by the committees. On the basis of its white paper and the input of the other committees, each committee will write a resolution stating what definite action it believes should be taken by the Future Forum (discussed below), by business, by governments, by international organisations etc.

Friday afternoon, the resolutions produced will be presented by each committee in a plenary session, where the resolutions will be debated and amendments proposed and debated upon. The final resolutions will be passed on to governments, international organisations, and other relevant parties.

Mr. Peter Pfannes (DE), the organizer of both the 1998 and 2000 Forums, is president of Future Forum, which is an international not-for-profit organization, incorporated in Germany and Ireland. Its purpose is to bring together young people from all over the world to further the discussion of topics vital to the youth of today, particularly technology-related subjects, and to promote the results of their work on a national and international level. •

COUNCIL continued from page 1

US: the ACM and the IEEE Computer Society. Hospitality was generous, including a dinner honoring **IFIP**'s 40th anniversary.

Good news was reported on a number of fronts: financially, **IFIP** is very healthy; 1999 sales of **IFIP** publications from Kluwer Academic Publishers, the primary **IFIP** publisher, were up 28% from the prior year, and the royalties were up 13%; a large number of papers — over 2000 — were submitted to the 16th World Computer Congress (**IFIP** Congress 2000); Technical Committee TC3 on Education reported the completion of the UNESCO-commissioned Modular University Informatics Curriculum Framework, for developing countries, and the beginning of the development of a new elementary-school informatics curriculum; very successful conferences and other activities have been held; and a new *This Is **IFIP*** information brochure has been prepared and distributed. Major discussions concerned digital libraries and cooperation with industry. One of the very few difficulties discussed was the drop in the number of Member societies with voting rights in **IFIP** to 40.

The Council was rather sparsely attended. Only four of the eight **IFIP** trustees were present, as were seven of the twelve TC chairs. In fact, toward the end of the meeting, only two trustees and five TC chairs remained. Some standing committee meetings were not held because of the absence of members, and some TC reports could not be delivered.

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COUNCIL continued from prior page

Following the initial day of Executive Board meetings, committee members and trustees assembled for their activities. The first item on the agenda was the presentation of reports by chairs of the major committees. This new information session was very useful in informing those present about what the committees had done during the interval since the General Assembly (GA) in September 1999.

Digital Libraries

Another new session was a "strategy session," held the second day of committee meetings, in which representatives of the two US Member societies described their activities in the area of digital libraries (DLs).

Mr. John Keaton of the IEEE–CS discussed their DL program. He pointed out the importance of publications to the Society, since 59% of their income comes from that source. The number of editorial pages published is growing. In 2000, they expect to publish 21 "titles" with 16 000 editorial pages. All of this will be available electronically. They do not plan to discontinue publishing in print in the near future, but they are entering electronic publishing seriously. Members of the Society receive electronically its general magazine, *Computer*, gratis and can subscribe to its complete DL, which contains Society publications and selected conference proceedings, for $99 (US) a year. In addition, individual articles in electronic form can be purchased. All of their publications are in the markup language SGML, and everything is text-searchable. The electronic version can be accessed well before the print version is available. At present, all periodicals since 1995 are available and all proceedings since 1997, and they are working on including material published before those dates. At present, they have 8000 subscribers. It is predicted that about 50% of subscriptions will be for both print and electronic versions. Among the difficulties mentioned by **Mr. Keaton** are establishing standards, the problems in processing complex mathematics, the failure of some academics to recognize electronic-only publication of peer-reviewed articles as being on a par with print articles, and issues concerning intellectual property rights. He mentioned that Kluwer has been cooperating with the IEEE–CS in some of these areas.

Mr. John White, chief executive officer of the ACM, gave a presentation of their DL activity, which was launched in 1997. They publish 25 journals and magazines and approximately 80 conference proceedings a year, as well as a book series, all of which is in the DL. The full text of all publications from 1985 to the present is available, amounting to 370 000 pages. The worldwide delivery of the DL contents is provided by a company specializing in "content delivery." There are 35 000 subscribers at present. The DL is also available to members of other societies with which ACM has agreements. One of the goals is to eventually incorporate all ACM publications since 1947 into the DL, as well as publications of other IT societies, in order to "create a portal to the world's computing literature."

Other topics included in the strategic session were education and cooperation with industry. The representatives of both US societies discussed their experience in these areas. **Mr. White** said that **IFIP** is viewed as a place where societies of the world can work together, but as primarily an academic organization. It was noted that many people join the IEEE and ACM while they are students and maintain their memberships after they have graduated and moved into industrial work. **IFIP**, on the other hand, tends to recruit its volunteers from the academic community.

Opening Session

Participants to the Council were summoned to its sessions by a bell rung by the **IFIP** secretary, **Dr. Roger Johnson (GB)**, donated to **IFIP** by his predecessor as secretary, **Mr. Graham Morris** (GB).

At the opening session of the Council, **Mr. White** welcomed **IFIP** on behalf of the ACM. He spoke of the transitions of ACM from a "membership organization" to an "electronic community" and from a print-based publisher to an electronic publisher. He pointed out that one ACM goal is to nurture the worldwide development of the IT profession. Speaking for the IEEE–CS, **Dr. Benjamin Wah** (US), president-elect of that society and chairman of the International Program Committee for **IFIP** Congress 2000, presented some interesting statistics about the Society: the membership is 103 000, up 4% during the past year, and it constitutes 27% of the membership of the IEEE. The non-US membership, now 41%, has been growing over recent years, but it has leveled off recently.

In the president's report, **Dir. Peter Bollserslev** (DK) called attention to this being the 40th anniversary year of **IFIP**. He stressed the productive work going on in **IFIP**, the close cooperation with UNESCO, and the progress of arrangements for future Congresses.

Finances

We begin with the favorable news on finances: we are in very good financial shape. The result for 1999, reported by **Prof. Dipak Khakhar** (SE), the **IFIP** treasurer, and **Mr. José Granado** (PT), chair of the Finance Committee, is a surplus of 459 000 Swiss francs (459K CHF), much better than the 200K CHF forecast by **Prof. Khakhar** in September 1999. There has been an increase in income over the 1998 amount (even without taking into account the appreciation of 320K CHF in portfolio investment), while expenses have increased only marginally. The income for 1999 was 887K CHF, and the expenses were 357K, resulting in a net income of 525K. (The discrepancy of 5K is due to a bookkeeping anomaly.) The total assets are now slightly over 3000K. The general fund now stands at 2116K — a 28% increase over 1998— and special funds add up to 665K. These favorable results have been achieved by tight control over expenses (due, in part, to a very efficient Secretariat), a 10% return on assets, and improved collection of dues. Proceeds from TC events were slightly greater than in 1998. Royalties from publications were slightly less than in 1998 and 16K below the 175K budgeted for 1999. **Mr. Granado** cautioned that some time in the future the "overheated status of the world capital markets" might lead to a drop in the value of our assets, even though they are conservatively invested. Some improvement is still necessary in order to optimize our banking arrangements. It was pointed out that **IFIP** is in only the fifth year of a 15-year period of financial support from the Austrian government, which was offered when the Secretariat was moved to Laxenburg, Austria, in 1995.

A proposal to reduce dues for Member societies in small developing countries was presented by **Prof**. **Khakhar** and **Mr. Plamen Nedkov**, Executive Director. The minimum dues would be 850 eur, enabling some countries that cannot afford to pay the present minimum dues to join or remain in **IFIP**. An opinion was expressed, however, that the expense to send representatives to the GA and to Technical Committee (TC) meetings is a more significant factor than dues in making participation in **IFIP** too expensive for many countries.

The Finance Committee proposed a change in dues category for eight countries (based on the United Nations dues scheme), which

would raise their dues, beginning in 2001. Those countries that pay their dues in advance (up to three years) will be able to defer the increases.

At the 1999 Council, a proposal was made with regard to a "risk fund" that would enable **IFIP**, when organizing events jointly with other organizations, to take greater financial risks than are now permitted. At the 2000 Council, it was decided that no special fund need be established, since monies can be taken from a variety of **IFIP** funds for such special cases, and no special committee need be appointed to allocate such monies.

A final financial issue concerned the sharing of **IFIP** Congress proceeds with TCs involved in the organization of component conferences of the Congresses. An elaborate scheme was devised to apportion this money among the TCs. Had this plan been in force for the Congress in Vienna and Budapest, the amount distributed among the TCs would have been 10 000 CHF.

Publications

It was reported that 24 **IFIP** books had been published by Kluwer in 1999. The publisher's goal is to print at least 30 volumes in 2000 (hopefully 40 — in celebration of the 40th anniversary of **IFIP**). The sales of **IFIP** books published in 1999 were up 28% from the 1998 results, and royalties were up 13%. (The inconsistency between these numbers and those in the treasurer's report occurs because royalties are reported by the treasurer in the year they are paid rather than the year they are earned.) TC6 (Communication Systems) was by far the leading TC with respect to total 1999 revenues earned. The publisher's report proudly announced that all pre-conference proceedings were delivered to the conference venues on time. It also pointed out the enhancements to the Kluwer Web site for **IFIP** editors (http://www.wkap.com/ifip).

Some light was cast on the perennial question of why **IFIP** books are so expensive by **Mr. Scott Delman** (US), Kluwer's representative, who presented several factors affecting the price: the royalties to **IFIP** are significant; the market for these very specialized books is small; there are many conferences competing for the same market; there is a certain inelasticity in the market (i.e., the number of sales is not closely related to the price); similar books in the same technical area sell twice as many copies; and most **IFIP** conferences are small (200–300 participants), and the number of participants is dwindling. Kluwer will conduct an experiment to determine the effect of price on sales for one **IFIP** book, the results of which will be reported back to **IFIP**. The publisher's report also indicated that, after much deliberation, Kluwer had negotiated an increase with **IFIP** of the bulk-sale price to conference organizers for proceedings.

With regard to the journal of the Technical Committee on Education (TC3), *Education and Information Technologies*, its future had been uncertain because the number of subscribers was small (44 institutional subscribers and 8 individual subscribers). In her report to the September 1999 GA, **Mrs. Yana Lambert** (US), Kluwer's **IFIP** Editor, stated, "Kluwer is currently negotiating a new contract with **IFIP** for ownership of the journal — a move that will justify the significant investment Kluwer is making to re-launch the journal, and a move that is ultimately of mutual benefit to all." In December, the Executive Board transferred ownership and copyright for the journal to Kluwer without any payment, and Kluwer agreed to return rights to the journal to **IFIP** should Kluwer not wish to continue it. Kluwer hopes to make this journal a success.

The publisher's report indicated Kluwer's involvement in electronic publication, as follows:

> Kluwer is in the process of transitioning from a paper-based publisher to an e-publisher. The implications of this for our business as well as for our customers are wide reaching. While we will continue for the foreseeable future to deliver our books, journals, and reference works in traditional formats, we have already introduced electronic delivery of our subscription-based product to the institutional marketplace and will start introducing new and innovative products to niche scientific communities in the coming years. At present, nearly 400 of Kluwer's 650+ journals are available for full-text electronic delivery in PDF format with SGML headers 6–8 weeks prior to print publication, including the *Education and Information Technologies* journal. In 2000–2001, our journals will be delivered fully SGML, and then XML, providing enhanced searching capabilities for the end user. Kluwer is actively signing licensing agreements in North and South America, Europe, and Asia/Australasia with individual libraries and library consortia to deliver journals electronically to their members....

The report went on to speculate about the future, without specifying Kluwer's plans:

> In addition, the scientific community is starting to hint at the need for dissemination of research-oriented books to be delivered in electronic format, both as electronic facsimiles of the original books and as dissected and repackaged material in the form of personalized information packages. In the future, companies such as Kluwer will sell not only complete **IFIP** volumes, but also individual chapters packaged with other **IFIP**- and Kluwer-related chapters from our various publications. The end user will be given the option of either purchasing an entire **IFIP** volume in print or electronic format or a compilation of chapters from a variety of subject-related publications. These personalized information packages will not be offered in the near future, as there is not a considerable marketplace for them at this time. However, this is one direction Kluwer and other scientific and technical publishers will likely move....It is an exciting time to be involved with the dissemination of scientific literature and you can be assured that companies like Kluwer are going to be at the cutting edge of e-publishing strategy and commerce.

The Publications Committee will present a paper at the GA, in August in Beijing, concerning its proposals for electronic publication in **IFIP**.

Cooperation with Industry

In March 1999, **Dr. Takeo Miura** (JP), now a vice-president, proposed that action be taken to involve industry more closely with **IFIP**. In his report to the Council on the progress of the committee formed to study this problem, he observed that people from industry have a mistaken impression that **IFIP** is not of interest to them. He proposed that there be an industry session in Congresses, that more standards work be done in **IFIP**, and that the Statutes and Bylaws be changed to permit greater industrial participation, and he made other suggestions. **Prof. Reino Kurki-Suonio** (FI), chair of TC2 (Software: Theory and Practice), observed that he has found it easy enough to make contact with industrial *research* people but difficult to get others in industry involved. The next step will be for a survey to be made by the Secretariat to determine the actual ratio of industry to academia within the **IFIP** community.

Membership

The secretary informed Council that there were only 40 Members with voting rights. At the GA last September, it was reported that there were 41 Members in good standing; however, the Memberships of Albania, Greece, Ireland, and Russia had been suspended because of their failure to pay their dues, and the **IFIP** statutes require that their Memberships be automatically terminated at the end of 1999. Since then, the New Zealand

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COUNCIL continued from prior page

Member has requested to change its status to Corresponding Member. Because back dues have been received from the Greek and Irish societies, their Memberships are in good order, but the Memberships of Albania and Russia have been "frozen." Thus, there are 41 Full Members in good standing at present.

Concern was expressed about the absence of Russia and other Eastern European countries from **IFIP**. **Mrs. Judy Hammond** (AU), chair of TC13 (Human–Computer Interaction) observed that not having Russia involved in **IFIP** is detrimental to our work. **President Bollerslev** replied that he has been in touch with representatives of Russia and other former Soviet Union countries. Also, he observed that some initiatives have been taken to increase the low Arab representation.

Congresses

IFIP Congress 2000

In his role as International Program Committee (IPC) chair of the 16th World Computer Congress, **Prof. Wah** reported for both the IPC and the Organizing Committee. This Congress will take place 21–25 August in Beijing, China. Despite the very low number of paper submissions received by the initial deadline, an extended deadline resulted in some 2018 papers being submitted. The geographical distribution is as follows:

China	1283
remainder of Asia	182
Oceania	49
Europe	332
N. and S. America	141
other	31

The distribution of the submitted papers over the eight component conferences of the Congress is

Signal Processing	561
Communications	463
Software	304
Security	170
Artificial Intelligence	152
Business Applications	131
Education Applications	123
Microelectronics	114

The conference with the largest proportion of Chinese papers submitted was Signal Processing (76%), and the smallest fraction was for Education Applications (24%).

Since the Council meeting, the papers have been reviewed, and approximately 1000 have been accepted.

Prof. Wah described the system for the electronic submission of papers via the Web to the eight program committees (PCs) for review. The system, which originated in France and was adapted by **Prof. Xiaoming Li** (CN), was used by 2/3 of the authors. Only 20 authors submitted in hard copy exclusively, and the remainder used e-mail. The system made submitted papers available instantly to the PC chairs, who could forward them rapidly to reviewers.

Prof. Wah predicted an attendance of over 2000 participants, with 800 from outside of China. At another time, an attendance of 1400–1500 was estimated, and then 1500–1800.

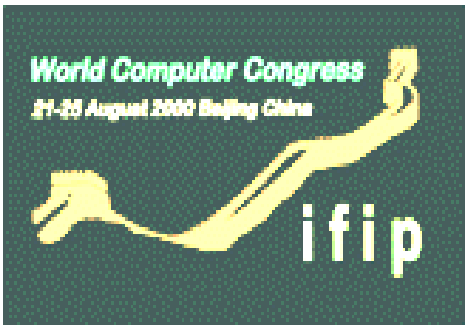
Special events planned include workshops, a panel, a youth forum (see the article on page 17), a Pioneers' Day for Chinese computer pioneers, an industrial exhibit, and other events.

Three keynote speakers had been determined as of March: **Prof. Sir Tony Hoare** (GB) of Microsoft, **Dr. Makoto Nagano** (JP), President of Kyoto University, and **Prof. Daniel Reed** (US) of the University of Illinois. There will also be a Chinese speaker.

The advance program for the Congress is now available on the Web at URL

http://www.wcc2000.org/ or
http://wcc2000.pku.edu.cn

For further information, consult the Web at the same URLs.



Congress 2002

With regard to Congress 2002, which will take place 25–30 August 2002 in Montreal, Canada, **Mr. Jan Wibe** (NO), chair of its IPC (see his biography on page 6), proposed reverting to the old scheme of a Congress with parallel tracks rather than retaining the present organization of a Congress comprising several individual conferences. This surprising proposal was made to the TC Forum.

Congress 2004

Insofar as Congress 2004 is concerned, **President Bollerslev** reported that invitations had been received to hold the Congress in Jerusalem, Israel; Toulouse, France; and Capetown, South Africa. **President Bollerslev** and **Mr. Nedkov**, acting as the Site Evaluation Committee, will visit the three potential hosts, and the GA will choose the site in August.

Technical Activities

The report of the Activity Management Board indicated, "We have a very stable situation, with the number of events in 1999 reaching the level of the two previous best years (1995 and 1997). The income from activities was, as well, very similar to the two previous best years." Thirty-four events were held in 1999, with **IFIP** as the full sponsor or main sponsor for 28 of them. The year 2000 promises to be much better, with 44 events already registered.

The chair of **TC1** (Foundations of Computer Science), **Prof. Giorgio Ausiello** (IT), announced the publication of the book *Algebraic Foundations of Systems Specifications*, edited by **E. Astesiano**, **H.-J. Kreowski**, and **B. Krieg-Brückner** and published by Springer–Verlag as part of the **IFIP** State-of-the-Art series. Many of the leading scientists working in this field are members of the Working Group on Foundations of Systems Specifications (WG1.3), and the production of the book has been an activity of the WG in cooperation with the ESPRIT Basic Research Working Group COMPASS. This book presents a collection of fundamental, high-quality contributions on the algebraic foundations of systems specification.

The TC1 report also noted that, "Because of the lack of a broader event devoted to theoretical computer science in [Congress 2000], TC1 decided to promote and organize a conference in theoretical computer science in Japan shortly before the Beijing Congress. [See the article in the December 1999 ***IFIP Newsletter***, page 2.] For the future, in order to increase the interaction between the TC1 community and the more traditional **IFIP** community, TC1 is strongly advocating that at the next **IFIP** Congress, in Montreal, a theory track (or a theory subconference) be organized."

Following this report, **Prof. Robert Aiken** (US), chair of the Technical Assembly and vice-president, noted that the other TC chairs commended **Prof. Ausiello**'s work in revitalizing TC1.

The following information was included in the **TC3** (Education) report:

> Currently TC3 has completed the first phase contract with UNESCO for the Modular University Informatics Curriculum Framework ICF 2000, which was

continued on following page

well received at the UNESCO Expert meeting in Vienna in February (including participants from Vietnam, Cameroon, Hungary, Slovakia, Netherlands and UNESCO). It will be at the basis of UNESCO efforts to help developing countries to get informatics education off the ground, and TC3 is now in discussion with UNESCO on methods of delivery. The second phase, a WG3.2-led activity (with the interest of both ACM and IEEE–CS) to produce a global University IT Curriculum, is now underway. It is hoped that this co-operation between ACM, IEEE–CS and **IFIP** will also result in a sharing of teaching/learning materials (that have already been created) with colleagues in developing countries.

TC3 is also working on the "Elementary ICT Curriculum," which is being led by **Anton Knierzinger** (AT), the Chairman of WG3.5. This is a two-year UNESCO-funded project, the first stage of which must be completed by 15th May 2000.

The report also noted, "The project on Harmonisation of Professional Standards in IT [see the article in the March 1998 ***IFIP*** *Newsletter*, page 8] was put on hold by **IFIP** last year…The limited funds for year 2000 have restricted the progress to just one meeting, which will be held in August."

The report of **TC5** (Computer Applications in Technology) discussed a new project called COVE (Cooperation infrastructure for Virtual Enterprises and electronics business), which was described as follows:

The proposed project aims at assessing research results and practices in virtual enterprises and electronic business, leading to the design of common reference models, cooperation infrastructures, and prospects for further collaborative developments. It will be based on the creation and operation of a cluster/forum of participants and projects active in the field, covering a world-wide representation, which will facilitate the exchange and refinement of knowledge and project results on new ways of working in networks of independent but cooperative nodes.

At the request of TC5, the Technical Assembly dissolved WG5.4 (Industrial Software Quality and Certification). Also, plans for a new Special Interest Group on Products Data Management, a new WG on Rapid Product Development, and a new task force on Informatics and Automation were discussed.

The **TC6** (Communication Systems) report noted the publication by Kluwer of six TC6 books.

Three of the seven upcoming **TC7** (System Modelling and Optimization) events are planned to be held in Eastern European countries.

The report of **TC8** (Information Systems) contained this invitation: "TC8 will host a workshop in Bled, Slovenia, 18 June, immediately prior to the 13th International Conference on Electronic Commerce, in order to explore what role **IFIP** might play in advancing the field of Electronic Commerce. All delegates are welcome, and there is no additional registration fee. All TC Chairs and their WGs' representatives are invited to participate in this workshop."

The report of **TC13** (Human–Computer Interaction [HCI]) concentrated on INTERACT '99, the seventh **IFIP** Conference on HCI (see the article on page 3 of the December 1999 ***IFIP*** *Newsletter*). In discussing funding for delegates from developing countries, the report stated the following:

TC13 is very grateful to the **IFIP** Developing Countries Support Committee for granting funds (4000 CHF) to assist 5 participants of developing countries in the African, Asian, Indian and South American regions to attend INTERACT. Five grantees were selected and were able to participate fully in the INTERACT event, much to their delight. Three of these grantees now represent their countries on TC13. Requests for assistance for developing country participants were also made to UNESCO and the European Union. We are very disappointed that these requests were unsuccessful, as INTERACT is the premier international conference on Human-Computer Interaction, and we had hoped to involve more developing countries in this most important aspect of **IFIP** TC13's work.

Developing Countries

IFIP events were held during 1999 or are planned to be held in 2000 and 2001 in several developing and Eastern European countries: Brazil, China, Hungary, India, New Zealand, Poland, South Africa, Thailand, Russia, Romania, Slovakia. The main activity of the Developing Countries Support Committee (DCSC) continues to be dispersing funds to send delegates from DCs to **IFIP** events. In particular, 30K CHF has been granted to send delegates from DCs to Congress 2000. The Developing Countries Support Plan (see the article in the June 1999 ***IFIP*** *Newsletter*, page 4), intended to assist Member societies in DCs to participate in **IFIP** activities, up to the amount of 1000 CHF per year, was used by only two Members in 1999. **Prof. Khakhar**, chair of DCSC, also argued that financial assistance be granted to Member societies in DCs that host Council or GA meetings. Having these meetings in developing countries frequently brings **IFIP** experts into the host countries, often to give seminars.

Miscellaneous

Executive Director Nedkov spoke about Secretariat activities, stating that "lean" and "mean" do no necessarily go together. The Secretariat is certainly lean but very helpful, as everyone attests. The following are among the accomplishments:

- Meeting minutes are produced in record time.
- The latest ***IFIP*** *Information Bulletin* was printed at the end of January (this very useful document can also be downloaded, in PDF format, from the **IFIP** Web site).
- The **IFIP** Web site gets better and better.
- Reports are produced rapidly.
- The Secretariat is taking a proactive role, reminding volunteers of tasks to be done and offering help.

Mr. Nedkov also reported that another organization has registered the URL "www.ifip.org" but is not using it. He is trying to acquire it, so that we could use it rather than the present "www.ifip.or.at." A half-time Administrative Assistant had been hired to take over some of the work that **Ms. Dorothy Hayden** performed before she took on the role of Event Facilitator. (Unfortunately, the new employee resigned recently, and the position remains vacant.)

Ms. Hayden reported to the Technical Assembly on her activities as Event Facilitator, a new position. She described some of her tasks in the following way: "Previously, we were primarily dependent on input from forms and direct information. Now I visit Websites, search engines etc. to complete missing information. Event forms often arrive in poor condition, which requires further search, correspondence and completion.… I have enhanced the **IFIP** electronic Calendar of Events, which is turning into a useful and authoritative reference source.…I create direct links between the process of event organization and the publication of conference proceedings and follow-up for the circulation of publication contracts." All attendees seemed delighted with **Ms. Hayden**'s work.

In his role as **IFIP**–UNESCO Liaison Officer, **Mr. Nedkov** reported, "**IFIP** is an active member of the NGO–UNESCO Liaison Committee, which recently met with the new Director General of UNESCO (see the article on page 2). A project for a Joint NGO–UNESCO Committee on Communications and New Technologies is in preparation, and **IFIP** is represented by **Mr. Nedkov** on the three-member subgroup of the Liaison Committee, which was assigned the task of performing the

continued on page 23

SMARTNET continued from page 3

and one session each on Intelligent Networks; Middleware and Specification Languages; High Capacity Networks and ATM; and QoS and Performance Management. The two special technical session were related to Intelligent Networks in the Asia-Pacific region.

SMARTNET'99 had four keynote and five invited speakers. The keynote speakers were **Prof. Otto Spaniol** (DE), **Prof. Olli Martikainen** (FI), **Prof. Guy Pujolle** (FR) and **Dr. Kanchit Malaivongs** (TH).

This tutorial-oriented conference was very well appreciated, not only by the Thai participants but also by the international audience.

The chair of the program committee was **Dr. Thongchai Youngchareon** (TH). The co-chairs were **Prof. Finn Arve Aagesen** (NO) and **Prof. Vilas Wuwongse** (TH). The proceedings book, published by Kluwer Academic Publishers and delivered in time for the conference, is entitled *Intelligence in Networks*. It was edited by the chair and co-chairs of the programme committee.

The farewell party, at the Asian Institute of Technology, was an unforgettable event. We were welcomed by elephants dressed with the SMARTNET conference logo (see photograph on page 15), the entrance to the outdoor dining was decorated with the **IFIP** logo made from a colored flower decoration, and the dinner was ended by fireworks (see page 3), which also contained the **IFIP** logo. The local Organizing Committee, chaired by **Dr. Kosol Petchuwan**, gave this stunning ending to a very well planned and managed conference. •

Calls for Papers

International **IFIP** WG10.3/10.4 /10.5 Workshop on **Distributed and Parallel Embedded Systems**
18–19 Oct 2000, Paderborn, Germany
abstracts due: 16 Jun 2000
contact: Bernd Kleinjohann
C-LAB
D-33102 Paderborn, Germany
tel: (+49)5251-606101
fax: (+49)5251-606066
e-mail: bernd@c-lab.de

International **IFIP** TC12 Conf. on **Knowledge Based Computer Systems — KBCS2000**
17-19 Dec 2000, Mumbai, India
papers due: 31 Jul 2000
contact: KBCS-2000 Secretariat
National Centre for Software Technology
Gulmohar Cross Rd. No. 9
Juhu, Mumbai 400 049, India
tel: +91 (22) 620 1606 Ext. 371
fax: +91 (22) 621 0139
e-mail: kbcs@ncst.ernet.in
http://www.ncst.ernet.in/kbcs2000/

IFIP WG8.6 Working Conf. on **Diffusing Software Product and Process Innovations**
7–10 Apr 2001, Banff, Canada
contributions due: 11 Aug 2000
contact:
Mark Ardis
Bell Labs, Rm. 2F-333
263 Shuman Boulevard
Naperville, IL 60566, USA
tel: +1 630 / 979-0042
fax: +1 630 / 713-4982
e-mail: maa@research.bell-labs.com
or
Prof. Barb Marcolin
Faculty of Management
University of Calgary
Calgary AB T2N 1N4, Canada
tel: +1 403 / 220-6075
fax: +1 403 / 282-0095
e-mail: marcolin@ucalgary.ca

Seventh **IFIP** World Conf. on **Computers in Education**
29 Jul–3 Aug 2001, Copenhagen, Denmark
papers due: 31 Oct 2000
contact: WCCE 2001, Dansk Dataforening
Store Kongensgade 59 A, DK-1264
Copenhagen K, Denmark
e-mail: WCCE2001@sek.ddf.dk

IFIP WG8.2 Conf. on **Realigning Research and Practice in IS Development: The Social and Organisational Perspective**
27–29 Jul 2001, Boise, Idaho, USA
submissions due: 1 Nov 2000
contact:
Brian Fitzgerald
Executive Systems Research Centre
University College Cork
Cork, Ireland
tel.: +353 21 903336
fax: +353 21 271566
e-mail: bf@ucc.ie
or
Nancy L. Russo
OMIS Department
Northern Illinois University
DeKalb, IL 60115, USA
tel: +1 815 753 6370
fax: +1 815 753 7460
e-mail: nrusso@niu.edu
http://afis.ucc.ie/ifip2001

Will event organizers please send calls for papers to both the **IFIP** Secretariat and the *Newsletter* editor. Note that calls cannot be listed in this column until the events have been approved by **IFIP**. •

National Abbreviations Used in Newsletter

AR	Argentina	DE	Germany	MY	Malaysia
AT	Austria	DK	Denmark	NO	Norway
AU	Australia	FI	Finland	NZ	New Zealand
BE	Belgium	FR	France	PL	Poland
BG	Bulgaria	GB	United Kingdom	PT	Portugal
BR	Brazil	HU	Hungary	SE	Sweden
CA	Canada	IL	Israel	SG	Singapore
CH	Switzerland	IN	India	SI	Slovenia
CN	China	IT	Italy	TH	Thailand
CZ	The Czech Republic	JP	Japan	US	USA
				ZA	South Africa

UNESCO DG continued from page 2

Committee on Communications and New Technologies. Preparatory work was done by a three-member subgroup of the Liaison Committee (including **Mr. Nedkov** and the representatives of the International Council of French-Speaking Radio and Television, and the International Council for Distance Education) with a survey to identify the interests of the NGO community in the field. Among the most favored topics for projects suggested by the sixty NGOs that responded to a questionnaire were the following:

- Informatics and the Internet in the educational process (with a particular emphasis on developing countries)
- New technologies to assist development in the South
- Developments in communications
- Ethics and legal aspects related to the Internet. •

FUTURE **IFIP** MEETINGS

GENERAL ASSEMBLY AND COUNCIL (and related meetings)

GA	26–29 Aug 2000 (Sat.–Tues.)	Beijing, China
Council	4–8 Mar 2001 (Sun.–Thurs.)	Naples, Italy
GA	Sep 2002 (in conjunction with **IFIP** Congress)	Montreal, Canada
GA	Sep 2003	Bilbao, Spain (tentative)

TECHNICAL COMMITTEE AND WORKING GROUP MEETINGS

TC1	Jul 2000	Geneva, Switzerland
WG1.2	27–29 Jul 2000	London, ON, Canada
	7 Oct 2000	San Jose, CA, USA
WG1.3	29 Jun–3 Jul 2000	Stanford, CA, US
	30–31 Mar 2001	Genova, Italy
WG1.5	Aug 2000	Japan
WG1.6	Jul 2000	East Anglia, UK
TC2	5–6 Jun 2000	Limerick, Ireland
WG2.1	8–12 Jan 2001	Bolivia
	Sep 2001	the Netherlands
WG2.2	25–29 Sep 2000	Oldenburg, Germany
WG2.4	Jun 2001	Pisa, Italy
	May 2002	Houston, TX, US
	spring 2003	Dagstuhl, Germany
WG2.5	30 Sep–1 Oct 2000	Ottawa, Canada
	May 2001	Amsterdam, the Netherlands
WG2.8	Jun 2000	US
TC3	21–25 Aug 2000	Beijing, China
	24–25 Nov 2000	Copenhagen, Denmark
	29 Jul–3 Aug 2001	Copenhagen, Denmark
WG3.1	Jul 2001	Copenhagen, Denmark
WG3.2	21–25 Aug 2000	Beijing, China
	Jul 2001	Copenhagen, Denmark
WG3.3	Jul 2001	Copenhagen, Denmark
WG3.4	11–15 Sep 2000	Sunderland, UK
	Jul 2001	Copenhagen, Denmark
WG3.5	21–25 Aug 2000	Beijing, China
	Jul 2001	Copenhagen, Denmark
WG3.6	Jul 2001	Copenhagen, Denmark
WG3.7	27–31Jul 2000	Auckland, New Zealand
	Jul 2001	Copenhagen, Denmark
TC5	15 Sep 2000	Bordeaux, France
WG5.7	27 Jun 2000	Tromso, Norway
WG5.10	20 Jun 2000	Geneva, Switzerland
WG5.12	Jul 2000	Grenoble, France
TC6	25–26 Aug 2000	Beijing, China
	30–31 Mar 2001	Cape Town, South Africa
WG6.8	15 Sep 2000	Gdansk, Poland
TC7	23–27 Jul 2001	Trier, Germany
WG7.4	Aug 2000	Atlanta, GA, US
	23–27 Jul 2001	Trier, Germany
WG7.5	Sep 2000	Ann Arbor, MI, USA
TC8	17–19 Aug 2000	Hong Kong, China
WG8.2	11Jun 2000	Aalborg, Denmark
	10 Dec 2000	Brisbane, Australia
	May/Jun 2001	Boise, ID, USA
WG8.3	Jul 2000	Stockholm, Sweden
WG8.6	Jun 2000	Limerick, Ireland
WG8.8	20–22 Sep 2000	Bristol, UK

(Continued on following page.)

COUNCIL continued from page 21

groundwork for this project." Also, **IFIP** is temporarily running the Web site of the NGO–UNESCO Liaison Committee.

Dr. Jack Rosenfeld (US), editor of the ***IFIP*** *Newsletter*, reported that the March 2000 *Newsletter* had been skipped but that there would be an expanded March/June issue (this issue) to celebrate the 40th anniversary of the Federation.

Dr. Walter Grafendorfer (AT), chair of the Marketing Committee, presented to the Council the new *This Is* ***IFIP*** flyer, which describes the Federation. Fifty thousand copies were printed and distributed. This project involved a great deal of work on his part.

The TC chairs expressed concerns about the necessity of preparing full reports for both the Council and GA meetings. Since most of the TCs meet annually or more frequently, often during the summer, it was felt that presenting a complete report at the GA meeting and updates at Council would be more efficient and effective. The chairs expressed the desire to submit only electronic reports to Council and address only issues that demand Council action. They would still deliver printed reports to the Technical Assembly and to the GA each September (or August). Also, some TC chairs argued that they should have the right to vote in Council meetings.

The new, spare format of the Council meetings, with only 1½ days for the Council itself, pleased some but not all participants. Many felt that there was not enough time to do the work that has to be done. One suggestion was that the TC Forum could meet in parallel with the Executive Board on the first day. It was pointed out that e-mail enables us to communicate better between Council and GA meetings; thus we need less time face to face. Also, the Secretariat is more responsive than in the past, also enabling us to accomplish more between meetings and reducing the need for more time at the Council.

Closing Session

The secretary informed the Council participants that no offers had been received yet to host the GA in September 2001 or the Councils in March 2002 and 2003.

Before adjourning the meeting, **President Bollerslev** thanked the ACM and IEEE–CS for superb support for the meeting. The facilities were excellent, and the staff was efficient, cheerful, and obliging. •

(FUTURE IFIP MEETINGS continued from prior page)

WG9.1	8–11 Jun 2000 (with WCC 2000)	Vancouver, BC, Canada
	1 Dec 2000	New York, NY, USA
WG9.2	30 Jun–2 Jul 2000	London, UK
	12–14 Jan 2001	Namur, Belgium
WG9.3	1 Jul 2000	Wolverhampton, UK
WG9.6	17–18 Jun 2000	Paris, France
WG9.7	Aug 2000 (tentative)	Beijing, China
TC10	Aug/Sep 2000	Beijing, China
WG10.4	Jun 2000	New York area, USA
TC12	Aug 2000	Beijing, China
WG13.5	2000	Boston, MA, USA

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. •

Prof. Donald Davies(GB)

(1925–2000)

We regret to announce the death, in May, of Prof. Donald Davies, who represented the UK on the IFIP Technical Committees on Communication Systems (TC6) and Security and Protection in Information Processing Systems (TC11). He served as vice-chairman of TC6, and in 1997 he received the TC11 Kristian Beckmann Award.

He was known for his pioneering work on data transmission. Davies is credited with coining the term "packet switching" in 1966. He was quoted as follows: "…in November 1965, I conceived the use of a purpose-designed network employing packet switching in which the stream of bits is broken up into short messages, or 'packets,' that find their way individually to the destination, where they are reassembled into the original stream."