IFIP newsletter
International Federation for Information Processing
Edito
Dr. Jack L. Rosenfel
Distributed b
IFIP Secretaria

Vol. 10, no. 2; June 1993

NEW FORMAT FOR IFIP CONGRESS '94

*by Dr. Ron Uhlig (USA)**

A year and a half before its opening, IFIP's 13th World Computer Congress is evolving, with a new concept and fresh design. Under its title, "Computing and Communications Evolution: The Driving Forces," this Congress, to be held in Hamburg, Germany August 28—September 2, 1994, will present and discuss likely developments in information and communication technologies and their applications, impact, and foundations. Of even greater interest, interactions and feedback among these areas will be discussed in some depth, and "action agendas" for future progress will be presented to the computer and communications community in a message summarizing the findings of IFIP Congress '94.

In its first part, the Congress will offer technical discussions in 4 tracks on specific themes. On the first day, Monday, Experts Day, keynote speakers will present their views on "The Impact of Investment Strategies on Computer and Communications Utilization," from the perspectives of national strategies in the U.S.A., Japan, and Europe, including the

continued on page 7

* chairman of the International Program Committee for IFIP Congress '94, president of the International Council for Computer Communication (ICCC)

CONGRESS FORMAT

	Monday	***Tuesday***	***Wednesday***	***Thursday***	***Friday***
	Experts Day	Specialists Day	Specialists and Issues Day	Issues Day	Message Day
9:00-10:30	Opening Ceremony	Invited Specialists	Invited Specialists	Submitted Issues Papers	Reports on Action Agendas
11:00-12:30	Keynote Session	Submitted Papers	Submitted Specialist Papers	Issues Panel Sessions	Closing Session
14:00-15:30	9 Streams (4 Parallel Tracks- 2 Sessions each + Developing Counties). State-of-the-Art Presentations. Invited Experts		Invited Issues Speakers	Development of Action Agendas (facilitated)	IFIP WORKING GROUP MEETINGS AND EXCURSIONS
16:00-17:30	24-27 "Meet the Experts Sessions" Small Group	Panel Sessions	Submitted Issues Papers		
18:00-19:00	Informal Presentations Videos, Posters, Non-commercial Demonstrations	Informal Presentations	Issues Informal Presentations		

IFIP COUNCIL MEETS IN VIENNA

Abbreviated Meeting Accomplishes a Great Deal

The IFIP Council met 3-4 March in Vienna, preceded by two days of meetings of other IFIP bodies. All Council members were present, and all but two of the Technical Committee and Specialist Group chairmen (TC2 and SG14) were present. The president of the Austrian Computer Society, *Prof. Dr. Günter Haring,* welcomed Council and stressed the importance of national professional societies' maintaining their contact with international organizations like IFIP, and societies in other countries, organizing conferences, and supporting young people in the profession.

Highlights of the Council included discussions of the future of IFIP's publica-

continued on page 6

CONTENTS

New Format for **IFIP** Congress '94 1
IFIP Council Meets in Vienna 1
High-Performance Networking 2
Formal Description Techniques 2
On-Line **IFIP** Database 2
LANs and Open Systems 3
Leaders of **IFIP** and CEPIS Meet 3
Who's Who: Prof. Robert Meersman 4
IFIP Membership Categories 4
Finances Discussed by Council 5
IFIP to Review Publication Policy 5
IMIA Continues Innovation 7
TCI0 Summary 8
IFIP Joins Publications Network 10
Sendov Cites Old Bulgarian Sayings 10
IFIP People Also ICCC Officers 10
Obituary: Professor Elod Knuth 11

National Abbreviations 10
Calls for Papers 11
Changes in **IFIP** 12
Future **IFIP** Meetings 12
Calendar of Events 16

IFIP NEWSLETTER

Editor:

Dr. Jack L. Rosenfeld
IBM Corporation
Journal of Research and Development
500 Columbus Ave.
Room 2B-71
Thornwood, NY 10594, U.S.A.
telephone: 1 (914) 742-5929
facsimile: 1 (914) 742-6033
Internet: rosenj@watson.ibm.com
Bitnet: rosenj@yktvmh

Published quarterly by
IFIP Secretariat
16 Place Longemalle
CH-1204 Geneva, Switzerland
telephone: 41 (22) 310 26 49
facsimile: 41 (22) 781 23 22
Bitnet: ifip@cgeuge51

CORRESPONDENTS

TC2 R.K. DeBry
TC3 B. Samways
TC5 G. Karlmark
TC6 D. Khakhar
TC7 P. Ka11
TC8 B. Glasson
TC9 F. van Rijn
TC10 R.N. Ibbett

Printed for **IFIP** by the courtesy of Elsevier/North-Holland.

Please apply to the **IFIP** Secretariat, at the address given above, for copies of the ***IFIP Newsletter*** and to be added to (or removed from) the mailing list.

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

The ***IFIP Newsletter*** may be reprinted, translated, and reproduced, in whole or in part, except for material specifically denoted as copyright protected. Reprinting in national and local information processing periodicals is encouraged. Acknowledgement to **IFIP** would be appreciated. In order to reprint material protected by copyright, apply for permission to the **IFIP** Secretariat, giving all pertinent details.

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

Please send the following **IFIP** information directly to the Secretariat: announcements of conferences, workshops, and other meetings; calls for papers; appointments to committees and other positions; and changes of address. The Secretariat is the clearinghouse for all such information; it will forward it to the *Newsletter.*

IFIP COUNCIL

Executive Board

A. Rolstadås	President N	92-95
Bl. Sendov	Past Pres. BG	92-93
A. Balasubrahmanian	Vice-Pres. IND	90-93
H.L. Funk	Vice-Pres. USA	91-94
A.W. Goldsworthy	Vice-Pres. AUS	92-95
K. Bauknecht	Vice-Pres. CH	92-95
J. Fourot	Secretary F	90-93
A. Melbye	Treasurer DK	90-93

Trustees

A. Alvarez-Rodriguez	E	91-94
M. Ozeki	J	91-93
M. Tienari	SF	92-95
D. Dolan	IRL	91-94
G.R. Fairall	ZW	91-94
D. Khakhar	S	91-93
W. Brauer	D	92-95
G.J. Morris	GB	92-95

HIGH-PERFORMANCE NETWORKING

*by Prof. Andre Danthine (B) * and Prof. Otto Spaniol (D)t*

The Fourth International Conference on High Performance Networking (HPN92) took place in Liège, Belgium, from the 16th to the 18th of December 1992, sponsored by the **IFIP** Technical Committee on Communication Systems (TC6) and its Working Group on Local and Metropolitan Communication Systems (WG6.4). After the High Speed Local Area Networks Workshops in Aachen, Germany, in February 1987 and in Liège in April 1988, the Conference on High Speed Networking was held in Berlin in March 1991. Its success was a strong incentive to hold a new event about 18 months later.

By stressing network performance instead of speed, the International Program Committee (IPC) wanted to focus on the increase in performance of the networked equipment made possible by the new communication support, rather than on the raw data rates of the networks. The response to the call for papers was excellent, with 80 papers submitted from 18 countries. On the basis of 248 reports provided by 119 reviewers, the **IPC** selected 28 contributions to compose the core of the conference. **All** of them were presented.

The keynote address, "The Networked Computer in the 21st Century — Bigger Is Better," was delivered by *Prof. David Farber (USA).* The advent of gigabit per second network technology has inspired a rethinking of the structure of networked computers, operating systems, and protocol structures, among other things, and this rethinking led the speaker to the conclusion that a globally distributed computer represents one of the best applications of this new technology.

One panel, chaired by *André Danthine (B),* was on the topic "FDDI Networks and Asynchronous Transfer Mode (ATM) Switches in the Local Area." The last-minute withdrawal of an invited speaker was a great concern for the IPC, but it was possible to organise, on the spot, a second panel, dedicated to "The Pace of ATM Deployment."

An analysis of the contributions of the Conference proceedings, edited by *Danthine* and *Otto Spaniol (D)* and published by Elsevier/North-Holland, reveals that most of the papers are related to three main directions:

- multimedia communication systems and, in particular, the distributed system aspects.
- enhanced network and transport services and protocols to support the changing application environment and to exploit new networks already available or soon to be.
- the search for efficient implementations and for high-performance systems.

The attendance of 170 people, coming from 20 countries, has confirmed that the high-performance networking area is of great interest and that a new event should be organised by TC6/WG6.4 in about 18 months. ■

* HPN92 program co-chairman
t HPN92 program co-chairman and TC6 chairman

CONFERENCE ON FORMAL DESCRIPTION TECHNIQUES

IFIP's Working Group on Architecture and Protocols for Computer Networks (WG6.1) is sponsoring the Sixth International Conference on Formal Description Techniques (FORTE'93), which will be held in Boston 26-29 October. FORTE'93 will address formal techniques and testing methodologies applicable to distributed systems and protocols. The conference will be a forum for presentation of the state of the art in theory, application, and tools of formal techniques and will provide an excellent orientation for newcomers. Research papers, industrial usage reports, tutorials, and tool demonstrations on formal techniques will be presented.

The Conference proceedings, *Formal Description Techniques VI,* will be published by Elsevier/North-Holland.

For further information, please contact

Richard L. Tenney
Math & Computer Science
University of Massachusetts
Boston, MA 02125-3393, U.S.A.
e-mail: rlt@cs.umb.edu ■

On-Line IFIP Database

All readers are reminded that a database of **IFIP** information (including this *Newsletter)* is now available through international computer networks. Access is possible via ftp from the repository at software.watson.ibm.com and via ordinary e-mail from the listsery @cearn repository. In addition, the database can be accessed through GOPHER. An article giving details of how to access the database can be found on page 10 of the March 1993 ***IFIP*** *Newsletter.* Member societies of **IFIP** are urged to bring the **IFIP** databases to the attention of their members.

LANS AND OPEN SYSTEMS

*by Dr. Bernard Glasson (AUS)**

Over the last decade or so, there has been a rapid expansion in the use of and reliance on Local Area Networks (LANs). They represent a significant investment for an organization, yet they can result in direct productivity increases and other less tangible benefits for the enterprise. Perhaps the most common application associated with a LAN is e-mail. In addition, however, organizational benefits may accrue from software to facilitate project management, distributed group (decision) support systems, real-time teleconferencing, group writing tools, imaging, document management, "calendaring," and other applications.

Better LAN Utilisation

Researchers and practitioners are beginning to ask how installed office LANs can be better utilized to enable organizations to capitalise further on their LAN investments. In this regard, open system architecture offers many prospects and a number of challenges. An open system may be regarded as one in which intermediate software acts to enable different kinds of proprietary software to behave similarly, from the perspective of the end user, regardless of the specific hardware, operating system or communications software employed. Theoretically, this enables end users to have access to, and to contribute to, a central pool of information from any number of different types of machines.

The question remains, however, as to how soon, or indeed whether, these benefits might be enjoyed, given the available technology and current levels of knowledge within the profession. Too often, information systems professionals report that vendors' claims of connectivity are not always matched by the performance of systems in organizational environments. In addition, progress towards industry-wide standards for hardware, software and communications remains chequered and problematic.

The Conference

In order to provide a forum in which researchers and practitioners are able to debate these and other related issues, **IFIP's** Working Group on Office Information Systems (WG8.4) is holding a conference, The Open Systems Future: Leveraging the LAN, in Perth, Australia, 29 August-2 September 1993, in conjunction with Curtin University of Technology and the Australian Computer Society.

Since many organizations have office LANs in place with spare capacity, the question that can be posed is: What additional applications would allow such organizations to better capitalize on their investment? Hence, "Leveraging the LAN" is one part of the conference title. Another question that may be posed is: What impact will the promised open systems era have on the office LAN? Hence, "The Open Systems Future" is the other part of the conference title.

The conference hopes to attract an audience of both researchers and practitioners interested in promoting the more effective utilisation of LAN technology. While specialised tracks will be of particular interest to one group or the other, the main aim is to bring together researchers who are interested in the implementation of new LAN-based systems and software, and inquisitive practitioners who are keen to explore new ways of exploiting the LAN technology they have in place.

Prof. Alex Verrijn-Stuart (NL), former chairman of WG8.4, is general chair of the Conference, *Prof. Douglas Vogel (USA)* and *Peter Marshall (A US)* are program chairs, and *Dr. Bernard Glasson (AUS)* is organizing chair. The proceedings, published by Elsevier/North-Holland, will be edited by the four chairmen.

For further information, one may contact

IFIP WG 8.4 Conference
School of Information Systems
Curtin University
GPO Box U 1987
Perth 6001
Western Australia
fax: +61-9-351-3076
tel: +61-9-351-7685
e-mail: lanconf@BAI.curtin.edu.au

(Please use e-mail, if possible.) ■

* Organizing Chair of the Conference, vice-chairman of IFIP's TC8

LEADERS OF IFIP AND CEPIS MEET IN VIENNA

*by Mr. Graham Morris (GB)**

CEPIS (the Council of European Professional Informatics Societies) is an association of twenty member societies from seventeen European countries. (See the article on page 6 of the September 1991 *IFIP Newsletter.)* In the great majority of cases, those societies are also Member societies of **IFIP.**

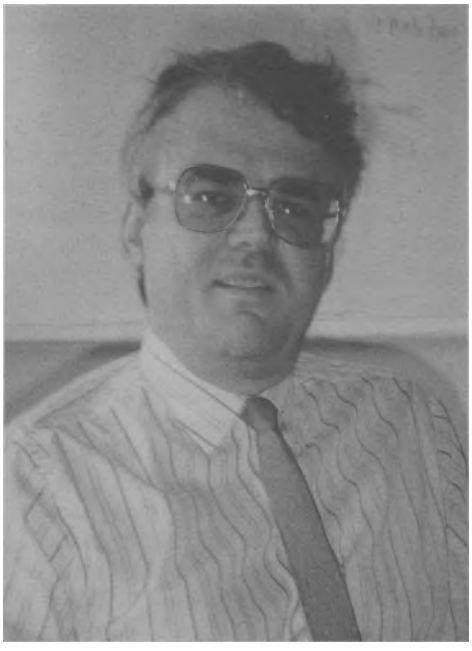
A meeting of the CEPIS Council was held in Vienna on March 5 and 6, immediately after the **IFIP** Council meeting, and advantage was taken of this to hold a joint meeting to review the roles and activities of the two organisations. The meeting, chaired by *Prof. Günter Haring,* President of the Austrian Computer Society, was addressed by **IFIP's** president, *Prof. Asbjørn Rolstadås (N),* on behalf of **IFIP** and *Prof. Maurice Elzas (NL)* for CEPIS.

There was general agreement that the two organizations have different missions; however, their objectives are similar. **IFIP** is world-wide in its activities and directs a significant part of its efforts towards research and development. Most of those participating in **IFIP** events are scientists, many from universities, who work at the leading edge of technology and applications. CEPIS, on the other hand, was formed four years ago to represent its members on issues related to the movement towards the unification of Europe, and specifically to interface with the European Commission in Brussels on matters of concern in proposed legislation.

It was clear to the participants of the **IFIP/CEPIS** meeting that, in view of the almost complete overlap in membership, any major clash of interests was unlikely unless it were to happen as a result of poor communication. An open and frank discussion concluded that both organisations would work to strengthen cooperation. They would also exchange information on their activities and seek to cooperate through joint activities for mutual benefit. ■

* IFIP trustee

Who's Who in IFIP: PROF. ROBERT MEERSMAN



Prof. Dr. Robert Meersman, chairman of IFIP's Technical Committee on Artificial Intelligence (TC12), was born in Antwerp, Belgium. He performed his undergraduate studies in Antwerp and Brussels and obtained his Ph.D. degree in Computer Science from the Free University of Brussels in 1976, based on research performed at Brussels University and Carnegie Mellon University (in Pittsburgh, Pennsylvania).

Following this, he worked as an academic staff member at Antwerp University until 1978, when he joined the Data Management Research Laboratory of Control Data Corporation in Brussels, where he was part of the team that developed the NIAM methodology for database and information system design and built its first implementation in commercial production software. He was also the leader of the RIDL* Conceptual Language Project and a Senior Consultant and lecturer for CDC at many companies in Europe and North-America.

In 1980 he began teaching teach courses on database and information systems at Brussels University, and in 1983 he was appointed Professor of Computer Science at Limburg University in Belgium, where he founded and directed the INFOLAB laboratory for software techniques for system development. The resulting product is called RIDL, a high-level state-of-the-art workstation environment for NIAM-based conceptual modeling and relational database design.

Since October 1986, *Prof. Meersman* has held the Chair of Computer Science at Tilburg University in the Netherlands. He is also Co-director of the Institute on Language and Knowledge Technology of the University.

He has consulted on and given seminars about database engineering and the extended NIAM method and its tools worldwide. He is the author, co-author and/or editor of numerous articles, papers, and proceedings on a variety of subjects, including numerical analysis, formal languages, theory and practice of information systems, methodologies, expert systems, and applications of artificial intelligence. In 1991, he was the keynote speaker at the 17th Very Large Data Base Conference in Barcelona. He is the founder and Chairman of the Board of IntelliBase NV in Belgium, a company specializing in the production and marketing of the NIAM/EER CASE techniques and the tool set RIDL.

In 1981, *Prof. Meersman* joined IFIP's Working Group on Database (WG2.6), and he served as its chairman from 1983 to 1992. He is also a member of and contributor to several working groups of the ISO/TC97/SC21 on Open System Interconnection (OSI) and collaborated on the "Orange Book," Report ISO TC97-N695 on "Concepts and Terminology for Conceptual Schema and Information Base." In 1989, he was appointed as the founding chairman of the IFIP Technical Committee on Artificial Intelligence.

Prof. Meersman lives in Antwerp and commutes to his job in the Netherlands. His wife, Rada, is from Bosnia. Thus, he considers himself "a true Eurocitizen." He enjoys golf and also "playing" with his PC. He and his wife have two sons, ages 11 and 13.

* ™ IntelliBase

COUNCIL CONSIDERS IFIP MEMBERSHIP CATEGORIES

Recommends that SEARCC Be Admitted as Affiliate Member

The March IFIP Council, meeting in Vienna, recommended that the General Assembly admit the South East Asia Regional Computer Confederation (SEARCC) as an Affiliate Member; the Executive Board made several recommendations to the Statutes and Bylaws Committee related to categories of membership in IFIP; increased Central European participation was encouraged; and membership of two national societies was terminated.

SEARCC, the first regional Full Member of IFIP, resigned in 1992. It has since applied for admission as an Affiliate Member (AM). The IFIP AMs are international organizations specializing in different aspects of information processing (e.g., the International Council for Computer Communication [ICCC]). AMs are voting members of the IFIP Technical Assembly, they report to Council and General Assembly (GA) and sit as observers at their meetings, and they pay no dues to IFIP.

Nonetheless, the IFIP statutes simply state, "Any international organization, professional or governmental, having interest in the Information Processing field and willingness to cooperate and coordinate its activities with the Federation, may become an Affiliate Member of the Federation." Because IFIP wishes to maintain ties with SEARCC and its 11 members, Council recommended that the September IFIP GA, to meet in Tokyo, admit SEARCC as an AM but that prior to the GA vote, SEARCC should present a statement indicating in what way it might contribute to IFIP more as an AM than as a Full Member. The Admissions Committee, however, expressed opposition to the admission as an AM.

Regional Members' Difficulties

Because of financial difficulties, Centro Latinoamericano de Estudios Informatica (CLEI), another regional Full Member, indicated its desire to withdraw from IFIP and apply for admission as an Associate Member or Corresponding Member. Council voted against recommending to the GA that CLEI be offered AM status. IFIP's other regional Full Members are also experiencing financial problems. (Not only does membership in IFIP require payment of dues, albeit minimal dues for developing countries, but to send representatives to meetings of the GA and Technical Committees can be quite expensive.)

The recommendations regarding membership that were made by the Executive

continued on page 11

FINANCES DISCUSSED BY COUNCIL

IFIP's treasurer, *Mr. Aage Melbye (DK),* reported his concerns to **IFIP's** Technical Assembly and Council during their March meetings in Vienna. The year 1992 was characterized as "a less satisfactory year for **IFIP** financially," and prospects for 1993 look no better. The provisional (unaudited) financial result was a deficit of 56 000 Swiss francs (56K CHF). However, a significant part of this, 39K CHF, represented writing off the loan to the Organizing Committee of **IFIP** Congress '86 (Dublin) as a bad debt. The major reasons for the negative result were decreased proceeds from events and decreased royalties. Income from investments, on the other hand, was better than expected.

The biggest cause for concern was proceeds of Technical-Committee–sponsored events, which dropped in 1992 to 21% of the 1991 level. No explanation was offered for this drastic downturn, other than the world-wide recession. So far, surplus monies had been received from only 3 events held in 1992. This situation supported the institution of an **IFIP** sponsorship fee, to be paid to **IFIP** by event organizers in return for the services and expertise provided by **IFIP,** regardless of the ultimate financial results of the events. (The fee is discussed on page 3 of the December 1992 ***IFIP*** *Newsletter.)*

1993 Budget Adjusted

Because the 1993 result would likely have been worse than budgeted if no adjustments had been made, Council modified the 1993 budget to include more realistic estimates of income and to reduce expenditures: the ***IFIP*** *Information Bulletin* will not be printed in 1993 (although updates to names and addresses will be available from the Secretariat), some standing committee budgets will be smaller, and an attempt will be made to reduce Secretariat expenses. On the other hand, increased funds are being made available to the Developing Countries Support Committee, in order to encourage greater **IFIP** activity in developing countries. Even with these adjustments, the revised 1993 budget projects a loss of 50K CHF. This was alleviated when receipts from **IFIP** Congress '92 (Madrid) were received: 30K CHF.

Mr. Melbye pointed out that **IFIP** is still healthy, with assets equal to more than two times the annual expenditure, and that improvement in the world's economy should help **IFIP.**

IFIP TO REVIEW PUBLICATION POLICY

Elsevier/North Holland Will not Renew Present Contract

is time for **IFIP** to review totally its publication policy, starting from scratch — not merely to try to improve what we've been doing all along," said *Prof. Ashley Goldsworthy (AUS),* a vice-president and former president of **IFIP.** This was part of the instructions given to the **IFIP** Publications Committee (PC) by the Council during the March Council meeting in Vienna. The impetus for these instructions was the decision taken by **IFIP's** primary publisher, Elsevier/North-Holland, not to renew its current contract with **IFIP** but to propose alternative plans.

Elsevier believes that the present arrangement for publication of **IFIP** books "is not meeting the current marketing needs nor meeting the internal financial criteria of Elsevier." The number of subscriptions to the ***IFIP*** *Transactions* (the new series of publications that includes the proceedings of almost all **IFIP** conferences) has been lower than anticipated, and Elsevier's book sales, as well as the sales of other publishers, are down. Royalties to **IFIP** for book sales in 1993 are expected to continue the decline that has been experienced in recent years. (The royalties for 1992, however, showed an improvement because of unusual adjustments to the printing schedule.) A year ago, another **IFIP** publisher, Springer-Verlag, cancelled the **IFIP** *Lecture Notes in Engineering* series. Although the present publication contract, which commenced in July 1991, permits either party to cancel, with 18 months' advance notice, Elsevier gave **IFIP** 22 months' notice. The contract will terminate at the end of 1994.

Elsevier's first **IFIP** book was the proceedings of **IFIP** Congress '62, and there will have been nearly 500 others by the end of this year. Over the years, the relationship has been cordial and fruitful. *Mrs. Stephanie Smit* of Elsevier has been involved in managing the **IFIP** publications since 1974, and since 1981 has attended Council and General Assembly meetings and other **IFIP** events and offered immeasurable assistance to **IFIP.** Her help was applauded by the Vienna Council.

Significant Questions

The review of the **IFIP** publication policy will give **IFIP** the opportunity to revise its practices and determine what and how it will publish in the 21st century. Many questions are being asked: How can the excellent work presented at **IFIP** conferences be given the widest possible exposure in the technical community? How can **IFIP** insure the highest quality in its publications? What can be done to make **IFIP** books as inexpensive as possible? Is printing books on paper the optimum publication technique, or should **IFIP** be producing its works on CD ROMs or other electronic forms? Should **IFIP** continue to publish the proceedings of almost all of its conferences? Should every paper presented at a conference be published in its proceedings? How can **IFIP** profit from its publications?

The PC has been addressing these questions and others. IFIP's president, *Prof. Asbjørn Rolstadås (N),* urged the PC to prepare a report on its study well in advance of the September 1993 General Assembly in Tokyo, so that a fruitful discussion can be held at that time and decisions taken as early as possible.

Change May Be Difficult

The problems associated with changing publication procedures are well recognized. During the 31 years of cooperation with Elsevier, routines have been developed for simplifying the publication process. Many factors must be considered, including advertising, distributing, printing, coordinating, and editing. Plans are already under way for some **IFIP** books due to be published in 1995. Thus, the PC has a mammoth job ahead of it: considering all these issues and helping **IFIP** reach a decision in time to avoid a disruption of the normally smooth flow of **IFIP's** publications.

On the other hand, the end of the current contract in 1994 may not bring an end to the Elsevier-IFIP collaboration. Elsevier suggested the possibility of a renewed relationship in a letter to *President Rolstdås* that included the following:

> It goes without saying that, in view of the long cooperation between Elsevier/North-Holland and **IFIP,** we are working on some alternative proposals which we would like to put forward for consideration by **IFIP** within the next few months.
>
> We thank you and everyone at **IFIP** for the good working relationships we have had and trust that we can find a mutually workable solution for the future.

continued on page 11

COUNCIL MEETS continued from page 1

tion activities, categories of membership, **IFIP** Congress '94, financial concerns, the relationship with the Council of European Professional Informatics Societies (CEPIS), and new technical activities. Most of these topics are covered in separate articles in this ***IFIP*** *Newsletter:* publications (page 5), **IFIP** membership (page 4), Congress '94 (page 1), financial matters (page 5), and CEPIS (page 3).

Technical Work

IFIP's technical work, as tabulated by the Activity Management Board, proceeded at a brisk pace. Some 80 events (conferences, workshops, seminars, and similar activities) were sponsored by **IFIP** in 1992. **IFIP** was the sole or main sponsor (having total or significant control of the program) of 62 of these events. When one compares 62 with 53 such events for 1991 and 46 for 1990, one sees that the number of **IFIP** events is growing at a healthy rate. This active schedule prompted a discussion of whether **IFIP** is holding too many events and whether the Federation should be engaging in other sorts of activities (e.g., standards, tutorials). *Prof. Kurt Bauknecht (CH),* chairman of the Technical Assembly (TA), promised a major discussion of this matter at the next TA meeting, in September.

One of the major decisions taken by Council was the formation of a provisional Specialist Group on Fractals, pending presentation of a satisfactory document on Aims and Scopes to the **IFIP** General Assembly in September. A second **IFIP** conference on fractals will be held in September, near London.

TC Reports

Some of the significant activities reported by Technical Committee (TC) chairmen to TA and Council were the following: cooperation between Unesco and TC3 (Education) and possible participation of TC3 in the judging of the International Olympiads in Informatics; planning for discussion of software (or system) quality at **IFIP** Congress '96, to be coordinated by *Mr. Marco Tomljanovich (I),* chairman of TC5 (Computer Applications in Technology); the success of TC6 (Communication Systems) in earning royalties and event proceeds — head and shoulders above all other TCs; plans by TC8 (Information Systems) for a conference on technology transfer, in response to the discussion at the Madrid TA in September 1992.

Other significant work included progress in drafting a "framework" **IFIP** code of ethics by TC9 (Relationship between Computers and Society); plans for a Working Group in TC12 (Artificial Intelligence) on Knowledge Based Systems Applications; consideration of a role for **IFIP** in the "Global Research Network on Sustainable Development," an organization devoted to "developing our world in such a way that the needs of the current generation can be satisfied, without jeopardizing the resource base of future generations," which was brought to the attention of Council by *Prof. Robert Meersman (NL),* chairman of TC 12; and a revision of the objectives of IFIP's Affiliate Member ICCC (International Council for Computer Communication) to place more emphasis on applications of computer communication and on policy issues, and less emphasis on technology.

Other Actions

A list of **IFIP** lecturers, specialists willing to deliver lectures in their fields of expertise free of charge to **IFIP** Member societies, has been created by *Dr. Dipak Khakhar (S),* an **IFIP** trustee. The list is available from the **IFIP** Secretariat and in the on-line **IFIP** databases (see the article on page 10 of the March ***IFIP*** *Newsletter).* Experts willing to volunteer their services as lecturers may contact *Dr. Khakhar* as follows:

Dr. Dipak Khakhar
IB-ADB
University of Lund
Sölvegatan 14A
S-223 62 Lund, Sweden
tel: 46 (46) 108026 or 460256
fax: 46 (46) 104528
e-mail: adbdk@seldc52 (Bitnet)
dipak.khakhar@ibadb.lu.se (Internet)
telex: 33533 luniver s

Further details of the program will be printed in the next *Newsletter.*

Several other actions were taken during the Council meeting. *Dr. Prem Gupta (IND)* was named chairman of the International Program Committee for **IFIP** Congress '96 (Canberra); his biography will be printed in a future *Newsletter.* **IFIP's** president, *Prof. Asbjørn Rolstadås (N),* named *Prof. Dr. Heinz Zemanek (A),* a former **IFIP** president, **IFIP** Historian and charged him with updating the history of **IFIP** since A *Quarter Century of* ***IFIP*** was published in 1986. The on-line **IFIP** databases (see page 2), created by *Mr. Howard Funk (USA),* an **IFIP** vice-president, were praised by several participants in the Council meeting. ***Dr.*** *Khakhar* will contact all Member societies to solicit standard information about the societies, which will be printed and distributed by **IFIP** as well as placed in the on-line **IFIP** databases. (Letters have already been written. Any Member society that has not responded is urged to send the requested information to the **IFIP** Secretariat.)

Also, the Executive Board recommended a new structure for the **IFIP** Annual Report. Council discussed how to attract more people from industry to **IFIP,** how to recruit new active members to TCs and Working Groups, and how to make **IFIP** more visible to members of Member societies. A proposal was made to perform an overall review of **IFIP,** similar to the reviews of TCs that are made every six years.

Congresses Discussed

Dr. Ronald Uhlig (USA), chairman of the International Program Committee for **IFIP** Congress '94, presented the exciting new Congress format to Council (described in an article on page 1). The report of the Organizing Committee was presented by its chairman, *Prof: Karl Kaiser (D).* In order for expenses to be covered by registration fees, attendance would have to be over 3300. Should 1500 delegates attend, a more realistic number, it is planned that the deficit will be covered by grants from certain German agencies and sponsors, and by proceeds of tutorials and the exhibition. Because of the current fiscal difficulties in Germany, due to reunification and new taxes, there is uncertainty whether these funds will be obtained. Furthermore, although the Congress will be treated as the annual conference of Gesellschaft für Informatik (GI), the German Member society of **IFIP,** recent attendance at GI conferences has been much lower than the peak attendance of a few years back. *Prof. Kaiser* talked of the possible need for a loan from **IFIP.** Everyone agreed that **IFIP** Member societies must promote attendance at the Congress.

Mr. José Boixo, representing the Spanish Organizing Committee for **IFIP** Congress '92, gave a final report to Council. Only 850 delegates registered, and registration fees covered less than 2/3 of the gross expense. After the guaranteed payment of 30 000 Swiss francs (30K CHF) was made to **IFIP,** the net loss was 260K CHF, contributed by the Spanish government, three corporations, and the component societies of FESI, the Spanish Member of **IFIP.** Council recognized this significant financial contribution.

Because of suggestions by several TC chairmen at previous Councils, this Council meeting was compressed from the

continued on page 11

IFIP CONGRESS '94 continued from p. 1

role of computers and communications in economic development and international relations. The tracks will begin later in the day with specific state-of-the-art presentations by experts in their fields. In approximately 25 "meet-the-experts" sessions, each participant will have 11/2 hours to meet with one expert for a small group discussion (a maximum of 50 persons per expert). On Tuesday and on Wednesday morning, Specialist Days, the tracks will continue with invited and submitted contributions. The tracks (most with 2 parallel streams) are as follows:

- Hardware, Software, and Communications Technology
- Computer and Communications Applications
- Impact (the role of computers and communications in solving major world problems)
- Foundations
- A special subtrack will be devoted to the role of information and communication technologies for developing countries.

Linkages among Tracks

In an innovative design, the second part of Congress '94 will stimulate feedback among the tracks. On Wednesday afternoon and Thursday morning, Linkage (Issues) Day, joint sessions between pairs of tracks will address serious questions/issues related to both areas. To generate interest and contributions for this unprecedented approach, the International Program Committee has formulated several stimulating "key" questions, to focus the feedback discussions:

Link 1: Technology Applications
What should we build?
How much application knowledge should a technologist have?

Link 2: Technology <=> Impact
When virtual reality becomes real
Utopia? or chaos? How should we control technology development?

Link 3: Technology .4=> Foundations
How much is safety worth?
Should we invest in intellectual elegance or computer power?

Link 4: Applications <=> Impact
Who is in control: user? or application system?
Is application development focused on real problems?

Link 5: Developing Countries 4=> Technology, Applications, and Impact
Is technology transfer the answer?

On Thursday afternoon, every Congress participant will have the opportunity to participate in working groups that will develop preliminary "action agendas" for these nine questions/issues.

On Friday, Message Day, the preliminary action agendas developed by the working groups will be presented to all Congress participants in a plenary session. This will be the Congress "Message to the Computer and Communications Community" about desirable directions to be taken by individual professionals, industry, government, and the academic world. Work on some or all of the action agendas will continue after the Congress, by those who are interested, culminating in their publication as the Congress '94 Message.

continued on page 10

IMIA CONTINUES TRADITION OF INNOVATION AND ACTIVITY

*by Dr. Marion Ball (USA)**

The International Medical Informatics Association (IMIA), an Affiliate Member of **IFIP,** sponsored its seventh triennial World Congress on Medical Informatics in Geneva, Switzerland, September 6-10, 1992. The meeting, MedInfo 92, drew 1580 attendees. The Organizing Committee was headed by *Jean-Raoul Scherrer (CH).*

As at past Medlnfos, the scientific program was extensive. Under the direction of the Scientific Program Committee, chaired by *Salah Mandil* of the World Health Organization, the program included 354 scientific papers, 40 scientific demonstrations, and 33 workshops. Topics covered were wide-reaching, with heavy emphasis on medical decision support (65 papers) and health information systems (61). Other areas of interest were computer systems technology (29), image and signal analysis (20), statistical techniques and modelling (23), nursing informatics (23), education and training (21), and standards in medical informatics (20). Proceedings of Medlnfo 92 were published by Elsevier, with *K.C. Lun (SGP)* heading up the Editorial Committee.

At the closing ceremonies in Geneva, *Jos Willems (B)* stepped down from the presidency, and IMIA welcomed *Marion J. Ball (USA)* as its new president. *Dr. Ball* has the distinction of being IMIA's first American, first non-physician, and first woman president. Vice-President for Information Services at the University of Maryland at Baltimore, she has been active in IMIA since the 1970s and will serve as president througn Medlnfo 95 in San Paulo, Brazil.

With the support of the IMIA Board and its Strategic Issues Committee, headed by *Hans Peterson (S), Dr. Ball* is working to strengthen IMIA's role as a bridge organization across national, professional, and disciplinary boundaries. As part of this initiative, IMIA has created a new institutional membership category, which encompasses universities, health centers, vendors, and governmental agencies. A one-day event is planned for institutional members in Kyoto, Japan, in conjunction with the IMIA General Assembly Meeting in September 1993.

IMIA was formed in 1967 as IFIP's Technical Committee on Health Care and Biomedical Research (TC4). In 1978, it evolved into a Special Interest Group, having semi-autonomous status and taking the name IMIA. In 1988, IMIA became totally independent and changed status to that of an **IFIP** Affiliate Member.

As in the past, IMIA is continuing its tradition of sponsoring working conferences and regional meetings. One of these, Health Informatics in Africa (HELINA'93), held in April in Nigeria, was organized in cooperation with **IFIP.** In Geneva, IMIA released a new product, the *1992 Yearbook of Medical Informatics: Advances in an Interdisciplinary Science.* Edited by *Jan van Bemmel* ***(NL)*** and *Alexa McCray (USA)* and published by Schattauer, the Yearbook contains information on IMIA, national informatics societies, several vendors, and IMIA working groups, along with selected articles authored by medical informaticians worldwide. The 1993 Yearbook is now being prepared; IMIA envisions this publication as the "yellow pages" of medical informatics.

Preparations for Medlnfo 95 (September 10-14 in Sao Paulo) are under way. Preconference workshops in Rio de Janeiro are also being planned.

For more information about IMIA, please contact

IMIA President's Office
Attention: Marion J. Ball
Internet: MJB@UMAB.UMD.EDU
Bimet: MJB@UMAB
fax: 1 (410) 706-8459

The **IFIP** Secretariat, which serves as the IMIA Secretariat, can also provide information.

* president of **IMIA**

IFIP TECHNICAL COMMITTEE 10: COMPUTER SYSTEMS TECHNOLOGY

IFIP's Technical Committee on Computer Systems Technology (TC10) was founded in 1977, seventeen years after the birth of IFIP. Although a significant fraction of the papers presented at the IFIP Congresses had dealt with hardware — from component design to computer architecture — there was no group in IFIP studying hardware. Explaining this anomaly, *Prof. Robert Piloty (D),* the first chairman of TC10, writes, "The early participants in IFIP were largely software people. It seems that I was one of the first delegates to the General Assembly who came from genuine computer engineering. As soon as I entered the GA, I discussed this void in IFIP's scope with my colleagues. It was *Philippe Renard (F),* chairman of the Activity Planning Committee, who asked me in 1975 to head a Task Force to see whether a hardware-oriented TC was conceivable." In 1976, the Task Force recommended to the GA that a TC on Digital Systems Design be created. The GA approved the plan, and TC10 held its first meeting in December 1977, chaired by *Prof. Piloty. Prof. David Aspinall (GB)* served as secretary and ultimately succeeded *Prof. Piloty* as chairman.

The current state of TC10, as discussed in the remainder of this profile, was described to the author during the IFIP General Assembly in September 1992 by *Prof. Gerard Reijns (NL)* and *Prof. Carlos Delgado Kloos (E),* then chairman and vice-chairman of TC10, respectively.

TC 10 is the only IFIP TC dealing with hardware devices. Although it is concerned with the design of total systems, both hardware and software, the stress is predominately on hardware. Modeling is emphasized at all levels, from devices on chips to large systems, and the importance of modeling increases every year. Designing systems in a well-structured way is also a paramount concern.

The essence of TC10, of course, can be found in its Working Groups.

WG10.2 on System Description and Design Tools initially concentrated on design languages and, in fact, set to work to produce such a language. CONLAN (consensus language) was the fruit of this effort. It permits the construction of tailor-made hardware description languages (HDLs) from a common language that contains basic facilities. The WG's scope has now been broadened to include four main areas: languages and VHDL (a standardized HDL), synthesis, formal verification, and design frameworks. Formal methods for the design of systems are of growing importance, having already demonstrated their power. WG10.2 emphasizes such approaches and their application to system design.

WG10.3 on Concurrent Systems, which initially dealt with hardware implementation of software functions, is now primarily concerned with concurrent computer architectures, in which several computers cooperate to perform a task more rapidly (or reliably) than a single computer can. In general, concurrent systems are classified as "parallel" or "distributed," the former for "tightly coupled" computers, and the latter for computers communicating by sending messages to one another over networks. The distinction between parallel and distributed systems is not always clear. Another approach to high-performance computing is with vector processors, special-purpose hardware units designed to perform high-speed arithmetic on streams of data. All these approaches to supercomputing are being studied by WG10.3. A major concern is the efficient application of a system's resources to its tasks, since system efficiency will be low unless most processors are active most of the time. Automatically allocating resources according to a task's demands is a related problem.

WG10.4 on Dependable Computing and Fault-Tolerance is also concerned with computer architecture, but from the viewpoint of system dependability. Reliability, availability, and serviceability (RAS) — designing systems that produce correct results, that remain in operation a very high percentage of time, despite the failure of individual components, and that are easily maintained and repaired — are key concerns. Air-traffic control, telephone, and spacecraft systems are among those requiring high RAS. WG10.4 studies the dependability of individual components, larger assemblies, software, and total systems. Safety-critical systems (e.g., aircraft, nuclear-plant control systems, and medical devices), whose failure can cost lives, are attracting increasing attention these days. The membership of WG10.4 includes the most outstanding people in the field of computer dependability.

WG10.5 on Very Large Scale Integration (VLSI) started life with only VLSI in mind but now considers systems issues, since in today's world, systems are dominated by chips. Although there is considerable overlap between this WG and WG10.2, they have worked out an effective collaboration, often organizing joint events, especially in the areas of formal design methods and HDLs. Major issues under consideration by WG10.5 include the very large, complicated software systems needed to design and test today's chips, which may contain millions of components. These systems include tools to verify chip designs before fabrication, and methods for testing faults in manufactured chips.

The newest WG in TC10, Neural Computer Systems (WG10.6), was founded in 1991. It investigates all aspects of neural networks, from design at the component level to simulation and programming. Neural networks are collections of interconnected devices that behave like neurons, with multiple inputs from receptors or other neurons and multiple outputs. The neurons fire when certain combinations of inputs are activated. The concept of neural networks has been discussed for decades. Only recently, however, has it been feasible to fabricate large hardware neural networks or simulate, by computer, neural networks that are large enough to demonstrate practical applications. Recent work has demonstrated that neural networks can indeed "learn" to perform complex tasks without extensive programming.

(WG10.1 on Systems Concepts and Characteristics was discontinued in 1990. Its scope included describing architectural and structural features of computers.)

Prof. Reijns would like to see more cooperation between TC10 and the other IFIP TCs. The TC 10 field is interdisciplinary to some extent, and some fruitful work calls for large projects involving many IFIP TCs. This has been difficult to achieve.

As time passes, the focus of TC10 will surely change. New WGs will be formed, and others will disappear. Microprogramming, for example, was once a "hot" topic. Now, however, most of the problems in microprogramming seem to have been solved, and little TC10 effort is devoted to it. At present, *Prof. Reijns* sees many challenges for TC 1 0 in multimedia systems. Combining multimedia and communication capabilities will require extensive data archiving, image enhancement and compression, wideband communication, and computers with high-speed parallel processing capacities, using ultra-fast microelectronics. In turn, these new capabilities will stimulate new applications in many areas (for instance, health care, satellite sensing, and climate investigations).

TC10 remains an active committee, holding many conferences, workshops, and other events. It is vital and continually evolving. ■

IFIP TC10

Deals with all aspects of computer design and the methodology of computer design, as well as with the life cycle of computer systems. Of special interest are logical design, fabrication of components, languages for specifying design, sets of design tools, techniques for verifying design correctness, computer organization and architecture, and dependability of components and systems. Modeling at all levels is a key technique.

TC10 Chairman: Prof. Dr. Egon Hörbst
Position: Executive Director, Corporate Research and Development
Employer: Siemens AG
Location: Munich
Interests: computer-aided circuit design, VLSI, simulation software

TC10 Vice-Chairman: Prof. Dr. Carlos Delgado Kloos
Position: Associate Professor
Employer: Technical Univ. of Madrid
Location: Madrid
Interests: formal methods for hardware design, functional formalisms, transformational methodology

TC10 Vice-Chairman: Prof. Claude Girault
Position: Professor
Employer: Laboratoire MASI, Université de Paris
Location: Paris

TC10 Secretary: Prof. Roland Ibbett
Position: Professor
Employer: Dept. of Computer Science, Univ. of Edinburgh
Location: Edinburgh
Interests: design and simulation of computer architectures

Working Group 10.2: System Description and Design Tools Concentrates on languages for all phases of computer design — from components to concurrent systems — and on design automation tools. Techniques for correctness verification are also studied. Stresses formal methods.

WG10.2 Chairman: Prof. Dr. Raul Camposano
Position: Prof. of Computer Science, Dir. for design of integrated circuits
Employer: Univ. of Paderborn, GMD
Location: St. Augustin, Germany
Interests: system design, design automation for digital systems, high-level synthesis

Working Group 10.3: Concurrent Systems Studies concurrent systems (including parallel processors, distributed systems, and vector processors). Is concerned with the interrelationship of hardware, software, and firmware.

WG10.3 Chairman: Prof. Michel Cosnard
Position: Professor
Employer: Ecole Normale Supérieure de Lyon
Location: Lyon
Interests: design and analysis of parallel algorithms, complexity analysis of automata and neural nets

Working Group 10.4: Dependable Computing and Fault-Tolerance Deals with understanding faults and their effects, specification and design for dependability, error detection and processing, validation (testing, verification, evaluation), and design for testability and verifiability.

WG10.4 Chairman: Dr. Jean-Claude Laprie
Position: Head, Research Group on Dependable Computing and Fault Tolerance
Employer: LAAS-CNRS
Location: Toulouse
Interests: basic concepts of dependability modeling and evaluation, fault tolerance, safety-critical systems

Working Group 10.5: Very Large Scale Integration Deals with the interaction between semiconductor fabrication and computer design. Tools and modeling are treated, as well as new technologies.

WG10.5 Chairman: Prof. Gerald Musgrave
Position: Pro-Vice-Chancellor, Head of Dept. of Electrical Engineering and Electronics
Employer: Brunel–The Univ. of West London
Location: Uxbridge, U.K.
Interests: specification languages, logic simulation, synthesis, test-pattern generation, databases for engineering

Working Group 10.6: Neural Computer Systems Is concerned both with implementation of neural systems (fabrication of components, architectures, and design tools) and applications and algorithrns for neural systems.

WG10.6 Chairman: Prof. J. Herault
Position: Professor
Employer: Institute Nationale Polytechnique de Grenoble
Location: Grenoble

IFIP JOINS NETWORK FOR AVAILABILITY OF SCIENTIFIC PUBLICATIONS

*by Mr. Plamen Nedkov (BG)**

During the 1990 General Assembly of ICSU (International Council of Scientific Unions) in Sofia, an open forum was held concerning a project for an international network to enhance the availability and distribution of science literature to Third World countries. Soon afterwards, ICSU undertook concrete action to establish a cooperative network of organizations involved in the distribution, publication, exchange, and donation of books, journals, and related materials to institutions, primarily in developing countries, but also in Central and Eastern Europe.

The result of this project, the International Network for the Availability of Scientific Publications (INASP), is a program of the Publishing Service of ICSU in collaboration with the European Commission, Unesco, and the Third World Academy of Sciences. In 1992, a Network office was established in London. The INASP database of donor organizations presently incorporates over 140 national and international organizations. **IFIP** is one of these.

For many years, **IFIP** and its primary publisher, Elsevier/North-Holland, have donated **IFIP** publications to **IFIP** Member societies from developing countries. Naturally, ICSU's initiative attracted IFIP's attention, and in 1992 **IFIP** joined INASP by offering 34 different **IFIP** books. As a result, in November 1992, **IFIP** publications were donated to universities and research organizations in Lesotho, Swaziland, Botswana, Indonesia, Peru, Bolivia, Mozambique, and other countries.

For further information about INASP and its programs, interested societies may contact the INASP Director, Ms. Carol Priestly, at the following address:

INASP
P.O. Box 2564
London W5 1ZD, England
tel: 44 (81) 997 3274
fax: 44 (81) 810 9795
e-mail: inasp@geo2.geonet.de ■

* IFIP Contracts Officer

IFIP PEOPLE ALSO HOLD ICCC OFFICES

Dr. *Ronald Uhlig (USA),* chairman of the International Program Committee for **IFIP** Congress '94 (to be held in Hamburg), was elected president of the International Council for Computer Communication (ICCC), an Affiliate Member of **IFIP,** at the ICCC Board of Governors meeting in September 1992. He succeeds *Dr. Prem Gupta (IND),* who is chairman of the International Program Committee for **IFIP** Congress '96 (Canberra). *Dr. Uhlig* also served as chairman of the **IFIP** Technical Committee on Communication Systems (TC6) from 1986 to 1992.

Dr. Dipak Khakhar (S), an **IFIP** trustee, was elected ICCC vice president, as was *Mr. Trevor Housley (AUS),* TC6 vice-chairman. *Dr. Farouk Kamoun,* Tunisian representative to the **IFIP** General Assembly, was named chairman of the ICCC Developing Countries Committee, and *Dr. Einar Fredriksson (NL),* former representative to **IFIP** from Elsevier/North-Holland, was elected Deputy Secretary General. ■

SENDOV CITES OLD BULGARIAN SAYINGS

In September, during IFIP Congress '92 in Madrid and during the subsequent meeting of the **IFIP** General Assembly in Toledo, *Acad. Blagovest Sendov (BG),* president of **IFIP** at that time, amused the participants by quoting several old Bulgarian sayings:

"Too much good is no good" was said in relationship to the situation in which the increasing number of information processing professionals in the world leads to decreased attendance at generalist computer conferences.

"Count your chickens in September — not in May" was rephrased as "Count your Congress delegates at the welcoming cocktail party — not at the official opening ceremony."

"Everything has an end but the sausage, which has two ends, and you never know which is the start and which is the finish" was said at the closing ceremony of the Congress, since the end of one **IFIP** Congress marks the start of the cycle for the following Congress.

"The shoemaker always has the worst shoes" was applied to **IFIP** during the discussion of an IFIP Code of Ethics. Although many of the **IFIP** Member societies have codes of ethics, **IFIP** is still struggling to formulate its international code (a much more difficult task, of course). ■

IFIP CONGRESS '94 continued from p. 7

The deadline for submission of papers is January 14, 1994. In addition to regular papers, there will be special sessions for informal presentations. The informal presentations may be in the form of posters, videos, or non-commercial demonstrations.

Other Activities

IFIP Congress '94 will offer much more, including a major exhibition, tutorials, a social program with an excursion Friday afternoon, and programs for accompanying persons, as well as pre- and post-conference tours.

Many more details are available in the call for papers, which is available from the **IFIP** Secretariat, **IFIP** Member societies, and the Organizing Committee. Other information, may be obtained from

Conference Secretariat — IFIP '94
do Congress Centrum Hamburg
Congress Organisation
P.O. Box 30 24 80
W-2000 Hamburg 36, Germany
tel: +49 40 /35 69 - 22 42
fax: +49 40 /35 69 - 23 43
telex: +212 609 ■

National Abbreviations Used in Newsletter

A	Austria	GB	United Kingdom	S	Sweden
AUS	Australia	H	Hungary	SF	Finland
B	Belgium	I	Italy	SGP	Singapore
BG	Bulgaria	IND	India	SLO	Slovenia
CDN	Canada	IRL	Ireland	SYR	Syria
CH	Switzerland	J	Japan	TN	Tunisia
D	Germany	MEX	Mexico	USA	U.S.A.
DK	Denmark	N	Norway	YU	Yugoslavia
E	Spain	NL	The Netherlands	Z	Zambia
F	France	PL	Poland	ZW	Zimbabwe

CALLS FOR PAPERS

IFIP WG5.3 Intl. Workshop on The Design of Information Infrastructure Systems for Manufacturing
8-10 Nov 93, Tokyo
papers due: 1 Jun 93
contact: DIISM 93
do Yoshikawa Laboratory
The Univ. of Tokyo
Dept. of Precision Machinery Engineering
7-3-1 Hongo, Bunkyo-ku
Tokyo 113, JAPAN
e-mail: jago@zzz.pe.u-tokyo.ac.jp
fax: +81-3-3812-8849
tel: +81-3-3812-2111, ext. 6481

Fourth **IFIP** WG10.4 Work. Conf. on **Dependable Computing for Critical Applications — DCCA-4**
4-6 Jan 94, San Diego, California
papers due: 30 Jun 93
contact: Dr. Gerard Le Lann
INRIA – Projet REFLECS
BP 105
78153 Le Chesnay Cedex, France
tel: +(33) 1 39 63 53 64
fax: +(33) 1 39 63 53 30
e-mail: gerard.le_lann@inria.fr

IFIP WG5.7 Work. Conf. on Evaluation of Production **Management Methods**
21-24 Mar 94, Porto Alegre/Gramado, Brazil
extended abstracts due: 1 Jul 93
contact: Prof. Dr. C. Walter
Pos-Graduação em Engenharia de Produção
Escola de Engenharia — UFRGS
Av. Oswaldo Aranha, 99 sala 205
90210 Porto Alegre RS, Brazil
tel: +55 51 228 1633, ext. 3491
e-mail: ifipwg5794@vortex.ufrgs.br

IFIP WG8.2 Work. Conf. on **Information** Technology **and New Emergent Forms of Organizations**
13-15 Aug 94, Ann Arbor, Michigan
papers due: 30 Oct 93
contact: Richard Baskerville
School of Management
Binghamton Univ.
Binghamton, NY 13902-6000, U.S.A.
or
Steve Smithson
London School of Economics
Houghton St.
London WC2A 2AE, U.K.

IFIP Work. Conf. on Upper **Layer Protocols, Architectures and Applications — ULPAA**
1-3 Jun 94, Barcelona
papers due: 1 Nov 93
contact: Dr. Nathaniel S. Borenstein
Room MRE 2D 296
Bellcore
Morristown, NJ 07962-1910, U.S.A.
tel: +1 (201) 829 4270, fax: +1 (201) 829 5963
Internet: nsb@thumper.bellcore.com
or
Dr. Manuel Medina
Universitat Politecnica de Catalunya
Gran Capitan, s/n. - D6.207
Dept. Arquit. Comput.
ES-08071-BARCELONA, SPAIN
tel: +34 3 401 6984, fax: +34 3 401 7055
Internet: medina@ac.upc.es

Third **DTP** WG7.6 Work. Conf. on **Optimization-Based Computer-Aided Modelling and Design**
24-26 May 94, Prague
extended abstracts due: 15 Nov 93
contact: IFIP'94 Working Conference
Institue of Information Theory and Automation
P.O.B. 18
Pod vodárenskou vezi 4
182 08 Prague, Czech Republic
tel: +42 2 847042, fax: +42 2 847452
e-mail: ifip@utia.cas.cs

IFIP Work. Conf. on **Programming Concepts, Methods and Calculi**
6-10 Jun 94, San Miniato, Italy
papers due: 1 Dec 93
contact: Prof. Dr. E.-R. Olderog
FB Informatik
Univ. Oldenburg
Postfach 2503
D-2900 Oldenburg, Germany

Thirteenth World Computer Congress: **IFIP Congress '94**
28 Aug-2 Sep 94, Hamburg
papers due: 14 Jan 94
contact: IFIP '94
do Congress Centrum Hamburg
Congress Organisation
P.O. Box 30 24 80
W-2000 Hamburg 36, Germany
tel: +49 40/35 69-22 42
fax: +49 40/35 69-23 43
telex: +212 609

IFIP WG9.3 Work. Conf. on **Home-Oriented Informatics, Telematics and Automatics: Reconstituting Oikos**
27 Jun-1 Jul 94, Copenhagen
papers due: 15 Jan 94
contact: Kresten Bjerg or Bjorn Nake
Psychological Laboratory
Univ. of Copenhagen
88 Njalsgade
DK 2300 Copenhagen S, Denmark
tel: +45 31 54 18 56, fax: +45 32 96 31 38
e-mail: kresten@vax.psl.ku.dk

Sixth World Conf. on **Computers in Education**
23-28 Jul 95, Birmingham, U.K.
papers due: 31 Jul 94
contact: WCCE/95
Margaret St.
Birmingham **B3 3BW,** U.K.
tel: 44+(0)21-428 1258
fax: 44+(0)21-428 2246

IFIP PUBLICATIONS cont. from p. 5

Those present during the discussions that preceded the negotiations for the current contract recall that several alternatives to publishing with Elsevier were considered at that time, but the agreement with Elsevier was selected over the others.

Suggestions Are Solicited

Soliciting views on how **IFIP** might publish in the future, *Mr. Graham Morris (GB),* chairman of the PC and an **IFIP** trustee, wrote in April to selected **IFIP** Member societies and to some international organizations with significant publishing activities. He hopes that they will produce practical suggestions that will contribute to the PC report to the GA. The views of *Newsletter* readers will also be welcome and should be sent, as soon as possible, to

Mr. Graham J. Morris
43 Pewley Hill
Guildford, Surrey GUI 3SW
United Kingdom
tel: [44] (483) 66933 ■

MEMBERSHIP CATEGORIES continued from page 4

Board for consideration by the Statutes and Bylaws Committee and subsequent presentation to the GA are

- Institutions in territories (not necessarily independent nations) should be permitted to become Full Members.
- Regions should be permitted to become Corresponding Members
- Full Members that resign should not be permitted to rejoin as Associate Members until 3 years have elapsed.
- AM status should be available to any international organization in information processing — not just those interested in specialized technical fields (as discussed above with regard to SEARCC).

In addition, the Executive Board appointed an ad hoc committee to promote **IFIP** membership for the newly emerging countries of Central Europe. *Acad. Blagovest Sendov (BG),* past president of **IFIP,** was named chairman of that committee.

Finally, it was noted with regret that the memberships of Brazil and Cuba have been terminated because of failure to pay past dues. ■

PROFESSOR ELÖD KNUTH

We regret to announce that Professor El&I Knuth (H) passed away 25 December 1992. He was a member of IFIP's Technical Committee on Software: Theory and Practice (TC2), a member of the Scientific Advisory Group of **IFIP's** TC on Artificial Intelligence (TC12), and the driving force behind the WG2.6 second conference on Visual Database Systems.

COUNCIL MEETS continued from page 6

normal 21/2 days to 11/2 days (plus the two prior days of meetings). Reports of TC chairmen were abbreviated, and some decisions taken by the Executive Board were reported but not discussed in the Council. As a result of these condensations, Council was able to accomplish its work comfortably in one less day than usual.

President *Rolstadås* closed the Council meeting with thanks to the Austrian Computer Society, especially its representative to **IFIP,** *Dr. Walter Grafendorfer,* for excellent organization. Next year's Council meeting is scheduled to take place in Brussels during the first week of March. ■

CHANGES IN IFIP

NEW APPOINTMENTS

TC, WG, and SG OFFICERS

TC10 chairman:
Prof. Dr. Egon Hörbst
Siemens AG
Otto Hahn Ring 6
D-8000 München, Germany
tel: +49-896363354, fax: +49-8963641288
(succeeding Prof. G.L. Reijns)

WG7.5 chairman:.
Prof. R. Rackwitz
Technical University of Munich
Arcisstrasse 21
D-8000 MUNICH 2, Germany
tel: +49 89 2105 3050, fax: +49 89 2105 3057
(succeeding Prof. P. Thoft-Christensen)

WG7.5 vice-chairman:
Prof. A.S. Nowak
2370 G.G. Brown, Civil Eng.
University of Michigan
Ann Arbor, MI 48109, U.S.A.
(succeeding P. Bjerager)

SG15 (Provisional Specialist Group on Fractals) chairman:
Dr. M.M. Novak
School of Physics
Kingston Univ.
KINGSTON-UPON-THAMES, Surrey KT1 2EE
U.K.
tel: +44 81 547 7419, fax: +44 81 547 2000
e-mail: novak@kingston.ac.uk

TC and WG MEMBERS

TC5: R.A. Earnshaw (GB)

WG5.4
M. **Azuma (J)**
M. d'Amore (E)
V.R. Basili (USA)
R. Ciampoli (I)
A. Combelles (F)
F. Copigneaux (F)
T. Flynn (IRL)
C. Fruhauf (CH)
J. Gorski (PL)
M. Grisoni (GB)
H. Hakalahti (SF)
J.C. Laprie (F)
B. Lepape **(B)**
M. Maiocchi **(I)**
P. Meseguer (E)
Z. Pendic (YU)
M. Pivka (SLO)
A. Preece (CDN)
F.N. Svendsen (DK)

TC6:
F. Kiwan (SYR)
M. Mwale (Z)
R. Posch (A)

WG7.5:
L. Esteva (MEX)
H. Ishikawa (J)
P. Sniady (PL)

TC9: J.A.N. Lee (USA)

TC10: E. Hörbst (A)

TC11:
G. Papp **(H)**
H. Pohl **(D)**
R. Posch (A)

TC12:
B. Neumann **(D)**
J. Glasgow (CDN)

WG12.4:
J.D. Pustejovsky (USA)
M. Palmer (SGP)

ADDRESS AND OTHER CHANGES

IFIP trustee and GA rep. of Finland:
Prof. Martti M. Tienari
Univ. of Helsinki
Dept. of Computer Science
P.O. Box 26
SF-00014 HELSINKI, Finland
e-mail: Martti.Tienari@cs.Helsinki.FI

IFIP trustee and GA rep. of Zimbabwe:
Mr. Geoff Fairall
e-mail: fairall@zimbix.uz.zw

GA rep. of Belgium and national society:
Fed. des Associations Informatiques
de Belgique - FAIB/FBVI
do I.S.E. SA Jean E.D. Navez
Square de Biarritz, 3/10
B-1050 BRUSSELS, Belgium
tel. & fax : +32 2 6460 013

GA rep. of Malaysia: Prof. Lee Poh Aun
Dept. of Mathematics
Universiti Malaya
Lembah Pantai
59100 KUALA LUMPUR, Malaysia
tel: +603 755 5466, fax +603 255 2919

GA rep. of South Africa: Mr. Christopher Guy
tel: +27 11 224 2490, fax: +27 11 224 4911
e-mail: CHRISGUY @JOHIC I .VNET.IBM.com

TC2 chairman: Prof. P. Poole
e-mail: pcp@bu.oz.au

WG2.1 chairman: Prof. Dr. H.A. Partsch
Fakultaet f. Informatik
Universitaet Ulm
Oberer Eselsberg
D-W-7900 ULM, Germany
tel: +49 731 502 4160, fax: +49 731 502 4142

WG2.2 chairman and WG2.6 vice-chairman:
Prof. Dr. E. Neuhold
GMD - IPSI
Dolivostrasse 15
P.O. Box 104326
D-64293 DARMSTADT, Germany
(effective 1 July 1993)

WG6.6 chairman: Mr. W. Zimmer
GMD-FIRST
Rudower Chaussee 5/G13.7
D-1199 Berlin-Adlershof, Germany
tel: +49 30 6704 2652, fax: +49 30 6704 5610
e-mail: zimmer@first.gmd.de

WG9.1 chairman: Prof. Dr. **I.** Wagner
e-mail: IWAGNER@email.tuwien.ac.at

WG9.3 chairman: Mr. F. van Rijn
University of Amsterdam
Dept. of Communication
Oude Hoogstraat 24
NL-1012 CE AMSTERDAM, The Netherlands
tel: +31 20 525 3589 (Univ.)
+31 20 550 1746 (Polytech.)
+31 20 664 1342 (home)
fax: +31 20 525 2179 (Univ.)
+31 20 638 2319 (Polytech.)
+31 20 676 3507 (home)
e-mail: felix_van_Rijn@sara.nl

WG9.4 chairman: Dr. M. Odedra
e-mail: odedra@iscs.nus.sg

WG9.5 secretary: Mr. G. Cyranek
TA Informatik
Auf der Mauer 3
CH 8001 Zurich, Switzerland
tel: +41 (01) 252 02 74, fax: +41 **(01)** 252 02 74

WG12.4 chairman: Prof. Dr. H.C. Bunt
fax: +31 13 662537

SG14 chairman: Prof. **J.** Gruska
e-mail: gruska@informatik.uni-hamburg.de ■

FUTURE IFIP MEETINGS

GENERAL ASSEMBLY AND COUNCIL (and related meetings)

GA	6-10 Sep 93	Tokyo
Council	28 Feb-3 Mar 94 (tentative dates)	Brussels
GA	(contiguous to **IFIP** Congress '94)	Hamburg
GA	(contiguous to **IFIP** Congress '96)	Canberra, Australia

TECHNICAL COMMITTEE AND WORKING GROUP MEETINGS*

WG2.1	28 Jun-2 Jul 93	Hamilton, Ontario
	(organized jointly with WG2.2 and WG2.3)	
WG2.2	same	
WG2.3	same	
WG2.4	4-7 Oct 93	Monterey, California
WG2.5	17-20 Sep 93	Toronto
WG2.7	Sep 93	New Jersey
WG2.8	11-13 Jun 93 (with FPCA'93 conf.)	Copenhagen
	mid 94	Calgary, Alberta
TC3	28-29 Aug 93	Birmingham, U.K.
	26-27 Aug 94	Hamburg
	22-29 Jul 95	Birmingham, U.K.
WG3.1	7-11 Jun 93 (with conf.)	Gmunden, Austria
WG3.4	12-16 Jul 93 (with conf.)	Soest, Germany
TC5	13-17 Sep 93 (with conf.)	Phoenix, Arizona
WG5.3	12-16 Sep 93 (with conf.)	Phoenix, Arizona
WG5.7	28-30 Sep 93 (with APMS'93 conf.)	Athens
WG5.10	28 Jun-2 Jul 93 (with conf.)	Genova, Italy
TC6	15-16 Oct 93	Sofia
	23-24 May 94	Porto Santo Island, Portugal
	4-6 Oct 94 (with SEACOMM conf.)	Malaysia
TC7	6 Jul 93 (with conf.)	Compiegne, France
TC8	8-9 May 94	Queensland, Australia
WG8.1	1-3 Sep 93 (with conf.)	Como, Italy
TC9	31 Jul-1 Aug 93	Farnham, U.K.
	Aug/Sep 94	Hamburg
WG9.2	15-16 Jan 94	Namur, Belgium
WG10.2	20-24 Sep 93 (with conf.)	Hamburg
WG10.4	22-24 Jun 93 (with conf.)	Toulouse, France
TC12	29-30 Aug 93 (with conf.)	

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

Will TC and WG chairmen 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.

NEW IFIP PUBLICATIONS FROM NORTH-HOLLAND

Human, Organizational and Social Dimensions of Information Systems Development

Proceedings of the IFIP WG8.2 Working Conference on Information Systems Development: Human, Social and Organizational Aspects, Noordwijkerhout, The Netherlands, 17-19 May 1993

edited by D. Avison, J.E. Kendall and J.I. DeGross

IFIP Transactions A: Computer Science and Technology Volume A-24

©1993 xii + 496 pages Paperback
Price: US $ 137.25 / Dfl. 240.00
ISBN 0-444-89983-9

Decision Support in Public Administration

Proceedings of the IFIP TC8/WG8.3/1NG8.5 Working Conference, Noordwijkerhout, The Netherlands, 13-14 May 1993

edited by P.W.G. Bats, H.G. Sol and R. Traunmüller

IFIP Transactions A: Computer Science and Technology Volume A-26

©1993 x + 200 pages Paperback
Price: US $ 77.25 / Dfl. 135.00
ISBN 0-444-81485-X

Architectures and Compilation Techniques for Fine and Medium Grain Parallelism

Proceedings of the IFIP WG10.3 Working Conference, Orlando, FL, USA, 20-22 January 1993

edited by M. Cosnard, K. Ebcioglu and J.-L. Gaudiot

IFIP Transactions A: Computer Science and Technology Volume A-23

©1993 342 pages Paperback
Price: US $ 111.50 / Dfl. 195.00
ISBN 0-444-88464-5

50% DISCOUNT AVAILABLE TO INDIVIDUAL MEMBERS OF IFIP SOCIETIES... SEE OVERLEAF FOR ORDER INFORMATION

Knowledge Oriented Software Design

Extended Papers from the IFIP TC12 Workshop on Artificial Intelligence from the Information Processing Perspective - AIFIPP'92, Madrid, Spain, 14-15 September 1992

edited by J. Cuena

IFIP Transactions A: Computer Science and Technology Volume A-27

©1993 300 pages Paperback
Price: US $ 100.00 / Dfl. 175.00
ISBN 0-444-81541-4

High Performance Networking, IV

Proceedings of the IFIP TC6/WG6.4 Fourth International Conference, Liege, Belgium, 14-18 December 1992

edited by A. Danthine and 0. Spaniol

IFIP Transactions C: Communication Systems Volume C-14

©1993 468 pages Paperback
Price: US $ 131.50 / Dfl. 230.00
ISBN 0-444-81481-7

Interoperable Database Systems (DS-5)

Proceedings of the IFIP WG2.6 Database Semantics Conference, Lorne, Victoria, Australia, 16-20 November 1992

edited by D.K. Hsiao, E.J. Neuhold and R. Sacks-Davis

IFIP Transactions A: Computer Science and Technology Volume A-25

©1993 xiv + 348 pages Paperback
Price: US $ 111.50 / Dfl. 195.00
ISBN 0-444-89879-4

ELSEVIER
SCIENCE PUBLISHERS

Computer Networks, Architecture and Applications

Proceedings of the IFIP TC6 Working Conference, NETWORKS '92, Trivandrum, India, 28-29 October 1992

edited by S.V. Raghavan, G. v. Bochmann and G. Pujolle

IFIP Transactions C: Communication Systems Volume C-13

©1993 x + 298 pages Paperback
Price: US $ 100.00 / Dfl. 175.00
ISBN 0-444-89968-5

Interfaces in Industrial Systems for Production and Engineering

Proceedings of the IFIP TC5/WG5.10 Working Conference, Darmstadt, Germany, 15-17 March 1993

edited by J. Rix and E. Schlechtendahl

IFIP Transactions B: Computer Applications in Technology Volume B-10

© 1993 302 pages Paperback
Price: US $ 100.00 / Dfl. 175.00
ISBN 0-444-81496-5

Synthesis for Control Dominated Circuits

Selected Papers from the IFIP WG10.2/WG10.5 Workshops, Grenoble, France, April and September 1992

edited by G. Saucier and J. Trilhe

IFIP Transactions A: Computer Science and Technology Volume A-22

©1993 464 pages Paperback
Price: US $ 128.50 / Dfl. 225.00
ISBN 0-444-81479-5

IN PREPARATION:

Graphics, Design and Visualisation

Proceedings of the IFIP TC5/WG5.2/WG5.10/CSI International Conference on Computer Graphics, Bombay, India, 24-26 February 1993

edited by S.P. Mudur and S.N. Pattanaik

IFIP Transactions B: Computer Applications in Technology Volume B-9

©1993 Paperback
ISBN 0-444-81564-3

SPECIAL 50% DISCOUNT ORDER FORM FOR INDIVIDUAL IFIP TITLES

CONDITIONS FOR THE 50% DISCOUNT ON IFIP PUBLICATIONS

- O Bona-fide individual researchers who are members of IFIP member societies are entitled to purchase copies of IFIP publications at 50% discount off the list price.
- e No discounts are given if the book(s) ordered is not an IFIP computer science publication from North-Holland
- © Discounts are not applicable to orders from libraries, institutions, companies, etc.
- t Orders at these special discounts must be submitted using the order form below.
- • In all cases the discounts refer to pre-paid orders from personal funds.

Send this form (or a photocopy) to:
ELSEVIER SCIENCE PUBLISHERS BV
(Imprint: North-Holland)
Attn: Petra van der Meer,
P.O. Box 103, 1000 AC Amsterdam,
The Netherlands
Fax: (020) 5862 616

	List Price	Less 50% Discount	Discount Price

Yes, please send me ..... copy(ies) of:

I am a member of the following IFIP Member Society.....

My membership number is .....

❑ **Payment enclosed:**

❑ Bank Draft ❑ Eurocheque ❑ International Money Order
❑ Postal Cheque ❑ Personal Cheque ❑ UNESCO Coupons

❑ **Please charge my credit card:**

❑ Access ❑ American Express ❑ VISA
❑ EuroCard ❑ MasterCard

Card No ..... Valid Until .....

Name .....

Address .....

City ..... Postal Code .....

Country .....

VAT Registration Number .....

Signature ..... Date .....

The Dutch Guilder (Oft) price is definitive. The US$ price is for guidance only and subject to exchange rate fluctuations. Non VAT registered customers in the European Community should add the appropriate VAT rate applicable in their country to the price(s). In New York State, please add applicable sales tax. No postage will be added to prepaid book orders. All prices are subject to change without prior notice.

JUNE 1993

CALENDAR OF EVENTS

(continued from page 16)

Event	Date	Location	Sponsored by
Conf. on *Network Information Processing Systems — INFONET'93*	12-14 Oct 93	Sofia	**IFIP** TC6/Bulgarian Acad. of Sci.
First Intl. Conf. on *Lan Interconnection — LAN INTERCON'93*	20-22 Oct 93	Raleigh, North Carolina	**IFIP** WG6.4, TC6, WG7.3 et al.
Sixth Intl. Conf. on *Formal Description Techniques — FORTE'93*	26-29 Oct 93	Boston	**IFIP** WG6.1, Bellcore, U. of Delaware, BNR
Twelfth Intl. Conf. on *Computer Safety, Reliability and Security — SAFECOMP'93*	27-29 Oct 93	Poznan, Poland	EWICS **IFIP** TC7, TC5 et al.
Intl. Workshop on *The Design of Information Infrastructure Systems for Manufacturing — DIISM*	8-10 Nov 93	Tokyo	**IFIP** WG5.3 et al.
Thirteenth Intl. Conf. on *Information Systems — ICIS '93*	5-8 Dec 93	Orlando, Florida	ICIS, SIM / **IFIP** TC8
Work. Conf. on *Numerical Analysis and Optimization*	15-17 Dec 93	Rabat, Morocco	**IFIP** WG7.2
Work. Conf. on *Broadband Communication*	1 Jan 94	Paris	**IFIP** TC6
Work. Conf. on *Dependable Computing for Critical Applications — DCCA-4*	4-6 Jan 94	San Diego	**IFIP** WG10.4
Intl. Workshop on *Stochastic Programming: Algorithms and Models*	18-20 Jan 94	Lillehammer, Norway	**IFIP** WG 7.7/ MPS NCS
Work. Conf. *on The Impact of Informatics on Society: Key Issues for Developing Countries*	21-23 Feb 94	Havana	**IFIP** WG 9.4/ INSAC
Workshop on *Stochastic Methods and Global Optimization*	? Mar 94	Palanga/Trakai, Lithuania	**IFIP** WG7.7
Work. Conf. on *Optimization-Based Computer-Aided Modelling and Design*	24-26 May 94	Prague	**IFIP** WG7.6 et al.
Work. Conf. on *Application Layer Communication Services*	1-3 Jun 94	Barcelona	**IFIP** WG6.5
PROCOMET'94	6-10 Jun 94	San Miniato, Italy	**IFIP** TC2 WG2.2
Workshop on *Intelligent Manufacturing Systems*	22-24 Jun 94	Vienna	IFAC **IFIP** WG5.3 IFORS et al.
Work. Conf. on *Promoting A New Partnership: Children, Teachers, and Technology*	27 Jun-1 Jul 94	Philadelphia	**IFIP** TC3 WG3.5
Work. Conf. on *Home-Oriented Informatics, Telematics and Automatics: Reconstituting Oikos*	27 Jun-1 **Jul** 94	Copenhagen	**IFIP** WG9.3
Conf. on *Asia Pacific Information Technology in Training and Education — APITITE'94*	28 **Jun-2 Jul 94**	Brisbane, Australia	ACS **IFIP** TC3 et al.
IMACS World Congress '94	**? Jul 94**	Atlanta, Georgia	IMACS
Eighth Work. Conf. on *Database Security*	23-26 Aug 94	Hildesheim, Germany	**IFIP** WG11.3
***IFIP** Congress '94 — Thirteenth World Computer Congress*	**28 Aug-2 Sep 94**	**Hamburg**	**IFIP**
Work. Conf. on *Comparative Review of Information Systems Methodologies Revisited — CRIS'94*	5-7 Sep 94	Maastricht, Netherlands	**IFIP** WG8.1
Symp. on *Robot Control — SYROCO'94*	19-21 Sep 94	Capri, Italy	IFAC/ **IFIP** WG7.6, IMACS
Workshop on *Expert Systems in Computer Integrated Manufacturing*	? Sep 94	Kiev, Ukraine	**IFIP** WG5.3
Second Symposium on *Artificial Intelligence in Real Time Control*	3-5 Oct 94	Valencia	IFAC **IFIP** WG5.4
Work. Conf. on *Integrating Information on Technology into Education*	? Oct 94	Spain	**IFIP** WG3.1
Work. Conf. on *Change-Point Detection*	? 94	Vilnius, Lithuania	**IFIP** WG7.1
Work. Conf. on *Approximations and Applications in Stochastic Programming*	? 94	Tallinn, Estonia	**IFIP** WG7.7 IIASA
World Conf. on *Computers in Education — WCCE '95*	23-28 Jul 95	Birmingham, U.K.	**IFIP** TC3 BCS
Eighth **IMIA** World Congress on *Medical Informatics — MEDINFO'95*	10-14 Sep 95	Sao Paolo, Brazil	IMIA
IFIP Congress '96 — Fourteenth World Computer Congress	**2-6 Sep 96**	**Canberra, Australia**	**IFIP**
Thirteenth ***IFAC** World Congress '96*	? 96	San Francisco	IFAC

Please see page 12 for schedule of **IFIP** administrative meetings.
The **IFIP** Secretariat can furnish details of most of the events listed.

CALENDAR OF EVENTS

Event	Date	Location	Sponsored by
Industrial Engineering and Production Management — IEPM'93	2-4 Jun 93	Mons, Belgium	FUCAM/INRIA, **IFIP** WG5.7
Open Conf. on *Informatics and Changes in Learning*	*7-11* Jun 93	Gmunden, Austria	**IFIP** TC3 (WG3.1 and 3.5)
Sixth Conf. on *Functional Programming Languages and Computer Architecture — FPCA* '93	9-11 Jun 93	Copenhagen	ACM, SIGPLAN/SIGARCH/ MIT, DIKU, **IFIP** WG 2.8
Workshop on *Stochastic Optimization: Numerical Methods and Technical Applications*	15-17 Jun 93	Munich	**IFIP** WG 7.7/GAMM, UniBW
First Work. Conf. on *Development and Implementation of Computer-Based Information and Communication Networks — NetWORKing*	16-18 Jun 93	Vienna	**IFIP** WG9.1
Workshop on *Formal Design Methods for Computer-Aided Design*	16-19 Jun 93	Tal lin, Estonia	**IFIP** WG5.2
Twenty-third Intl. Symp. on *Fault-Tolerant Computing — FTCS* 23	22-24 Jun 93	Toulouse, France	IEEE, LAAS-CNRS, AFCET, **IFIP** WG10.4
Work. Conf. on *Geometric Modelling in Computer Graphics — GMCG*	28 Jun-2 Jul 93	Genoa, Italy	**IFIP** WG5.10, CNR
Sixteenth Open Conf. on *System Modelling and Optimization*	5-9 Jul 93	Compiegne, France	**IFIP** TC7
Work. Conf. on *Computer-Mediated Education of Information Technology*	12-16 Jul 93	Soest, Germany	**IFIP** WG3.4
Thirteenth Triennial **IFORS** Conf. on *Operations Research — IFORS '93*	12-16 Jul 93	Lisbon	IFORS
IFAC World Congress '93	19-23 Jul 93	Sydney	IFAC
Work. Conf. on *Visualization in Scientific Computing: Uses in University Education*	28-30 Jul 93	Irvine, California	**IFIP** WG3.2
Work. Conf. on *Security and Control of IT in Society*	12-17 Aug 93	Stockholm	**IFIP** WG9.6
Work. Conf. on *Intellectual Property Rights in Computer Software and Their Impact on Developing Countries*	20-21 Aug 93	Bangalore, India	**IFIP** WG 9.4/CSI, IIS
Intl. Conf. on *Teleteaching '93*	20-25 Aug 93	Trondheim, Norway	IFIP TC3, ICDE
Third Intl. Conf. on *CAD — Graphics '93*	23-26 Aug 93	Beijing	CCF, **IFIP** WG5.10
Work. Conf. on *The Open Systems Future: Leveraging the LAN*	29 Aug-2 Sep 93	Perth, Australia	**IFIP** WG8.4/ Curtin Univ., ACS
Thirteenth **IJCAII** Intl. Joint Conf. on *Artificial Intelligence — IJCAII '93*	29 Aug-3 Sep 93	Chambery, France	UCAll
Work. Conf. on *Statistical Aspects of Stochastic Programming*	4-9 Sep 93	Prague	**IFIP** WG7.7
Work. Conf. on *Lessons from Learning*	6-8 Sep 93	near Geneva	**IFIP** WG3.3, NEUROPE Lab.
Nineteenth **EUROMICRO** Conf. on *Open System Design: Hardware, Software, and Applications — EUROMICRO'93*	6-9 Sep 93	Barcelona	EUROMICRO
VLSI '93	*7-10* Sep 93	Grenoble	**IFIP** WG10.5
Work. Conf. on *Fractals — FRACTAL 93*	7-10 Sep 93	Kingston upon Thames, U.K.	**IFIP**
Seventh Work. Conf. on *Database Security*	12-15 Sep 93	Lake Guntersville, Alabama	**IFIP** WG11.3
Second Intl. Conf. on *Open Distributed Processing — ICODP2*	14–? Sep 93	Berlin	**IFIP** TC6, GMD-Fokus
Workshop on *Applications of the Reed-Muller Expansion in Circuit Design*	16-18 Sep 93	Hamburg	**IFIP** WG10.5
Fifth Intl. Conf. on *Advances in Production Management System — APMS '93*	28-30 Sep 93	Athens	**IFIP** WG5.7 HMA IPM
Sixth Intl. Workshop on *Protocol Test Systems — IWPTS'93*	28-30 Sep 93	Pau, France	**IFIP** WG6.1 Univ. de Pau
Work. Conf. on *Software Engineering Education*	28 Sep-2 Oct 93	Kowloon, Hong Kong	**IFIP** WG3.4
Workshop on *Large Scale Stochastic Programs: Applications and Solutions*	*1–?* Oct 93	Yalta, Ukraine	**IFIP** WG7.7
Intl. Workshop on *Distributed Systems: Operations and Management — DSOM'93*	5-6 Oct 93	Long Branch, New Jersey	**IFIP** WG 6.6/ IEEE COMSOC CNOM
Work. Conf. on *Computer Support for Environmental Impact Assessment — CSEIA'93*	6-8 Oct 93	Como, Italy	**IFIP** WG5.11, CIRITA
Work. Conf. on *Diffusion, Transfer and Implementation of Info. Technology*	11-13 Oct 93	Pittsburgh	**IFIP** TC8, SW. Eng. Inst., CMU

(continued on page 15)

IFIP Congress '94 — 13th World Computer Congress	28 Aug-2 Sep 94	Hamburg, Germany	**IFIP**
IFIP Congress '96 — 14th World Computer Congress	2-6 Sep 96	Canberra, Australia	**IFIP**

Please see page 12 for schedule of IFIP administrative meetings.
The **IFIP** Secretariat can furnish details of most of the events listed.