IFIP newsletter
International Federation for Information Processing

Editor:
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ISDN IN EUROPE

IFIP/ICCC *Conference Very Successful*

*by Dr. Ronald Uhlig (USA) **

Integrated Services Digital Networks (ISDNs) were the subject of a recent very successful international conference sponsored jointly by IFIP's Technical Committee on Data Communication (TC6) and the International Council for Computer Communication (ICCC). ISDNs are digital communication networks that give users the digital communication links they require for both voice and data through a single set

• chairman of IFIP's Technical Committee on Data Communication (TC6)

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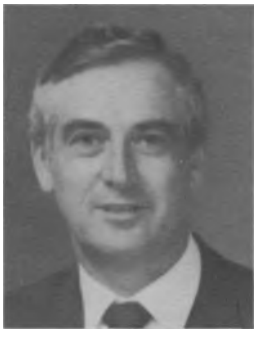
GREETINGS TO 11TH WORLD COMPUTER CONGRESS PARTICIPANTS



Our World Computer Congress is our most important single event. It is the premier assembly of computer professionals from around the globe.

We are delighted that the 11th Congress is being held in San Francisco, a city of unmatched beauty and charm and a delight to visit. I am sure that everyone attending this event will have fond memories of places visited and people met while they were here.

The theme of the Congress, "Better Tools for Professionals," is designed to provide a practical framework within which leaders in their respective fields can demonstrate the latest advances in the knowledge and application of information technology.

In recent years, general conferences in the computer field have suffered declining attendances. We have recognized this in IFIP, so this Congress is really a series of specialist conferences in eleven technical streams. The content and structure of those streams provide an unequalled opportunity for delegates to learn of the latest advances and approaches.

We are fortunate in having many of the world's leading computer scientists and practitioners present their ideas and experiences to their colleagues. The triennial IFIP Congress brings together an exciting panorama of people, topics and activities.

IFIP is dedicated to the development, exploitation and application of information technology for the benefit of all people. Its activities are designed to stimulate and encourage participation in research, development and application of information technology. The Congress provides a forum for computer professionals to enhance their knowledge and understanding of the field in which they work. It provides an opportunity to meet and mingle with others from all parts of the world.

I would like to pay a tribute to all those volunteers who have worked so hard for so long to organize this Congress. I am confident that your enjoyment of this week will be more than ample testimony to how effective their work has been.

Good fortune and a safe journey home for each and every one of you.

Ashley W. Goldsworthy
IFIP President

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

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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.*

Who's Who in IFIP: PROF. ALEXANDER VERR/JN-STUART

IFIP trustee ***Prof. Alexander Verrijn-Stuart*** was born in October 1923 in Rotterdam. He completed his undergraduate studies in experimental physics at the University of Amsterdam in 1950 and received a doctorate in experimental physics at the University of Michigan in 1953.

He then continued his "globe-trotting" as an employee of the Royal Dutch/Shell Group from 1952 to 1970, starting in Amsterdam and moving to Paris; The Hague; London; Abadan, Iran; and back to London. In 1970, he accepted the position of Professor of Computer Science (specializing in Information Systems) at the University of Leiden, where he has remained ever since.

Prof. Verrijn-Stuart became acquainted with computers when the Royal Dutch/Shell Group's first computer was installed in 1954. He used it for theoretical calculations of molecular spectra. In 1958, when he was given the opportunity to leave fundamental physics research and enter the world of applied computing, he hesitated momentarily, but never looked back.

His first participation in **IFIP** was in 1970, as a delegate to the First World Conference on Computers and Education in Amsterdam, and he has participated in **IFIP** Congresses since 1971. However, he became truly involved in 1975, when **DTP's** Technical Committee on Information Systems (TC8) was founded. He has been the Netherlands' national representative to TC8 from the beginning and has missed only one meeting. He was chosen as chairman of TC8 in 1977 and served in that position until 1983. He helped found the Working Group on Office Information Systems (WG8.4) in 1985 and has been its chairman from the inception. He also is the creator and editor of ***NEWS//8,*** the TC8 newsletter.

Prof. Verrijn-Stuart has chaired a number of conferences of WG8.1 and WG8.4 and has been co-editor of several **IFIP** proceedings and of the 10th Anniversary Anthology of TC8, ***Trends in Information Systems.***

In addition to contributing to TC8, Prof. ***Verrijn-Stuart*** has served as the Netherlands' representative to the **IFIP** General Assembly since 1980. He was elected trustee in 1985. He has also served as TC3 Cognizant Officer, Finance Committee chairman, and Publications Committee chairman.

Prof. Verrijn-Stuart is married and has two adult sons. His hobbies are music (passive), reading (active), ice skating (conditions permitting), and mountaineering (regular). Lately, he has gone backpacking in remote areas of the Alps, Pyrenees and in Scandinavia. He is the author of two mountaineering expedition books: ***Annapurna, 8091 Meter*** and ***Everest 1982, the Story of an Unsuccessful Expedition.***

The NGI has chosen a new representative to the GA, effective following the 1989 GA meeting. Those of us who have had the pleasure of working with ***Alex in*** **IFIP** respect his talent, admire his boundless energy, and recognize his truly tremendous contributions to **IFIP.** We know, however, that he will continue to participate in and contribute to **IFIP.**

TECHNICAL COMMITTEE CHAIRMEN

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IFIP'S FIRST STATE-OF-THE-ART SEMINAR

After several years of planning, IFIP's concept of bringing seminars on the state of the art in various areas of information processing to developing countries became a reality. The goal of offering this type of activity rather than the more common IFIP working conferences, in which the state of the art is advanced, was described in the September 1988 ***IFIP Newsletter*** (page 1). Following is the report of ***Prof. Jorge Boria,*** Chairman of the Computer Sciences Department of the University of Centre of Buenos Aires Province at Tandil, about the first IFIP State-of-the-Art seminar.

High in the mountain range northwest of Rio de Janeiro, ninety professionals from Argentina, Brasil and Uruguay attended the lectures of the IFIP State-of-the-Art Seminar on Formal Description of Programming Concepts. Seven lecturers crowded the ten very active days of the seminar, from 18 to 28 April.

The audience was made up of university and industry professionals, in a different proportion from that expected by the visiting professors: there were more people from universities than anticipated. This forced some of the lecturers to change their approach to the subject, but there was no loss of clarity. The lecturers covered seven topics: Denotational Semantics by ***Prof. Peter Mosses (DK),*** Algebraic Specification by ***Dr. Martin Wirsing (D),*** VDM (Vienna Definition Method) Specification and Implementation Methodology by ***Prof. Dines Bjørner (DK),*** Distributed, Concurrent and Reactive Systems by ***Prof. Manfred Broy (D),*** Typeful Programming by ***Dr. Luca Cardelli (USA),*** Operational Semantics by ***Prof. Egidio Astesiano*** (1), and Program Verification by ***Prof. Krzystof*** Apt (F).

Each day was divided into five ninety-minute lectures, and each lecturer delivered an extra lecture on a chosen subject, also ninety minutes long. The result was seven and a half hours of classroom work each day, plus the necessary reading of the (very good) material the professors provided those attending. Even with such a crowded day, few people missed lectures, since this was a once-in-a-lifetime opportunity to see the leading edge of computer science in action. It was common to see groups working after hours and to see lecturers join them to further explain some possibly obscure points.

The overall impression of those that attended this excellent seminar was that such a big effort was more than compensated for by the results: a glimpse of what was going on in the minds of the foremost computer scientists, through well organized lectures and materials, plus the opportunity of discussing such important subjects with those actually contributing to their growth. For a fortnight, a few of us in South America left the Third World to join the computer scientists of the leading countries. Thank you IFIP. Thank you, organizers and speakers! May it happen again!

After the Seminar, lecturers ***Mosses*** and ***Wirsing*** visited two schools, in Argentina and Brazil, to speak to faculty and students.

A book based on the lectures from the Seminar will be available by the end of this year.

The technical organizers of the Seminar, in IFIP's Working Group on Formal Description of Programming Concepts (WG2.2), led by Prof. ***Erich Neuhold (D),*** are planning another, updated version of the seminar, to be held in 1990 in India or Southeast Asia. ■

A MESSAGE FROM

In 1951, the first Joint Computer Conference was held in Philadelphia, sponsored by the American Institute of Electrical Engineers and the Institute of Radio Engineers. Nearly 900 professionals attended. This was the first of a long series of conferences. Ten years later, the sponsors (including the Association for Computing Machinery by this time) agreed to form the American Federation of Information Processing Societies (AFIPS), an organization that would continue to organize the Joint Computer Conferences, be the national spokesman for the computer field, and serve as the U.S. member of IFIP, to help facilitate international communication and dissemination of information on new developments in computer science. Over the past twenty-eight years, membership in the Federation has grown to eleven major national professional societies:

American Society for Information Science (ASIS)
American Statistical Assn. (ASA)
Assn. for Computational Linguistics (ACL)
Assn. for Computing Machinery (ACM)
The Computer Society
Data Processing Management Assn. (DPMA)
International Assn. for Computing in Education (IACE)
Instrument Society of America (ISA)
Society for Computer Simulation (SCS)
Society for Industrial and Applied Mathematics (SIAM)
Society for Information Display (SID)

The approximately 240,000 constituents of the member societies are engaged in all facets of design, application and management of information processing systems.

AFIPS represents its member organizations by promoting the integrity and effectiveness of the profession with activities that include sponsoring major computer conferences and seminars, publishing books and periodicals on current and historical developments in the field, working with agencies of the United States government to provide accurate and timely information on computer-related activities, and honoring those individuals who have made significant contributions to the field of information processing.

AFIPS calls on the talent and expertise of its many outstanding volunteers to help meet its objectives of promoting the welfare and effectiveness of the information processing profession, and representing and enhancing the efforts of its member societies in those areas. These many activities help to maintain and enrich its leadership in the information processing field.

AFIPS is delighted to be the host for the 11th World Computer Congress. The prior IFIP Congress held in the U.S. was in New York in 1965. AFIPS welcomes back the Congress as well as the IFIP General Assembly and hopes that these meetings will be productive, comfortable, and enjoyable. Thank you for coming to the U.S., and please return again soon. ■

TC2 AND WG2.6 HOLD CONFERENCE ON VISUAL DATABASES

Paper Presented on Tibetan Painting

Information processing has been 1 evolving from numerical computation to character handling, and now to visual information processing. Likewise, database systems are also progressing along this line. Fairly large amounts and complex structures of visual information make visual database systems both storage- and computation-intensive. Now, the storage and processing power barrier has been eliminated by recent advances in workstations with very large memories and files and powerful processors." Thus stated ***Prof. Dr. Tosiyasu Kunii (J)*** in the preface to the proceedings of the IFIP Working Conference on Visual Database Systems.

He also noted the following:

> There are two possible ways to interpret the term "Visual Database Systems:"
>
> • conventional databases with more ***visual*** facilities for data presentation
> • new types of databases with capabilities for handling visual data (as well as symbolic and numerical data
>
> Though the two concepts may seem orthogonal to each other, they are closely related. Neither can develop by itself without progress in the other.

The Conference was held 3-7 April in Tokyo, organized by IFIP's Technical Committee on Programming (TC2) and its **Working Group on Database** (WG2.6). Twenty-two papers were presented, and a panel discussion was held. Of the 89 participants, 67 were from Japan and the rest from Europe, the U.S.A., and Asia.

To illustrate the scope of the Conference and the nature of the problems addressed, we quote here from three of the papers.

Automatic Feature Detection

The question of how to classify images automatically was addressed by ***Profs. Gio Wiederhold, Jim Brinkley, Ramin Samadani,*** and ***Robert Clauer (all*** of the U.S.A.) in their paper "Model-Driven Image Analysis to Augment Databases." They summarized their goal in the introduction to their paper: •

> To be able to retrieve images stored in databases, we must associate identifying parameters with each of the images. It is through these parameters that we can select stored images for display, comparison, and further analysis. Primary parameters are produced when the images are obtained, and describe the imaging event and its process. For satellite images of earth, we would have the time of observation, the setting of the scanner and the satellite, and, immediately derived from those data, we can determine the satellite's path and the portion of the earth seen. For medical images, the primary parameters are the name of the patient, the date, the operator of the scanner, positioning information, and the purpose of the scan.
>
> The pixels which make the images themselves are rarely suitable for direct search. If we can provide secondary parameters indicating the type of objects seen on the earth or the type of abnormality seen in a body, then database searches could be enabled that directly serve the end-users' objectives. This paper describes a promising category of image analysis, namely model-driven methods. Two examples, operating in very different domains, are presented.

Multimedia Databases

Issues related to multimedia database systems were considered by ***Profs. Klaus Meyer-Wegener (D), Vincent Lum*** (USA), and ***Thomas Wu (USA)*** in their paper "Image Management in a Multimedia Database System." They described their approach as follows: •

> As database applications become more and more diversified, the capabilities of the current commercial database management system (DBMS) developed on the basis of handling formatted data become less and less satisfactory. In many of the newer applications, handling of ***multimedia data*** such as text, graphics, images, voices, sound, and signal data is important and must be dealt with.
>
> thing; organizing a large amount for efficient search and retrieval is quite another. Unfortunately, because of the complexity in managing multimedia data, there are no generally accepted solutions at this time.
>
> The approach in this paper is to develop a basic functional DBMS that can handle mutlimedia for ***any*** application, analogous to the way one constructs a normal DBMS for handling formatted data.
>
> The fundamental difficulty in handling multimedia data lies in the problem of handling the ***rich semantics*** that is contained in the multimedia data. Consequently, a simple extension from formatted data of traditional DBMS into textual data, for example, already brings us much difficulty.
>
> To answer queries posed about images, a human must draw from a very rich experience he or she has encountered in life. Further, the person must also perform integration, analysis, synthesis, and even extrapolation of his or her knowledge to derive a good answer. To expect computer systems to have this kind of capability for answering queries about multimedia data is definitely not possible today.
>
> We can, however, do the next best thin. We can ***abstract the contents*** of the image data, sound data, or other forms ***into words or text.***

Electronic Tibetan Sketch Book

The most unusual of the papers may well be "A Diagrammatic Interface to a Database of Thangka Imagery" by ***Mr. Ranjit Makkuni (USA).*** He described a prototype system that applies very modern technology to very ancient culture. Selections from this paper follow. •

> Today, a variety of forces threatens the practice of Thangka painting. As a part of a monumental task to preserve the artistic heritage of Tibet, the remaining Thangka painters, at the request of the Dalai Lama, have become wanderers, traveling the world as a living archive, and carrying with them the knowledge of the ways of Thangka painting. The Electronic Sketch Book of Tibetan Thangka Painting project was conceived as a way of using computing and video representation to preserve Thangka imagery and the cultural context in which it is created, and as a way of using these representations to reveal the process of composing Thangkas.
>
> The Electronic Sketch Book is seen as having two roles: first, a preservation role, and second, a dissemination role. In the preservation role, the sketch book serves as a chronicle, an audio-visual diary of Thangka imagery, similar to traditional manuscript illuminations and narrative paintings. In the dissemination role, the sketch book serves as a medium of transmission, one that can connect a Thangka master with beginning painters, or, in museum settings, serve as an interpretive guide to both the context and process of Thangka painting.
>
> This paper discusses preliminary research into the construction of a prototype sketch book. The prototype contains a database of sounds and images of the process of Thangka composition, including: audio recordings

• C) IFIP

of conversations, computational graphic representations, video-based re-enactments of compositions and sketches, and video stills.

The hardware of the Electronic Sketch Book consists of three video monitors, three video disk players, a switch to control video output, and a computer.

Student-Computer Interaction

The student painter interacts with the Thangka sketch book calligraphically, using a diagrammatic language. The language provides a means for presenting the contents of the database, as well as a means for indexing and retrieving categories of elements in the database. In doing so, it permits the student to control access to the database in a manner that is consistent with the content of the database. This furnishes the beginning painter with a powerful point of entry into a complex web of process representations. The language provides a bridge between Thangka representations in traditional media and process-oriented representations in electronic media.

The various authoring activities of the Thangka master are: recording and editing video se ents, transcribing conversations an. defining key words from the transcripts, constructing a computation model of the video records, clustering and connecting records and constructing a dictionary of deity diagrams.

The painter's hands and eyes work together. In our contemporary preoccupation with the display of images and with the speed at which they are presented, we have neglected and subtracted the communicative content of interaction techniques. Electronic media are powerful in engaging the painter's eyes. This research is a step towards engaging the painter's hands.

Catalog of Tibetan hand gestures

PROGRAMMING ENVIRONMENTS FOR SCIENTIFIC PROBLEM-SOLVING

A Working Conference (WC) on Programming Environments for High-Level Scientific Problem-Solving will be held in Karlsruhe, F.R.G., 23-27 September 1991. This will be the sixth WC organized by WG2.5, the IFIP Working Group on Numerical Software. (See the report on a recent WG2.5 WC on page 7 of the March ***IFIP Newsletter.)***

The evolution of the WC has taken several years, and the history is interesting.

The chairpersons of the Conference's International Program Committee were ***Prof. Kunii,*** who also edited the proceedings, and Prof. ***Dr. Robert Meersman (NL). The*** editor, Program Committee, authors, and publisher (Elsevier/North-Holland) are to be congratulated on the fact that the proceedings were available in final, hardcover form at the time of the Conference. Authors were delighted to receive preprints of their articles ***before*** the Conference. It was made possible by all those involved adhering to a tight schedule.

Many of the Conference participants supported a proposal that a conference series on Visual Database Systems be established. ■

At the 12th meeting of WG2.5, in June 1985, a possible future WC was suggested. The first title to be suggested was Interactive Programming Languages, which was then changed to Non-lingual Programming. The WC would cover such topics as various forms of input/output, including voice, and expressions in pure mathematical notation (not the sequential strings of characters used in present symbolic languages). The languages discussed would not be directed towards batch processing as are classic languages such as Fortran and Algol and some relatively modern languages like Pascal and Ada.

The WC would be concerned with Very High-Level Problem-Solving Programming Environments (VHLPSPEs). In a VHLPSPE, it should be possible to ***use*** the notational conventions from, for example, physics to define a problem in physics, from chemistry for a problem in chemistry, and so on. Programs could be represented graphically as two-dimensional images, built using pointing devices to move icons to form a graph. Not all the problem-solving details about computational method, discretization, and accuracy would have to be given by the programmer; they could be obtained, instead, through a knowledge base or expert system.

In May 1987, the WC title became Non-lingual Scientific Problem-Solving, which was changed to its present form at the meeting of IFIP's Technical Committee on Programming (TC2) in March 1988. The WC will focus on the construction of high-level scientific problem-solving systems. Topics to be discussed include

- Design of User Interfaces
- Techniques for Problem-Solving
- Implementation Issues

For further information, you may contact either of the program committee co-chairmen:

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IFIP PUBLICATIONS

by Dr. Karen Duncan (USA) •

Imp publications are very important because dissemination of information is one of our central missions, and because publications revenues are a significant source of funds to support IFIP's activities. We currently publish about 50 books a year and derive about a third of our income from this source.

In 1977, the IFIP General Assembly approved the IFIP Publications Policy, which discusses types of publications, IFIP's standards for its publications, and procedures and guidelines to be used for contracting and for preparing publications for the publisher. The policy gives these purposes of IFIP publications:

- to serve the international information processing community
- to enhance IFIP's image in the community
- to produce revenue for support of IFIP activities
- to promote technology transfer to developing countries

Publications Policy

Some of the highlights of the policy are given below.

General Policies

Publications activities and policies are initiated and approved by the Publications Committee. The Committee actively seeks opportunities to strengthen our current offerings and to expand into new markets and new areas of publishing. All proposals for publications must have the approval of the Publications Committee before they can be initiated in IFIP's name.

Only the IFIP president can sign IFIP publishing contracts. The Publications Officer advises editors and negotiates and reviews publications contracts for the IFIP president.

Types of Publications

Our primary publications are proceedings of conferences, special books, and journals. It is IFIP's policy that all working conferences disseminate conference findings by publishing proceedings. IFIP's larger conferences also have proceedings. Most proceedings are currently under contract to be published by Elsevier/North-Holland. The special books include the State-of-the-Art series published by Springer-Verlag, anthologies, and books on methodology.

IFIP Publication Standards

Publications must be written in good English and produced in the established book format, with a characteristic title, and with the IFIP logo prominently displayed on the cover. They must be published under IFIP copyright.

Guidelines for Editors

A separate document, which is actually a part of the Publications Policy, is *Guidelines for Editors of IFIP Working Conference Proceedings Published by North-Holland.* The information in this document is useful for all IFIP book editors, since it discusses in detail the IFIP policies, responsibilities of editors, and publishing timetables.

The editor and publisher are responsible for the quality of an IFIP publication. For a conference, the proceedings editor works on a tight timetable, so the editor should be appointed as quickly as possible after the conference is approved. As is the case with all information processing professionals who work with IFIP, editors provide their services to IFIP without compensation. This policy was reaffirmed by the IFIP Council in March, 1989.

Royalties and Republication Rights

All royalties for IFIP publications are paid to IFIP, with the exception that IFIP may share royalties with the author of an IFIP book or editor of a non-conference book that has been prepared especially for IFIP. This arrangement requires prior approval.

All material published under the IFIP copyright is the property of IFIP, and it may not be republished in any form without IFIP's permission.

Contracting Procedures

All IFIP Technical Committee (TC) and Working Group (WG) members involved with IFIP publications are encouraged to discuss their ideas with the Publications Committee chairman and the Publications Officer at a very early stage.

When a new book has been approved for publication by the Publications Committee, the selected publisher will route a draft contract to the editors, the TC and/or WG chairman, and the Publications Officer, to confirm all publishing details and agreements. When the draft contract has been approved by all parties, a final contract is signed by the IFIP president and the publisher.

For a new book in a series that has already been approved by the Publications Committee, such as a conference proceedings, a master contract may already be in place. IFIP has a such a master contract for most conference proceedings with North-Holland, until July, 1990. Some benefits of this contract for IFIP are that North-Holland publishes all designated proceedings — not just books expected to have large sales — prints the *IFIP Newsletter,* and will enter into publishing and marketing experiments with IFIP. (North-Holland also sends a representative to Council and General Assembly meetings.)

New editors can find out from the chairman of the WG or TC that is sponsoring the conference or from the Publications Officer whether the proceedings fall under this contract. If they do, then the editors will be asked to approve a contract attachment that contains such details as the editors' names and addresses, title, size, and the manuscript delivery date.

Springer-Verlag also publishes several IFIP working conference proceedings and other IFIP books, and we are currently negotiating a master contract. Until negotiations are complete, books which are approved for publication by Springer-Verlag require separate contracts.

Future of IFIP Publishing

In the past two years, the Publications Committee has introduced the Policy and Guideline documents and worked with its publishers to improve quality and streamline procedures. These measures should make the editors' tacks lighter and reduce the delays that hurt the sales of IFIP books. However, several major challenges still lie ahead. Many people believe that our books cost too much, that we need to do more to put our books into the hands of professionals in developing countries, and that we need to market our books better so that IFIP publications will have a more prestigious image. Of course, we would like more revenues from our books, too.

. **IFIP** Publications Officer

continued on page 7

WHO'S WHO IN IFIP: PROF. HAROLD SACKMAN

Prof. Harold (Hal) Sackman is chairman of IFIP's Technical Committee on the Relationship between Computers and Society (TC9).

He may be unique among the committee chairmen and officers of IFIP in that his formal education is in psychology: he received a bachelor's degree from the City College of New York in 1949 and a doctorate from Fordham University (New York) in 1953, both in psychology.

After completing his studies, he worked for the Rand Corp. and the Systems Development Corp. At the former, he worked in the interdisciplinary areas of policy studies, social experimentation, survey research, telecommunications, long range planning, and person-computer problem solving. At the latter, he held several senior managerial positions for military command and control information system design and development.

In 1976, he joined academia. His prior affiliations include: Head of the Department of Computer Science at Kansas State University, the Graduate School of Business at Manchester, England, and the Universities of California at Irvine and at Los Angeles, in their departments of Information and Computer Science. Since 1979, he has been Professor of Information Systems in the School of Business at California State University, Los Angeles.

Prof. Sackman has been a consultant for many corporations. He has published 17 books and over 100 papers concerned with computers and society, mass computer communication utilities, person-computer problem-solving, large-scale systems test and evaluation, health care information systems, and planning and policy studies. Three of the books are IFIP volumes he edited.

He chaired the Committee on Social Implications of Computers for the American Federation of Information Processing Societies (AFIPS) from 1970 to 1975. Since 1976, he has been the U.S. representative to TC9. He has been chairperson of TC9 since 1983. In 1986, he received the Silver Core Award for his service to IFIP.

He and his wife Kathy have three children: Jeffry, Sharon, and Amy. ***Prof. Sackman*** has been jogging for over a quarter of a century and enjoys "panoramic hiking, pristine seashores, and classical music."

He has served the maximum of six years as TC chairman and will be stepping down at the end of this year. ■

NEW ADDRESS FOR IFIP NEWSLETTER

Dear Reader:

My professional activities and work location have changed. Please see the masthead on page 2 for new addresses for mail and other forms of communication.

Jack L. Rosenfeld
Editor

PUBLICATIONS cont. from page 6

The Publications and Marketing Committees are working with other IFIP groups and with publishers to find ways to solve these problems, and the committees welcome the suggestions and assistance of *Newsletter* readers.

For more information about IFIP Publications or the publications process, one may contact the Publications Committee chairman or the Publications Officer. Documents mentioned in this article can be obtained from the IFIP Secretariat. ■

IFIP WG9.2 NAMUR AWARD

by Drs. Felix van Rijn (NL) •

IFIP's Working Group on Social Accountability (WG9.2) has established the biennial IMP WG9.2 Namur Award for outstanding contributions to the awareness of social implications of information technology. The idea for this award originated from the Working Conference 'Can Information Technology Result in Benevolent Bureaucracies?' which was held in Namur, Belgium in 1985. The award will be presented once every two years at a special meeting of WG9.2 in Namur. In accordance with the spirit of WG9.2, the proceeds of the award will be honour, a commemorative plaque and a diploma.

Anyone is welcome to propose for this award any person (except present WG9.2 members), group or association who contributed by publication, design, lecture, action or any other accomplishment or achievement with international impact to the awareness of social implications of information technology. The nominating committee will decide on the candidates who will be nominated. Proposers of nominated candidates will have the opportunity to speak in support of them in front of the forum of WG9.2 or to delegate this task to a member of WG9.2. This meeting will take place 12-14 January 1990.

Well-reasoned proposals for the first, 1990 Award are to be sent, before November 1, 1989, to the chairperson of the IFIP WG9.2 Namur Award Nomination Committee:

Dr. Jan Holvast
University of Amsterdam,
Department of Social Science Informatics
Herengracht 196
1016 BS Amsterdam, Netherlands ■

• chairman of WG9.3, and **IFIP** Newsletter correspondent

AI IN ECONOMICS AND MANAGEMENT

Nobel Laureate Speaks

The 2nd International Workshop on Artificial Intelligence in Economics and Management was held in Singapore 9-13 January 1989. Two hundred thirty participants registered. Of these, half came from Singapore. The second largest contingent came from Europe, followed by the U.S.A. and Australia. The rest were quite evenly distributed among the Asian countries and Canada. The Workshop was sponsored jointly by IFIP and sister federations IFAC (International Federation of Automatic Control) and IFORS (International Federation of Operational Research Societies). The International Program Committee chairmen were ***Prof. Yoh-Han Pao*** (USA), Prof. ***L.F. Pau (DK),*** and ***Prof. Hoon Teh*** (SGP). Prof. ***Juzar Motiwalla*** (SGP) was general chairman. These four are also editors of the proceedings, which will be published by Elsevier/North-Holland. ***Mr. Desai Narasimhalu*** (SGP) served as Organizing Committee chairman.

Dr. Tay Eng Soon, Senior Minister of State for Education, officiated at the opening ceremony. He spoke of the need for Singapore to become part of the growing global market and noted that positive steps have been taken by local companies to introduce AI-based systems.

The keynote speech, "Artificial and Natural Intelligence in Business Decision Making," was delivered by Professor ***Herbert Simon (USA),*** a Nobel Laureate. Many local computer professionals had asked to hear Prof. ***Simon's*** talk. To meet the overwhelming demand, the organizers set up closed-circuit TV for the opening ceremony.

Tutorials, Papers, Panels, Exhibit

The first 2 days of the Workshop were devoted to tutorial sessions presented by noted researchers from the AI community. The tutorials were well attended, and positive feedback was received on the quality of speakers and material.

Of the 43 papers presented at the Workshop, approximately 40% were from the U.S., and the rest were by authors from around the world. The Workshop was wide-ranging, and the papers varied from the esoteric to the practical and covered all levels of experience and training. [Perhaps the most intriguing title of the papers presented was: "AI in Organization: Complementing the Garbage Can Model of Organizational Choice" — Ed.]

There were 2 panel sessions: AI Education for Finance and Economics, and Industry Trends. The panelists of the first panel presented two points of view: (1) AI training should be part of the normal computer science education and (2) AI is a specialized area; hence, one can go straight to applications without having to go through the normal training. The panel concluded that the nature and needs of an organization were instrumental in deciding the right path.

In conjunction with the conference, a 2-day exhibition was held. The participation of local institutions was indeed encouraging.

A poster session was organized alongside the Workshop and was held after the opening ceremony. It gave participants an opportunity to hold informal discussions with some of the authors.

The Workshop was an unqualified success. It provided participants with insights into the latest AI developments and an excellent introduction to the issues and directions surrounding new AI technologies. The high standard of tutorials and session papers reflected the increasing maturity of AI. The rapidly developing industries in the region have, no doubt, derived tremendous benefit from the tutorials as well as from the exchange of experience and the promotion of an understanding of current research.

MARCEL LINSMAN 1912_1989

IFIP has lost one of its earliest promoters, who served as a representative of Belgium and Assistant Secretary of IFIP.

Marcel Linsman was born in Liege on 22 June 1912. He studied mathematical sciences at the University Liege, receiving his bachelor's degree in 1934. In 1937, he received his doctorate "with highest distinction." He was appointed assistant professor at Liege in 1938, and in 1964, full professor.

In 1943, he became interested in numerical calculation and recognized immediately the electronic possibilities. A grant by the Belgian research organization I.R.S.I.A. gave him an opportunity to work at Harvard University, in America, during the school year 1947-48, where he became a member of Howard Aiken's development group. From 1951 to 1955, he managed the development of one of the earliest European electronic computers, known as Machine I.R.S.I.A. His interest then took him into non-numerical applications of the computer. Starting with automatic language translation, he initiated many projects, including teaching informatics and medical applications. Throughout his career, he was the recipient of many awards.

In IFIP, he was present from the first Council meeting in Rome until 1971, representing the Belgian member society. He was also active in the Technical Committee on Education (TC3). During the time IFIP was registered in Belgium, 1962 through 1967, he served as IFIP Assistant Secretary and handled all legal matters for IFIP. In 1974, he was in the first group to receive the IFIP Silver Core Award.

After long and painful years of sickness, Marcel Linsman died during the night from 18 to 19 April 1989. We all feel sympathy for his widow, who was with us so often during his active years.

Prof. Dr. Heinz Zemanek (A)
Honorary Member and former president of **IFIP**
after a "Mot d'adieu" by G. Fonder,
Dean of the Sciences Faculty of the University of Liege

IAPR EXAMINES STRUCTURE OF ITS CONGRESSES

Just as IFIP regularly examines the goals and organization of its Congresses, so does IFIP Affiliate Member IAPR (International Association for Pattern Recognition). A recent ***IAPR Newsletter*** printed the following message from IAPR president ***Prof. Martin Levine (CDN).*** We find that it has relevance for IFIP Congresses.

There has been much criticism that the International Conference on Pattern Recognition is too diffuse in terms of the number of topics that it addresses. There have also been criticisms regarding the quality and number of papers. Many people are probably sympathetic to these viewpoints.

However, in my opinion the solution is not to break the biennial conference into smaller, separate conferences. The reason I feel this way is that most attendees of the IAPR conferences enjoy meeting their international colleagues, even though they may not actually be working m exactly the same technical areas. Therefore, as a social event, a reasonably well attended conference is quite important to most people concerned with the field. It provides the loose bond that reminds us that we are all part of a more global activity. In fact, the IAPR is still the only existing international organization dedicated solely to computer vision and pattern recognition, and the conference is still the largest ***international*** forum of all existing conferences.

Thus, one solution seems to be that we should have an umbrella conference under whose aegis several smaller, specialized conferences could be held at the same time. In other words, all of the social events would be in common, but each of the specialized conferences would have its own technical program committee and review structure. I am pleased to report that the next conference in Atlantic City will follow this format. Four conferences will be held there.

I hope that this restructuring of the biennial conference will result in a revival of interest in the IAPR by those who have stopped participating in our activities. It is only by an honest and open exchange of opinions that we can improve the situation to the satisfaction of all our members and enhance the activities on the international scene.

The September 1987 ***IFIP Newsletter*** (page 10) carried earlier thoughts on this topic by the IAPR secretary. ■

HUMAN FACTORS IN INFORMATION SYSTEMS

Dual Role of IS Designers Is Noted

Today's information systems aim at a broad support of people in their work. Because they involve the interaction of man and computer, they are characterized as human-machine systems. For a long time, human factors were overlooked in the design of human-computer systems. Nowadays, the need to provide both a functionality that meets a user's tasks and an ergonomic, human-machine interface that takes into consideration how people would like to solve their tasks is recognized as a primary concern of the designers of information systems.

Computerized environments for the design of information systems are themselves information systems in the above sense. So, issues of an ergonomically designed human-machine system arise for the designers of information systems, in their roles as both the providers and the users of relevant techniques.

Both issues have a lot in common. Researchers in the field of information systems and in the field of human-computer interaction have been working, separately, towards a common target. In order to promote progress in this area and to explore the commonalities, IFIP's Working Group on the Design and Evaluation of Information Systems (WG8.1) is planning an International Conference on Human Factors in Information Systems Analysis and Design. It will be held 5-8 June 1990 in Scharding, Austria, in cooperation with the Austrian Computer Society. The Conference committee comprises ***Dr. Anthony Finkelstein*** (GB), ***Prof. Michael Tauber (D),*** and ***Prof. Roland***

Major topics to be covered are design methods and techniques for human-machine interfaces and methods for the evaluation of human-machine systems with respect to their impact on human cognitive work and life.

For further information, one may contact

IFIP Conference Committee
Dr. Anthony Finkelstein
Imperial College
Dept. of Computing
180 Queens Gate
London SW7 2BZ, England
tel. 01-589 5111
Email: acwf%uk.ac.ic.doc
or UUCP: acwf!icdoc!ukc!mcvax!... ■

PROF. FREEMAN LEAVES IFIP

We note with regret that ***Prof. Herbert Freeman*** (USA) has stepped down as the representative of the International Association for Pattern Recognition (IAPR) to IFIP. IAPR is an Affiliate Member of IFIP. Prof. ***Freeman*** has been the IAPR representative since 1976, when that organization became IFIP's first Affiliate Member — ***at Prof. Freeman's*** suggestion.

In addition, ***Prof. Freeman*** has served as chairman of the U.S. Committee for IFIP Congress '71 (Ljubljana), as International Program Committee (IPC) chairman for Congress '74 (Stockholm), as vice-chairman of the IPC for Congress '77 (Toronto), as U.S. representative to the General Assembly from 1979 to 1980, and as a member of the Activity Planning Committee (and its successors) from 1978 to 1988. Over the years, he has been one of IFIP's staunchest supporters and hardest workers. We miss his wise counsel.

Prof. Freeman is general chairman of the 10th International Conference on Pattern Recognition, the major IAPR conference, which will take place in Atlantic City 17-21 June 1990.

The new IAPR representative is ***Dr. Pierre Devijer (B).*** ■

IFIP PUBLICATIONS AVAILABLE

New **IFIP** workers should be aware of the availability of the following **IFIP** publications from the **IFIP** Secretariat:

Information Bulletin
Statutes and Bylaws
Standing Orders
What Is ***IFIP?***
6-Year Plan (list of planned **IFIP** events)

ISDN continued from page 1

of standardized interfaces. The Conference, entitled ***ISDN in Europe,*** was held in The Hague April 25-27, hosted by the Netherlands PTT. It was notable in being the first conference organized jointly with ICCC, an Affiliate Member of IFIP. ICCC sponsored a prior ISDN conference in Dallas in 1987.

Mr. Bert Boutmy (NL) was chairman of the Conference Organizing Committee. In describing the significance of the Conference, he wrote

> ISDN is one of the exciting, new developments now taking place in the world of telecommunications. Through the upgrading of the telecommunications infrastructure, a wide range of significant benefits will become available to all users. These new and fast developments raise several issues for the users, the network and service providers, and the manufacturers. ***Does the ISDN concept lead to "Innovative Technology" or "Innovative Services?"***
>
> ISDNs are being introduced on a commercial basis after extensive field trials in selected cities and areas. By 1990, several ISDNs will have been implemented and interconnected internationally to form the nucleus of a global network. Will ISDN offer the "super wall socket," giving access to all kinds of networks and services now accessed and operated separately?
>
> With appropriately focussed papers and informed discussions, ***ISDN in Europe*** addressed these issues and presented a forum for network and service providers, telecommunication industries, researchers, regulators and users, in their endeavours to face their common European challenge.

Large Attendance

The Conference was attended by more than 600 persons. Of these, 240 were Dutch; other large delegations included West Germany (43), Belgium/ Luxembourg (40), France (37), U.K. (33), and Italy (22). Most major European PTTs were represented, as well as many telecommunications corporations.

This was the first major European ISDN conference to be held since the 1988 Plenary of the CCITT (International Telegraph and Telephone Consultative Committee), where new ISDN directions became clarified. In addition, this was the first meeting to follow the signing of the European Memorandum of Understanding on the Implementation of European ISDN Service by 1992 (MOU). Eighteen European countries have signed the MOU, and it was a major topic of discussion at the Conference.

There were four plenary sessions:

- Opening Session
- International Surveys
- ISDN Strategic Issues
- European Telecommunications Policy

The rest of the Conference was divided into two parallel tracks: a business track and a technical track.

The opening session discussed topics and themes which were echoed throughout the conference. In the opening address, M. ***Carpentier,*** Director General, Commission of the European Community (EC), discussed the EC Policy for ISDN Development. He stated that 40%-50% of employment in the EC is already linked with information technology. He viewed the key related issues in ISDN implementation as

- standards
- services
- tariffs
- interconnection

He viewed the role of ETSI (European Technical Standards Institute) as critical in deciding priorities for the next phase of standardization (1989-1992).

Recommendations on Tariffs

He stated the two key EC recommendations on ISDN tariffs:

1. Tariffs should be independent of services, so long as the same bit rate is used.
2. Tariffs should be cost-oriented, and less dependent on distance.

Mr. ***Th. Irmer,*** Director, CCITT, discussed what is happening with ISDN in CCITT. The CCITT "Blue Book," reflecting decisions of the 1988 Plenary, exceeds 19,000 pages. Approximately 1000 pages are devoted to ISDN. It was generally acknowledged that the length of these standards has become a problem.

Mr. Irmer stated that "dedicated networks have been a 'sellers' market.' ISDN will be a 'buyers' market.' Therefore, new marketing concepts are necessary." He believes customer migration to ISDN will depend on

1. attractive tariffs
2. cost-efficient, user-friendly terminals
3. high service quality
4. recognition of the dual concept of ISDN:
   - ISDN Services (standardized by CCITT, offered by network providers)
   - ISDN Applications (non-standardized)

He forecast the following as the major trends for the 1989-92 period:

- consolidation/update of 64 kb/s standards
- continued definition of ISDN services
- work on broadband ISDN:
  - what technologies
  - what services (High-Definition Television?)
  - what applications
- basic reform of CCITT structure and working methods
- close cooperation between network operators, industry, customers and regional standardization organizations

The Dutch Minister of Public Works and Transport, ***Mrs. N. Smit-Kroes,*** addressed participants on April 27, immediately following the European Council of Telecommunications Ministers' meeting in Luxembourg. She stated that the European Council reaffirmed its intent to press for implementation of a pan-European ISDN service as quickly as possible.

Mrs. Smit-Kroes commented that ISDN will be good for Europe, and the MOU is an important vehicle for implementation. However, it is also important that Europeans not neglect ISDN interconnection with countries outside of Europe, particularly for multinational corporations.

In response to a question following her talk, she stated that forecasts for initially small demand should not be used to delay introduction of ISDN. She felt there is enough evidence of the positive effects of ISDN on the communications infrastructure, that implementation should proceed.

Prof. Jens Arnbak (NL) served as chairman of the International Program Committee and edited the proceedings of the Conference (approximately 500 pages), which were published by Elsevier/North-Holland.

To Organizers of IFIP Conferences:
Please send several copies of your Calls for Papers to the IFIP Secretariat, in order that the staff may be able to handle queries.

NEW FROM NORTH-HOLLAND

The Official Publisher of the XI World Computer Congress Proceedings

INFORMATION PROCESSING 89

Proceedings of the IFIP XI World Computer Congress, San Francisco, CA, USA, 28 August -1 September 1989

edited by **G.X. Ritter**

(IFIP Congress Series, 11)
1989 xxviii + 1194 pages Price: US $144.00/Dfl. 295.00 ISBN 0-444-88015-1

INVITED PAPERS:

1. Fundamental Tools. Randomization in Distributed and Parallel Computing. "Perfect" Pseudo-Random Number Generation. Faster Algorithms for Hard Problems. Randomized Parallel Algorithms. Designing Concurrency Semantics. Proofs as Advanced and Powerful Tools.

2. Languages and Operating Systems. Real Time Programming: Special Purpose or General Purpose Languages. Why Isn't There an Object-Oriented Data Model? Parallelism in Logic Programming.

3. Communication and Distributed Systems. Communication Support for Distributed Systems: OSI Versus Special Protocols. From ISDN to IBCN (Integrated Broadband Communication Network). Computer Network Interconnection.

4. Knowledge-Based Systems. Logical Foundations of Deductive Databases. Experiences with Expert Systems.

5. Software Engineering. Effective Industrial Application of Formal Methods. Industrial Strength Software Development Environments. Software Fault Tolerance.

6. Supercomputing. Supercomputing in the 1990's. The Effectiveness of Neural Computing. The Graphics Supercomputer: A New Class of Computer. Supercomputing in Airplane Design.

7. VLSI-CAD for Professionals. Zero-Defect Designs, Why and How: Formal Verification vs. Automated Synthesis. The Evolution of VHDL. Design Method and Tools for Application Specific Integrated Circuits. Advances in VLSI Testing.

8. Office Automation. Can Office Technology Support Office Dialogues? The Future of Office Automation. Object-Oriented Development for Open Systems.

9. Factory Automation. Advanced Design for Automated Manufacture. Production Planning and Scheduling in CIM. Artificial Intelligence and Production Management.

10. Education. Better Tools - Less Education? Impact of Computer Technologies on Education.

11. Computers and Society. Hardware and Software Dependability Evaluation. Developing Competence in a Developing Environment. FRACTALS: A New Challenge to Model Reality. Formal Structures in an Informal World.

SEE OVERLEAF FOR CONDITIONS AND ORDERING INFORMATION

Computer Networking and Performance Evaluation

Proceedings of the IFIP WG 7.3 International Seminar on Computer Networking and Performance Evaluation, Tokyo, Japan, September 1985

edited by **T. Hasegawa, H. Takagi** *and* **Y. Takahashi**

1986 xii + 514 pages
Price: US $89.50/Dfl. 170.00
ISBN 0-444-87960-9

Software for Factory Automation

Proceedings of the IFIP TC5 / WG5.3 / IFORS Working Conference, Tokyo, Japan, October 1987

edited by **T. Sata** *and* **G. Oiling**

1989 xii + 364 pages
Price: US $85.25/Dfl. 175.00
ISBN 0-444-88046-1

ISDN: Innovative Services or Innovative Technology?

ISDN IN EUROPE

Proceedings of the IFIP TC6 / ICCC Joint Conference on ISDN in Europe, The Hague, The Netherlands, April 1989

edited by **J. Arnbak**

1989 xii + 464 pages
Price: US $123.75/Dfl. 235.00
ISBN 0-444-87388-0

IFIP and **Computer** Science Publications from **North-Holland** cover a wide range of subject areas.

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2. No discounts are given if the book(s) ordered is not an IFIP computer science publication from North-Holland.

3. Discounts are not applicable to orders from libraries, institutions, companies, etc.

4. Orders at these special discounts must be submitted using the order form below.

5. In all cases the discounts refer to pre-paid orders from personal funds.

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Send this form (or a photocopy) to:

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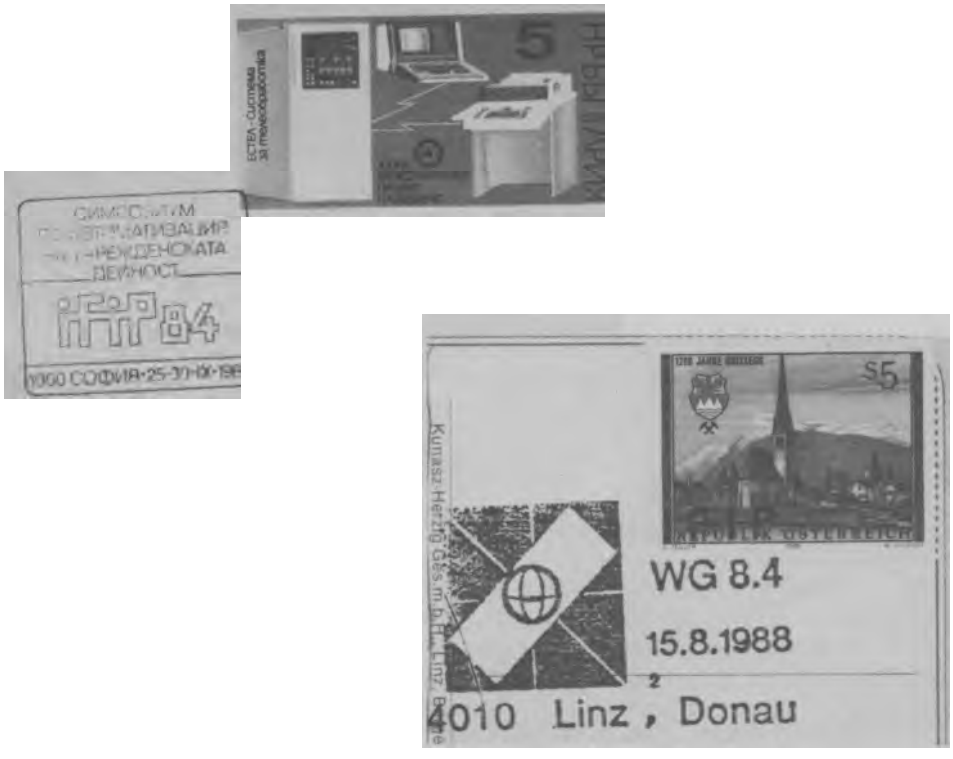

Shown here are two official cancellation marks used by postal agencies in Bulgaria and Austria in conjunction with IFIP conferences. Have you any other examples?

CALLS FOR PAPERS

WG2.2 and 2.3 Working Conf. on Programming Concepts and Methods
2-5 Apr 90, Sea of Gallilee, Israel
papers due: 10 Sep 89
contact: Prof. Dr. Manfred Broy
Fakultät filr Mathematik and Informatik
Universität Passau, Postfach 2540
D-8390 Passau, West Germany

TC6, ICCC, et al. COMNET '90
8-10 May 90, Budapest
papers due: 1 Oct 89
contact: COMNET '90 Conf. Secretariat
P.O. Box 240
H-1368 Budapest, Hungary
tel. (36-1) 329-349 or 329-390
telex: 22-5359, fax: (36-1) 354-317

IFIP Task Group on Fractals 1st Conf. on Fractals in the Fundamental and Applied Sciences — FRACTAL 90
6-8 Jun 90, Lisbon
papers due: 1 Oct 89
contact: FRACTAL 90
Associacao Portuguesa de Informatica
Av. Almirante Reis, 127, 1°
1100 Lisbon, Portugal
tel. +351-1-535587
telex: +351-1-64653 APINF P

5th TC3 World Conf. on Computer Education (WCCE/90)
9-13 Jul 90, Sydney, Australia
papers due: 1 Oct 89
contact: WCCE/90
PO Box 319
Darlinghurst, NSW 2010, Australia
tel. (+612) 211-5855
fax (+612) 281-1208

3rd TC6 Intl. Conf. on Information Network and Data Communication (INDC- 90)
26-29 Mar 90, Lillehammer, Norway
papers due: 1 Nov 89
contact: INCD-90 Secretariat
c/o Ellen Bøhler
Den Norske Dataforening
P.O. Box 6714 - Rodeløkka
N-0503 Oslo 5, Norway
tel. + 47 2 370213
fax: + 47 2 354669

WG5.7 Intl. Conf. on Advances in Production Management Systems (APMS '90)
20-22 Aug 90, Espoo, Finland
extended abstracts due: 30 Nov 89
contact: Dr. Eero Eloranta
Helsinki Univ. of Technology
Institute of Industrial Automation
Otakaari 1 A
02150 Espoo, Finland
fax: +358-0-4513665

10th WG6.1 Intl. Symp. on Protocol Specification, Testing, and Verification
13-15 Jun 90, Ottawa
papers due: 15 Jan 90
contact: PRG - Tenth Intl. Symposium
Computer Science Dept.
University of Ottawa
34 George Glinski
Ottawa (Ontario), Canada, K1N 6N5
tel. 1-(613)-564-9544
fax: 1-(613)-564-9486

Information Processing Society of Japan Intl. Conf. on Information Technology
1-5 Oct 90, Tokyo
papers due: 1 Feb 90
contact: Haruhisa Ishida
Computer Centre
University of Tokyo
2-11-16 Yayoi
Bunkyo-ku, Tokyo 113, Japan
tel. +81-3-818-0287
e-mail: infojapan90@u-tokyo.ac.jp ■

IFAC'S COMPUTER ACTIVITIES

[The following item appeared in the *Newsletter* of the International Federation of Automatic Control. IFAC is a sister society of IFIP in the Five International Associations Coordinating Committee (FIACC). The item is part of the 1987-1990 strategic plan for the IFAC Technical Committee on Computers. We reprint it here because of the common interest of IFIP and IFAC.]

Scope: The Computers Committee of IFAC (COMPUT) is concerned with the design and utilization of real-time computer systems in the control of continuous and discrete processes. Current areas of interest include software engineering, management of software projects, safety and reliability, system architectures, distributed computer control systems, inter-computer communications, database management and the use of artificial intelligence methodologies.

Recognizing that computers are all-pervasive in control, the committee maintains strong links with other IFAC committees and also acts as a bridge to IFIP and similar bodies.

Interpretation of Scope: COMPUT is not an applications committee—rather it must examine aspects of computing and computers as they impact applications. It clearly must look at current practice and experience and, based on the perceived needs of industry, investigate, examine and promote new technological developments. In many ways one could say that its activities should be one of the research "wings" of IFAC, based, however, with its feet firmly in the industry which IFAC serves. ■

CHANGES IN IFIP

NEW APPOINTMENTS

WG OFFICERS

WG5.7 Chairman: Prof. G. Doumeingts (formerly Vice-Chairman; succeeding Dr. P. Falster)

WG5.7 Vice-Chairman:
Assoc. prof. Dr. Ir. J.C. Wortmann
Dept. of Industrial Engineering
Eindhoven Univ. of Technology
P.O. Box 513
NL-5600 MB Eindhoven, The Netherlands
(succeeding Prof. G. Doumeingts)

WG5.7 Secretary Dr. E. Eloranta
Helsinki Univ. of Technology
Manufacturing Automation Institute
Otokaari lA
SF-02150 Espoo 15, Finland
tel. 358 (0) 45 13 642
fax:358 (0) 45 13 665
telex: 125161 htkk sf
e-mail: arpanet:eee%hutcs.uucp%fingate
(succeeding Dr. S. Augustin)

TC MEMBERS

TC3: Dr. Bojidar Sendov
Faculty of Mathematics and Informatics
Anton Ivanov str. 5
Sofia, Bulgaria
(succeeding Prof. T. Boyanov)

TC5: Dr. Prof. N.L. Rovira
Institute Superior Tecnico de Holguin
Carr. Central Via Tunas KM 7%
Holguin, Cuba

RESIGNATION

TC5 Secretary: Mr. L.H. Fransson
(He will serve as Corresponding Member until a new Swedish representative to TC5 is appointed.)

ADDRESS CHANGES

Representative of U.K. and Vice-President:
Mr. Graham J. Morris
ICL (UK) Limited
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Waterside Park
Cain Road
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tel. 44 (344) 711000

WG7.7 Chairman: Prof. P. Kall
Univ. of Zurich
Institute of Operations Research
Moussonstrasse 15
CH-8044 Zurich, Switzerland
tel. 41 (01) 2573771
e-mail: K153301 CZHRZU1A

CORRECTION TO INFORMATION BULLETIN

Mr. D. Lindsay is *secretary* of TC 11. •

FUTURE IFIP MEETINGS

GENERAL ASSEMBLY AND COUNCIL (and related meetings)

Council	5-9 Mar 90	Jerusalem or Tel Aviv
GA	3-7 Sep 90	Buenos Aires

TECHNICAL COMMITTEE AND WORKING GROUP MEETINGS•

TC2	2-10 Apr 90	Sea of Galilee, Israel
WG2.1	4-8 Sep 89	Colorado
	Apr 90?	Manchester, U.K.
	Jan 91?	Europe?
WG2.2	2-10 Apr 90	Sea of Galilee, Israel
WG2.3	28-31 Mar 90	Munich
	Jan 91	Catalina Island, California
WG2.4	Sep 89	Poland
	May 90	Canada
WG2.5	next meeting	Beijing
WG2.7	first quarter 90	Brussels
TC3	12-13 Jan 90	western Europe
	8, 13, 14 Jul 90	Sydney, Australia
	(before and after WCCE '90)	
TC5	1 Oct 89	Tokyo
	mid Jan 90	Munich
	(with WG chairmen's meeting and WG5.4 Conference)	
WG5.3	8 Nov 89	Arizona
WG5.4	mid Jan 90	Munich
TC6	May 90	Budapest
	Sep 90	Spain
WG6.4	first week of May 90	Budapest
WG10.4	3rd quarter 90	U.K.
	1st quarter 91	
	3rd quarter 91	Quebec
	1st quarter 92	
TC 11	7 Sep 89	Monterey, California
	21-22 May 90	Helsinki

• 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 ADDRESS FOR IFIP NEWSLETTER

Dear Reader:

My professional activities and work location have changed. Please see the masthead on page 2 for new addresses for mail and other forms of communication.

Jack L. Rosenfeld
Editor

National Abbreviations Used in Newsletter

A Austria
AUS Australia
B Belgium
BG Bulgaria
CDN Canada
D Fed. Rep. of Germany
DK Denmark
E Spain
F France
GB United Kingdom
H Hungary
I Italy
IND India
J Japan
N Norway
NL The Netherlands
P Portugal
RA Argentina
SEARCC South East Asia Regional Computer Confederation
SGP Singapore
USA U.S.A.
ZA South Africa

CALENDAR OF EVENTS

(continued from page 16)

Event	Date	Location	Organized by
Eleventh *IFAC World Congress: Automatic Control in the Service of Mankind*	13-17 Aug 90	Tallinn, U.S.S.R.	IFAC
Intl. Conf. on *Advances in Production Management Systems — APMS '90*	20-22 Aug 90	Helsinki	TC5 WG5.7
European Medical Informatics Congress	20-23 Aug 90	Glasgow	IMIA EFMI
Intl. Conf. on *Harmonization of Technology with Society — INFO JAPAN '90*	I-5 Oct 90	Tokyo	I**PSJ IFIP** IPSC IEEE/ACM
Purdue Intl. Workshop on *Industrial Computer Systems*	8-11 Oct 90	West Lafayette, Indiana	Purdue TC5 WG5.4
First Work. Conf. on *History of Computing in Europe*	Oct 90	Budapest	**IFIP History** Commission/J.vN. Soc.
Work. Conf. on *Formal Product Information*	Oct 90	Amsterdam	TC5 WG5.2/3/4/7/8
ICCC '90	5-9 Nov 90	New Delhi	ICCC
Second Conf. on *CAD/CAM and Technology Transfer to Latin America*	11-20 Nov 90	Havana	TC5
Work. Conf. on *Information Systems Research Methodologies*	14-16 Dec 90	Copenhagen	TC8 WG8.2
SEARCC '90	Dec 90	Manila	SEARCC
Work. Conf. on *Informatics and Medical Education*	90	Prague	IMIA
Workshop on *Geometric Modelling*	90	Albany, New York	TC5 WG5.2
Purdue Intl. Workshop on *Industrial Computer Systems*	15-18 Apr 91	West Lafayette, Indiana	Purdue TC5 WG5.4
Intl. Symp. on *Computer Hardware Description Languages and Their Applications — CHDL '91*	Apr 91	Europe	TC10 WG 10.2.
Seventh Intl. Conf. on *Computer Security* — **IFIP/SEC** *'91*	14-17 May 91	Brighton, U.K.	TC11
Eleventh Work. Conf. on *Protocol Specification. Testing and Verification*	9-12 Jun 91	Stockholm	TC6 WG6.I SICS
13th (MACS World Congress on Computation and Applied Mathematics	22-26 Jul 91	Dublin	IMACS
Work. Conf. on *Collaborative Work. Social Communication and Information Systems Theories. Methods. Tools and Impacts*	Jul 91	Finland	TC8 FIPA
Workshop on *Support Functionality in the Office*	Jul 91	Canterbury, U.K.	TC8 WG8.3 WG8.4
Work. Conf. on *Impacts of Informatics on the Organization of Education*	Jul–Aug 91	Santa Barbara, California	TC3 WG3.1
Twelfth International Joint Conf. on *Artificial Intelligence — IJCA1I '91*	18-23 Aug 91	Sydney, Australia	IJCAII
VLSI '9/	Aug 91	Edinburgh	TC10 WG10.5
Twelfth *IMEKO World Congress*	I0-15 Sep 91	Beijing	IMEKO
Work. Conf. on *Programming Environments for High-Level Scientific Problem-Solving*	23-27 Sep 91	Karlsruhe, F.R.G.	TC2 WG2.5
SEARCC '91	Sep 91	Jakarta	SEARCC
Work. Conf. on *Process Planning for Complex Machining with Al Methods*	Sep 91 or 92	Dresden, G.D.R.	TC5 WG5.3
Purdue Intl. Workshop on *Industrial Computer Systems*	21-24 Oct 91	West Lafayette, Indiana	Purdue TC5 WG5.4
Computer Application in Production and Engineering — CAPE '91	91	Bordeaux	TC5
Workshop on *Intelligent CAD*	91	Israel	TC5 WG5.2
Workshop on *CAD/CAM Interfaces in Mechanical Engineering*	*91*	Darmstadt, F.R.G.	TC5 WG5.2 WG5.3 WG5.10
Intl. Conf. on *Computers in the Automation of Shipyard Operations and Ship Design — ICCAS '91*	91	Rio de Janiero	TC5 WG5.6
Work. Conf. on *Production Management of Complex One-of-a-Kind Production*	**91**	**Bremen.** F.R.G.	TC5 WG5.7
Work. Conf. on *Programming Environments for Concurrent Systems*	91	??	TC10 WG 10.3
Intl. Conf. on *Computing in the 21st Century*	91	London	IEEE **IFIP**
INDC '92	Mar 92	Finland	TC6 SDF SSE DANFIP/DND
Purdue Intl. Workshop on *Industrial Computer Systems*	6-9 Apr 92	West Lafayette, Indiana	Purdue TC5 WG5.4
Eighth Intl. Conf. on *Computer Security* — **IFIP/SEC** *'92*	*May* 92	Singapore	TCII
Seventh Symp. on *Dynamic Modelling of National Economies*	18-20 Aug 92	Beijing	IFAC I**FORS IFIP IIASA**
I**FIP Congress '92 — 12th World Computer Congress**	**31 Aug-4 Sep 92 Madrid** (dates are tentative)		**IFIP**
Seventh World Congress on *Medical Informatics — MEDINFO '92*	6-11 Sep 92	Geneva	IMIA
SEA RCC '92	Sep 92	Kuala Lumpur	SEARCC
ICCC '92	Oct 92	Genoa	ICCC
Workshop on *Geometric Modelling*	92	Budapest	TC5
Eighth Conf. on *Software for Discrete Manufacturing — PROLAMAT*	92	Japan	TC5 WG5.3 IFAC
Ninth Intl. Conf. on *Computer Security* — **IFIP/SEC** *'93*	*May* 93	Tokyo	TC11
Thirteenth International Joint Conf. on *Artificial Intelligence — IJCA1I '93*	29 Aug-3 Sep 93	Chambery, France	IJCAII
VLSI '93	Aug 93	Grenoble	TC10 WG10.5
SEARCC '93	Dec 93	Hong Kong	SEARCC
Twelfth *IFAC World Congress*	93	Sydney, Australia	I**FAC**
SEARCC '94	Oct 94	Karachi	SEARCC
SEA RCC '95	Dec 95	Colombo, Sri Lanka	SEARCC
SEARCC '96	Nov 96	Bangkok	SEARCC
Thirteenth *IFAC World Congress*	96	San Francisco	IFAC
SEARCC '97	Nov 97	New Delhi	SEARCC

Please see page 14 for schedule of **IFIP** administrative meetings.

The **IFIP** Secretariat can furnish details of most of the events listed.

CALENDAR OF EVENTS

Event	Date	Location	Organized by
IFIP Congress '89 — 11th World Computer Congress	28 Aug-1 Sep 89	San Francisco	**IFIP AFIPS**
Fifteenth Symp. on *Microprocessing and Microprogramming — EUROMICRO '89*	4-8 Sep 89	Cologne	EUROMICRO
Work. Conf. on *Database Security '89*	5-6 Sep 89	Monterey, California	TCII WG11.5
Intl. Conf. on *Functional Programming Languages and Computer Architecture*	11-13 Sep 89	London	TC2 WG2.8 ACMSIGPLN/ARCH
Fourth Conf. on *Man-Machine Systems (MMS'89): Analysis, Design and Evaluation*	12-14 Sep 89	Xian, P.R.C.	IFAC **IFIP** IEA IFORS
Workshop on *Decisional Structures in Automated Manufacturing*	18-21 Sep 89	Genoa	IFAC IFORS **IFIP** CIRP
Symp. on *Control, Computers and Communication in Transportation — CCCT '89*	19-21 Sep 89	Paris	IFAC **IFIP** IFORS AFCET
Sixth Symp. on *Information Control Problems in Manufacturing Technology*	26-29 Sep 89	Madrid	IFAC **IFIP** IFORS !MACS
Ninth Conf. on *Computer Arithmetic — Arith 9*	Sep 89	Santa Monica, California	TC2 WG2.5 IEEE
Work. Conf. on *Medical Informatics for Primary Care*	Sep 89	Oxford	IMIA
Third Intl. Conf. on *Computer Applications in Production and Engineering — CAPE'89*	2-5 Oct 89	Tokyo	TC5 IPSJ JSPE IFAC
Second Intl. Workshop on *Protocol Test Systems*	3-6 Oct 89	West Berlin	TC6 WG 6.1 GI
Purdue Intl. Workshop on *Industrial Computer Systems*	9-12 Oct 89	West Lafayette, Indiana	Purdue TC5 WG5.4
Fourth Intl. Workshop on *High-Level Synthesis*	15-18 Oct 89	Kennebunkport, Maine	ACM/SIGDA IEEE/ DATC & CANDE WG10.2
Work. Conf. on *Distributed Databases in Real-Time Control*	16-18 Oct 89	Budapest	IFAC **IFIP** TC5 WG5.4
Sixth World Congress on *Medical Informatics — MEDINFO '89*	16-20 Oct 89	Beijing	IMIA CMIA
Workshop on *Evaluation of Adaptive Control Strategies in Industrial Applications*	16-20 Oct 89	Tbilisi, U.S.S.R.	IFAC Various
Work. Conf. on *An In-Depth Analysis of Information System Concepts*	18-20 Oct 89	Namur, Belgium	TC8 WG8.1 FRISCO
Sixteenth Workshop on *Real-Time Programming*	20-22 Oct 89	East Berlin	IFAC **IFIP**
Workshop on *Energy Systems, Management and Economics — ESMI '89*	25-27 Oct 89	Tokyo	IFAC **IFIP**
Workshop on *Experience with the Management of Software Projects*	30 Oct-2 Nov 89	West Layfayette, Indiana	TC5
Workshop on *Advances in Geometric Modeling*	8-9 Nov 89	West Berlin	TC5 WG5.2
Work. Conf. on *Modeling and Simulation for Optimization of Manufacturing Systems Design and Application*	8-10 Nov 89	Tempe, Arizona	TC5 WG5.3
Symp. on *Low-Cost Automation: Techniques, Components & Instruments, Applications*	8-10 Nov 89	Milan	IFAC **IFIP**
Workshop on *Applied Formal Methods for VLSI Design*	13-16 Nov 89	Leuven, Belgium	TC10 WG10.2 WG10.5
Intl. Symp. on *Skill-Based Automated Manufacturing*	15-17 Nov 89	Vienna	IFAC **IFIP** IMACS
Work. Conf. on *Methodological Approaches to Medical Technology Assessment*	Nov 89	Montpellier, France	IMIA
SEARCC '89	4-8 Dec 89	Singapore	SEARCC **IFIP**
Workshop on *Safety of Control Computer Systems — SAFECOMP '89*	5-7 Dec 89	Vienna	IFAC **IFIP** WG5.4
Second Intl. Conf. on *Formal Description Techniques for Distributed Systems and Communication Protocols*	5-8 Dec 89	Vancouver, B.C., Canada	TC6 WG6.1
Work. Conf. on *Implementation and Evaluation of Decentralized Computer Systems*	11-13 Dec 89	Lyon, France	TC10 WG10.3
Work. Conf. on *Robotics for Assembly*	13-14 Dec 89	Tel Aviv	TC5 WG5.3 Israel CAD/CAM & ME sots.
Work. Conf. on *Approving Software Products*	15-17 Jan 90	Munich	TC5 WG5.4
INDOLAN '90	30-31 Jan 90	Madras, India	TC6 WG6.4
Seventeenth Workshop on *Reliable Computing and Fault Tolerance*	Feb 90	??	TC10 WG10.4
Intl. Conf. on *Modelling the Innovation: Communications, Automation and Information Systems*	21-23 Mar 90	Rome	**IFIP** AEI IEEE IFAC
Third Intl. Conf. *onInformation Networks and Data Communications — INDC '90*	26-29 Mar 90	Lillehammer, Norway	TC6 SDF SSE DANFIP/DND
Workshop on *Knowledge-Based System Design Tools*	Mar 90	Amsterdam	TC10 WG10.2
Work. Conf. on *Programming Concepts and Methods*	2-5 Apr 90	Sea of Gallilee, Israel	TC2 WG2.2 WG2.3
Purdue Intl. Workshop on *Industrial Computer Systems*	23-26 Apr 90	West Lafayette, Indiana	Purdue TC5 WG5.4
Work. Conf. on *Artificial Intelligence Devoted to AI Applications in CIM*	Apr 90	Leningrad	TC5 WG5.3 Europ.Assn.AI
COMNET '90 — Forward into the 2nd Quarter-Century in Networking	8-10 May 90	Budapest	TC6 J.v.Neumann Society
Sixth Intl. Conf. on *Computer Security —* IFIPSEC *'90*	23-25 May 90	Helsinki	TC11 FIPA
Tenth Intl. Conf. on *Pattern Recognition*	17-21 Jun 90	Atlantic City	IAPR
Work. Conf. on *Human Factors in Information Systems Analysis and Design — WHISAD '90*	5-7 Jun 90	Schaerding, Austria	TC8 WG8.I
First Work. Conf. on *Fractals in the Fundamental and Applied Sciences — FRACTAL '90*	6-8 Jun 90	Lisbon	Task Group on Fractals
Tenth Work. Conf. on *Protocol Specification, Testing and Verification*	13-15 Jun 90	Ottawa	TC6 WG6.1
Work. Conf. on *Environments for Supporting Decision Processes*	18-21 Jun 90	Budapest	TC8 WG8.3
Work. Conf. on *Man in Flexible Automated Production*	19-21 Jun 90	Prague	TC5 WG5.3
Twelfth *!FORS Conference*	25-29 Jun 90	Athens	IFORS
Eighteenth Workshop on *Reliable Computing and Fault Tolerance*	Jun 90	Newcastle, U.K.	TC10 WG10.4
Intl. Conf. on *Economics and AI — CECOIA II*	2-6 Jul 90	Paris	IFORS **IFIP** IFAC
Open Conf. on *Information Technology Assessment — HCC4*	9-12 Jul 90	Dublin	TC9 CEC (FAST pgm.)/ICS
Fifth World Conf. on *Computers in Education — WCCE '90*	9-13 Jul 90	Sydney, Australia	TC3 ACS
Second Intl. Conf. on *Economics and Artificial Intelligence*	22 Jul 90	Paris	AFCET **IFIP**

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IFIP Congress '89-11th World Computer Congress	28 Aug-1 Sep 89	San Francisco	**IFIP**
IFIP Congress '92-12th World Computer Congress	31 Aug-4 Sep 92	Madrid	**IFIP**
	(Congress '92 dates are tentative)		

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