IFIP newsletter

International Federation for Information Processing

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WE WELCOME CHAPMAN & HALL

This is the first issue of the ***IFIP*** *Newsletter* printed by Chapman & Hall, the new **IFIP** publisher, as part of its contract with **IFIP:** We look forward to a long, cordial collaboration. Following is a description of C&H written by *Mr. Mark Hammond (GB),* the representative of C&H to **IFIP:**

Chapman & Hall, the new **IFIP** publisher, is both an old and a new company. Its origins lie in the 1830s. when it was the first significant publisher of Charles Dickens, publishing *Pickwick Papers* in 1836. For the past 50 years, it has been a publisher of science books and journals exclusively and remained relatively small, though noted for the quality of its publications. For many years, it represented John Wiley & Sons in Europe.

In 1987, the company became part of The Thompson Corporation (TTC), the major media group owned from Canada, based in the U.S.A., but with a significant portfolio of companies in Europe and Australia. It is the aim of TTC to build C&H into a major scientific, technical, and medical publisher, with full worldwide representation, through agents and offices. This schedule is on target. The company has tripled its revenues in five years and has major offices in Britain, the U.S.A. (New York), and Germany (Weinheim).

Unusual for a major science, technology, and medicine publisher, C&H has concentrated on building a balanced list of books and journals. In 1993, it published over 400 new titles and now has 64 journals and a number of electronic products. CD-ROMs are published in chemistry, and a major CD-ROM program is under way in all disciplines. On-line products are also being generated — the first electronic journals will be published over the Internet in 1995. There is a programme of computer science publications of growing importance, a manufacturing and industrial engineering programme, and an electronic engineering programme. In 1994, these programmes will produce approximately 60 new book titles (excluding **IFIP** publications), covering both the industrial and academic research markets, and textbooks for students and professionals.

C&H intends to integrate its publishing and marketing of **IFIP** with its own existing programme, to ensure maximum care from specialist personnel. The relevant editors will be in touch directly with Technical Committee, Specialist Group, and Working Group chairs as soon as possible; however, if individual proposals are now ready to be made, relevant **IFIP** members should contact *Mr. Mark Hammond,* the **IFIP** coordinator, at

Chapman & Hall
2-6 Boundary Row
London SE1 8HN, U.K.
tel: +44 (0) 71 865 0066 X6885
fax: +44 (0) 71 522 9624
e-mail: mhammon@chall.mhs.compuserve.com

WG3.2 HOLDS PAPERLESS CONFERENCE

Interactive Multimedia in University Education

The **IFIP** Working Group on Informatics Education at the University Level (WG3.2) held "the world's first paperless conference" 6-8 July 1994 in Melbourne, Australia. All 30 participants brought home from the conference a CD ROM that contained not only the text of the papers presented at the conference, but also video, graphics, animations, and audio snippets of the debate and discussion provoked by the papers.

continued on page 7

CONTENTS

We Welcome Chapman & Hall 1
WG3.2 Holds Paperless Conference 1
Who's Who: Mr. Plamen Nedkov 2
Sendov Leads Bulgarian Parliament 2
Gwyneth Roberts Retires 3
U.S. Member Society — FOCUS 3
New **IFIP** Secretariat in Austria 3
IFIP Is on the World Wide Web 3
TC13: Human–Computer Interaction 4
Computers for Handicapped Persons 6
WG on Human-Computer Interaction and Disability 6
Revisions to TC and SG Structure 7
IFIP Congress '94 "White Papers" 8
Summer School on Social Accountability . 8
Obituary: Prof. Richard A. Buckingham ... 8
Aims and Scopes of New WGs 9
Home-Oriented Informatics, Telematics and Automation 9
The IAPR Industrial **Affiliate Program** 10
No-Show Authors 10
CIPS Holds Seminars by Telecasts 11
Shrinking the World with E-mail 11
Brauer Is President of EATCS 12

National Abbreviations 12
Future **IFIP** Meetings 15
Calls for Papers 15
Calendar of Events 16

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Editor:
Dr. Jack L. Rosenfeld
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T.J. Watson Research Center
P.O. Box 218
Yorktown Heights, NY 10598-0218, U.S.A.
new telephone numbers:
telephone: 1 (914) 945-2362
facsimile: 1 (914) 945-2018
Internet: rosenj@watson.ibm.com
Bitnet: rosenj@watson

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IFIP Secretariat
new address:
Hofstrasse 3
A-236I Laxenburg, Austria
telephone: +43 2236 73616
facsimile: +43 2236 736169
e-mail: ifip@ifip.or.at

CORRESPONDENTS
TC2 R.K. DeBry (USA)
TC3 B. Samways (GB)
TC6 D. Khakhar (S)
TC7 P. Kall (CH)
TC8 B. Glasson (AUS)
TC9 F. van Rijn (NL)
TC10 R.N. Ibbett (GB)

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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, which it will forward to the *Newsletter.*

On-Line IFIP Databases

Databases of **IFIP** information (including this *Newsletter)* are available through international computer networks. Access is possible as follows:
BITNET:
listsery @cear n
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ftp:
software.watson.ibm.com/pub/ifip
gophers:
ietf.cnri.reston.va.us
gopher.micro.umn.edu (under "International Organizations")
www:
http://www.dit.upm.es/~cdk/ifip.html
Details of how to access the databases can he obtained from the Secretariat.

Who's Who in IFIP: MR. PLAMEN NEDKOV

Mr. Plamen Nedkov, the new Administration Manager of the **IFIP** Secretariat, was born in Vratza, Bulgaria, in 1954. As a child, he lived for several years in Israel and Lebanon. He studied economics and graduated from the Higher Institute of Economics in Sofia with a degree in International Economic Relations. He is a Fellow of the Salzburg Seminar (session on The International Negotiation Process) and has completed a course in French Language and Culture in Versailles. During and following his studies, he worked as an English interpreter and translator.

In 1982, he joined the staff of the Bulgarian Academy of Sciences, first as a specialist and later as head of the Sector for International Organizations. In 1989, he was appointed head of the Department for International Organizations. He was also executive director of the Sofia Office of the International Foundation for Survival and Development of Humanity, and national coordinator and secretary of the Bulgarian Organizing Committee for Earth Day International, from 1990 to 1992.

Mr. Nedkov also served as secretary of the Bulgarian Committee for the International Council of Scientific Unions (ICSU) and national coordinator of the Bulgarian Young Pugwash Group. He is presently a member of the Bulgarian Commission for UNESCO and has participated in five sessions of UNESCO's General Conference, the first session of the Intergovernmental Committee of the IIP-UNESCO, and in a number of ICSU General Assembly meetings.

He has coordinated a number of projects and events hosted by the Bulgarian Academy of Sciences. In 1987, he was appointed secretary of the Balkan Initiative Committee for the First Balkan Scientific Conference on Environmental Protection and as one of the editors of the conference proceedings. He was secretary of **the** National Organizing Committee for the 1990 General Assembly of ICSU, in Sofia.

Mr. Nedkov has written a number of articles for Bulgarian and foreign publications on problems relating to international scientific cooperation and international relations. With interviews for the Bulgarian media, he has contributed to the popularization of science.

The **IFIP** community met him in 1984, when he was responsible for arranging the General Assembly meeting in Varna, Bulgaria. Subsequently, he attended General Assembly and Council meetings as assistant to *Acad. Blagovest Sendov (BG),* then a vice-president. In 1989, he was appointed Contracts Officer, responsible for monitoring **IFIP** contracts with publishers, event organizers, and other associations. In 1994, he was named **IFIP** UNESCO Liaison Officer.

In September 1994, prior to the move of the **IFIP** Secretariat from Geneva, Switzerland, to Laxenburg, Austria, he was chosen as Administration Manager of the Laxenburg Secretariat. In speaking about plans for the future, *Mr. Nedkov* says, "As an **IFIP** volunteer myself for over 5 years, I have a great appreciation of the time and effort hundreds of **IFIP** volunteers around the world dedicate to the successful operation of our organization. A primary concern of the **IFIP** Secretariat in Laxenburg will be to maintain efficient communication and information channels to serve the **IFIP** community at large. Another area will be to extend the services to **IFIP** Member societies. The greatest challenge for the immediate future, however, is to meet the high standards of efficiency and tact so carefully developed through the years by the Geneva Secretariat and its manager, *Mme. Gwyneth Roberts."*

In his spare time, *Mr. Nedkov* enjoys skiing, swimming, and traveling. He has visited over 40 countries around the globe and appreciated their varied cultures and traditions.

SENDOV LEADS BULGARIAN PARLIAMENT

We are pleased to report that on 12 January, *Acad. Blagovest Sendov,* **IFIP** representative of Bulgaria since 1982 and president of **IFIP** from 1989 to 1992, was elected Chairman of the National Assembly of the Republic of Bulgaria.

GWYNETH ROBERTS RETIRES

Mme. *Gwyneth Roberts,* Administrative **Manager of the IFIP** Secretariat, retires in March, after twenty years of devoted and extraordinary service. The entire **IFIP** community, which has depended on her all these years, will miss her help, counsel, and friendship. *Gwyneth* was persuaded to write the following few lines of farewell.

As Shakespeare wrote: "All the world's a stage, and all the men and women merely players: they have their exits and their entrances ... "

I entered IFIP in 1975 and am exiting in 1995.

May I express here how much I have enjoyed working *for* and *with* you all.

My very best wishes accompany *Plamen Nedkov* and the Laxenburg Secretariat for the future.

NEW IFIP SECRETARIAT IN AUSTRIA

The IFIP Secretariat is now well established in its new headquarters in Laxenburg, Austria, the Geneva Secretariat having been closed in January. *Mr. Plamen Nedkov (BG)* is the Administration Manager, and ***Ms. Wilma Mendel (A)*** is Administrative Assistant.

Address information can be found in the masthead on page 2. ■

FEDERATION ON COMPUTING IN THE UNITED STATES (FOCUS)

*by Dr. Bruce Shriver (USA)**

The Federation on Computing in the United States (FOCUS) was formed in late 1991 to serve as the officially recognized U.S. member of **IFIP.** The primary purpose of FOCUS is to represent U.S. computing interests and to help the U.S. take part in the activities and programs of **IFIP.** FOCUS was established to fulfill the role of **IFIP** representation formerly performed by the American Federation of Information Processing Societies (AFIPS).

FOCUS was founded by the Association for Computing Machinery (ACM) and the IEEE Computer Society (IEEE-CS). These two founding societies appoint the members of the FOCUS Board of Directors, which is responsible for FOCUS policy matters and for appointing the U.S. delegate to the **IFIP** General Assembly. The delegate keeps FOCUS updated on general **IFIP** activities and policy issues.

FOCUS also has a Technical Assembly, which is responsible for appointing the U.S. representatives to the various **IFIP** Technical Committees. Through these representatives, FOCUS keeps abreast of the various technical activities carried out by **IFIP's** TCs and their Working Groups. The Technical Assembly is also a forum for FOCUS member societies to exchange views about U.S. and **IFIP** computing activities and, from time to time, to take positions on issues important to the U.S. computing community. Member societies of FOCUS participate in the Technical Assembly on a one-vote-per-society basis.

FOCUS is not directly involved in dissemination and technical interchange activities, such as publications and conferences, that might compete with the activities of the FOCUS member organizations. Its administrative functions are carried out jointly by the two founding societies.

FOCUS looks forward to hosting the March **IFIP** Council meeting in New York. ■

* former chairman of the FOCUS Board of Directors

IFIP IS ON THE WORLD WIDE WEB

*by Mr. Howard Funk (USA)**

The World Wide Web (www) is a distributed hypermedia system developed by *Tim Berners-Lee* of CERN in Switzerland. It has enjoyed an explosive growth since the development of Mosaic by the National Center for Supercomputer Applications at the University of Illinois, Urbana-Champaign. Mosaic is a "point-and-click" hypermedia browser for www. Since the development of Mosaic, many others have become available: Cello from the law school at Cornell University, Netscape from Netscape Communications (the developers of Mosaic are there), Web Explorer from IBM, AIR Mosaic from Spry, and LYNX, a text-only browser from the University of Kansas.

Thanks to the efforts of *Prof. Carlos Delgado-Kloos (E),* Internet users around the world can obtain information about **IFIP** via this service. The URL is

http://www.dit.upm.es/~cdk/ifip.html

With Mosaic and similar browsers, users can point to over 20,000 homepages such as **IFIP's,** to gophers, ftp archives, and other Internet resources. Free versions of Mosaic are available via anonymous ftp from

ftp.ncsa.uiuc.edu

Free versions of Netscape are available via anonymous ftp from

ftp.mcom.com

Versions of both of these browsers are available for Windows**, UNIXt, and Macintosh* platforms.

There are currently (December 1994) over 5000 publicly accessible Web servers and over 20,000 publicly accessible homepages. ■

*** IFIP** vice-president

** registered trademark of Microsoft Corp.
t registered trademark of UNIX Systems Laboratories, Inc.
registered trademark of Apple Computer, Inc.

IFIP TECHNICAL COMMITTEE 13: HUMAN-COMPUTER INTERACTION

Human-Computer Interaction (HCI) is a relatively new discipline that has matured considerably within the past two decades, and **IFIP's** Technical Committee on Human–Computer Interaction (TC13) has had a prominent role in that process of maturation. The work of TC13 is primarily oriented toward computer users, especially users who are not computer professionals. The goal is to improve the human-computer relationship for them. The field ranges from very technical areas, such as optimum colors to use on video display terminals, to societal concerns, such as the impact of computers upon individuals in organizations. In these areas, TC13 strives to develop and apply rigorous methods for studying, modeling, and measuring computer-human systems.

The history of HCI work in **IFIP** dates back to the 1970s in Working Group 6.3 on Man-Computer Communication, under chairman *Dr. Jim Bair (USA).* Its goals were similar to those of TC13; however, it operated within the TC on Communication Systems, which is more interested in the technology of computer communications. In 1981, WG6.3 was reorganized under the chairmanship of *Prof. Brian Shackel (GB),* the current chairman of TC13, and in 1982 it was reconstituted as an **IFIP** Task Group. At that time, a questionnaire was mailed to 1000 people, virtually the entire world-wide HCI community, and over 300 responded and expressed interest in receiving a newsletter in this field, to let them know what was going on in HCI. (A measure of their interest was their willingness to pay a fee for this service.) Consequently, *INTERACT,* the newsletter of the **IFIP** HCI Task Group, was initiated and published for six years. Another activity was sponsorship of HCI conferences. One of the first, supported by the Task Group and other organizations, was a conference in 1982 on Human Factors in Computer Systems, in the U.S.A. That conference led to the series of conferences organized by the U.S. Association for Computing Machinery (ACM) Special Interest Group on Computer-Human Interaction, annually since 1985.

In 1984, because of the need for an international conference on HCI, the Task Group organized the first INTERACT conference, which was held in London. Virtually all the notables in the field at that time attended, and the large number of delegates (550) surprised the organizers. It was a true state-of-the-art conference. The next INTERACT conference took place in Stuttgart in 1987, with a larger attendance. At that time, the number of people in the field had grown to a point that national organizations were able to organize conferences on HCI. Nevertheless, INTERACT'90, held in Cambridge U.K., was larger, with over 570 participants from 32 countries. The 1993 conference was named INTERCHI'93, because the Netherlands Society for Informatics and its Man-Machine Systems Group invited **IFIP's** TC13 and ACM's SIGCHI to hold the INTERACT and CHI conferences together. The joint organization brought a successful conference to Amsterdam, exceeding expectations of attendance with 1580 participants from 30 countries. Beginning in 1995, the INTERACT conferences will be held biennially. It is not thought that attendance will diminish much from the size of the 1990 meeting, even though there are some signs of HCI workers becoming more interested in specialized conferences (this parallels the evolution of **IFIP** Congresses). For 1995, in Lillehammer, Norway, and 1997, in Sydney, Australia, it is expected that INTERACT will continue with comparable attendance and with the same high standards for contributions.

In the late 1980s, it was suggested to *Prof. Shackel* that the time was ripe for the HCI Task Group to become an **IFIP** TC. He made that proposal to the 1989 **IFIP** General Assembly in San Francisco, which readily accepted it. The TC has been successful and now has four Working Groups, which are described below.

TC13 is a truly multi-discipline activity. Specialists in ergonomics, cognitive scientists, and computer scientists are involved in its activities. The majority of the workers, however, are from the human factors area. *Prof. Shackel,* for example, is a psychologist/ergonomist. Similarly, the areas of study are varied. They include the following:

- problems users have with computers
- impact of computers upon people in both individual and organizational contexts
- determinants of utility, usability, and acceptability
- appropriate allocation of tasks between computers and users
- modeling the user, as an aid to better system design
- harmonizing the computer to the characteristics and needs of the user

The TC attempts to bring formal methods to bear on all aspects of these problems — in the specification, design, and evaluation phases of systems development. Modeling of the computer system user is an approach that gained importance in the late 1980s. The field has matured a great deal, from the cut-and-try techniques of a decade ago to the more refined approach of iteratively (a) modeling a system, (b) carefully but rapidly designing an improved prototype solution, and (c) testing. Nevertheless, says *Prof. Shackel,* even now, HCI is not a pure discipline.

The TC13 Working Group on Education in HCI and HCI Curricula (WG13.1) promotes and improves all aspects of HCI education at all levels of higher education. It does not, however, specifically develop curricula itself. The focus of the WG is on existing work in **IFIP** Member countries and consists of evaluating needs, collecting information about existing programs, and making recommendations. This WG has held workshops at INTERACTs on Designing the Teaching of HCI. Another notable activity is the assistance and encouragement in the organization, at Ohio State University, of a database containing approximately 150 descriptions of **HCI** courses from approximately 80 institutions in 10 countries.

WG13.2 on Methodology for User-Centered System Design integrates HCI and software engineering. It is involved in research and the promulgation of information in this field. Both the use of HCI techniques to enable software developers to perform their tasks more effectively and the proper engineering of HCI systems are in the domain of this WG. The ultimate goal is the integration of HCI and software-engineering methods. Several workshops and conferences have been held and are being planned.

WG13.3 on Human–Computer Interaction and Disability works to make HCI designers aware of the needs of the handicapped and the elderly. Surveying the current directions in HCI is an important component of the WG's work. Promulgating guidelines for HCI systems, to make them usable by the handicapped. is also part of the WG's activities. In addition, *the* use of technology to empower the handicapped — for example. by replacing one interface with a more suitable one or designing systems that are easily adapted to the individual user — is part of the WG work.

WG13.4 on User Interface Engineering also belongs to TC2 on Software: Theory and Practice. (There, it is known as WG2.7.) Its scope includes providing a framework for reasoning about interactive systems and providing an engineering model for the development of user interfaces. The methodology of this WG tends to be analytic and is moving TC13 in the direction of greater rigor.

continued on page 8

IFIP TC13

Deals with human-computer interaction (HCI) in the widest sense, with the main orientation toward the users, especially non–computer-professional users, and how to improve the human-computer relationship for them.

TC13 Chairman: Professor Brian Shackel
Position: Professor of Ergonomics, Emeritus
Employer: HUSAT Research Institute, Loughborough University of Technology
Location: Loughborough, U.K.
Interests: analysis and design of **HCI** systems and interfaces, usability specification and evaluation, electronic journals

TC13 Vice-Chairman: Mrs. Judy Hammond
Position: Head of HCI Studies
Employer: School of Computing Sciences, University of Technology, Sydney
Location: Sydney, Australia
Interests: HCI education, HCI in systems development and design, usability testing, computer-mediated collaborative learning

Working Group 13.1: Education in HCI and HCI Curricula — Studies all aspects of HCI education and aims to improve courses with recommendations for HCI curricula.

WG13.1 Chairman: Prof. Dr. Peter Gorny
Position: Professor of Applied Computer Science
Employer: University of Oldenburg
Location: Oldenburg, Germany
Interests: methodology of user interface design, interactive computer graphics (especially interaction in 3D), educational software (especially user interfaces and semiotics for data visualization)

Working Group 13.2: Methodology for User-Centered System Design — Aims to foster research, information dissemination, and good practice in the methodical application of HCI to software engineering.

WG13.2 Chairman: Dr. Michael Tauber
Position: Professor of Informatics
Employer: Department of Mathematics and Computer Science, UniversitätGesamthochschule Paderborn
Location: Paderborn, Germany
Interests: task analysis, workplace analysis, empirical methods in user-centered design, object-oriented analysis, advanced user interfaces

Working Group 13.3: Human–Computer Interaction and Disability — Aims to make the HCI and computing communities aware of the needs of people with disabilities, in order to facilitate the accessibility to and usability of computers for such people.

WG13.3 Chairman: Professor Julio González-Abascal
Position: Professor of Computer Architecture
Employer: Informatika Fakultatea (School of Informatics), Euskal Herriko Unibertsitatea (University of the Basque Country)
Location: Donostia–San Sebastian (Basque Country), Spain
Interests: HCI, assistive technology (for people with disabilities), operating systems, computer architecture

Working Group 2.7 (13.4): User Interface Engineering — Investigates the nature, concepts, and construction of user interfaces for software systems.

WG2.7 (13.4) Chairman: Professor Dr. Claus Unger
Position: Professor of Computer Science
Employer: University of Hagen
Location: Hagen, Germany
Interests: intelligent user interfaces, interactive systems' architectures, CSCW, computers in education

4TH INTERNATIONAL CONFERENCE ON COMPUTERS FOR HANDICAPPED PERSONS

*by Dr. Walter Grafendorfer (A)**

The Austrian Computer Society, in cooperation with the Institut fiir Allgemeine Elektrotechnik and Elektronik of the Vienna University of Technology (Rehabilitation Technology group), has organized four international conferences on Computers for Handicapped Persons (ICCHP). The most recent, co-sponsored by the **IFIP** Technical Committee on Relationship between Computers and Society (TC9), two **IFIP** Working Groups, and other organizations, was held in Vienna 14-16 September 1994. More than 180 participants from 25 countries assembled to hear 80 contributions on issues relating to the state-of-the-art and recent developments and research projects in the field.

After welcome addresses from *Dr. Veith Risak,* president of the Austrian Computer Society, and *Dr. Wolfgang Zagler (A),* International Program Committee chair, the opening session was dedicated to the presentation of examples of initiatives for handicapped persons. *Mrs. Mary Frances Laughton (CDN)* presented a talk, "Communications and Information Technology for Persons with Disabilities — the Canadian National Strategy as an Example," which was followed by a video about the crucial points of research under the umbrella of the TIDE (Technical Initiatives for Disabled and Elderly People) program of the European Union.

Subsequently to the opening session, papers were presented in three parallel tracks. Track A was dedicated to current technologies and solutions that have been developed for blind or visually handicapped persons. Tracks B and C covered a variety of other topics. Blind people can be helped successfully by means of computer technology providing greater access to data and information. Many solutions for other handicaps were also discussed. New telecommunication services are a valuable contribution in the development of systems for handicapped persons.

During ICCHP'94, many reports were delivered concerning the integration of handicapped people in education and concerning authoring systems for the development of education for handicapped persons.

The Austrian Computer Society made an effort to give the participants, many of them handicapped, the opportunity during the social program to exchange personal experience in a pleasant atmosphere, including a reception by the mayor of Vienna in the city hall.

Prior to the Conference, introductory seminars were convened with the objective of extending the knowledge of participants in specific fields of information technology for handicapped persons. These 6 half-day introductory seminars were greatly appreciated and will be integrated into future Conferences, such as the 5th ICCHP, tentatively scheduled for August–September 1996, and the 6th in August 1998, which will be part of **IFIP** Congress '98, organized jointly by the Austrian Computer Society and the Hungarian John von Neumann Computer Society, in Vienna and Budapest.

The proceedings of ICCHP'94, *Computers for Handicapped Persons,* edited by *Dr. Zagler, Mr. Geoffrey Busby (USA),* and *Prof. Roland Wagner (A),* were published in the Springer-Verlag "Lecture Notes in Computer Science" series. ■

*** IFIP** trustee and chairman of the ICCHP Organizing Committee

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WORKING GROUP ON HUMAN—COMPUTER INTERACTION AND DISABILITY

*by Mrs. Collette Nicolle (GB)**

Starting with an inaugural meeting in November 1993, **IFIP' s** Working Group on Human-Computer Interaction (HCI) and Disability (WG13.3) is moving forward. One of the first items for discussion was the most appropriate name for the WG, which had originally been called **"HCI** and Special Needs." Some of the discussions revolved around the fact that disabled people don't have special needs, but need special solutions. It was suggested that the WG name should reflect the subject area as named and understood by the "world at large." It was then decided that the name should become "Human-Computer Interaction and Disability," because it is short and easy to understand.

There are over 500 million people with disabilities in the world. Social exclusion and many other problems often result from their situation. It is recognised that developments in information technology and HCI can often help with problems — for example, to maximise choice and integration. However, there is also a danger that such developments can lead to the further exclusion of this user group if they are not designed from the beginning with universal access as an aim.

Awareness Is Critical

WG13.3 intends to make designers of information systems and complementary tools aware of the needs of this group, in order to encourage the development of more appropriate tools for access and usability. As a result, systems will become universally accessible, and the market for them will increase.

The workplan and strategy for the next two years includes the following items:

- Ways need to be found to influence industry, perhaps through case studies.
- Figures are needed to stress the financial benefits to industry and the size of the potential user group.
- Regular contacts will be established within the computer industry, and information will be forwarded directly to them.
- Investigations will be made to identify how effective legislation has been.
- Investigations will be made to identify what makes designers take note of these issues.
- A combined approach will be exercised, including representatives from **IFIP** and the European TIDE programme (Technology Initiatives for Disabled and Elderly People).

Although WG13.3 intends to consider all of the above points, it is necessary to know its limitations in the short term; therefore, certain concrete tasks were identified, including production of a leaflet and poster informing the public about the group. A panel session was held at **CHI** '94, (ACM Conference on Human Factors in Computing Systems) entitled "Meeting Federal Accessibility/Disability Requirements in Interface Design." A summer school was held 1-5 August 1994

continued on page 12

* secretary of WG13.3

REVISIONS TO TECHNICAL COMMITTEE AND SPECIALIST GROUP STRUCTURE

In response to suggestions made by **IFIP**' s president, *Prof. Asbjørn Rolstadås* ***(N),*** in March 1994, the September General Assembly (GA) in Hamburg voted to accept most of the components of a plan to revise **IFIP** Technical Committees (TCs) and Specialist Groups (SGs). (The original proposals were described in the June 1994 ***IFIP*** *Newsletter,* page 9.) Following are the key changes approved by the GA; however, full implementation will have to wait until the requisite changes in the Statutes and Bylaws have been approved by the September 1995 GA.

- Membership of TCs may be expanded by admitting additional members from nations that are Members of **IFIP.** (At present, TC membership is limited to one member per nation. A TC member, however, need not be a member of the organization representing that nation in **IFIP.)** These added members will have a vote in the TC and be eligible to hold TC office. In addition, Expert Members from nations that are not Members of **IFIP** may also be invited to become TC members, but without a vote. New members will be nominated by the Member societies and the TC, and be approved by the Cognizant Officer of the TC. (Chairmen of the Working Groups (WGs) of TCs are already voting members of the TCs.)
- From now on, all SGs will be provisional and ultimately become TCs, WGs, or other **IFIP** bodies, or be disbanded. The present SG14 on Foundations of Computer Science will eventually become a TC, but the Hamburg GA took no specific action in that regard. The status of provisional SG15 on Fractals and Chaos was not changed by the GA.
- A database containing the addresses and scientific interests of WG members will be created, and information from this will be offered to Member societies. No decision was made concerning who will maintain the database and what controls will be placed on its use.
- Special Interest Groups (SIGs) may be created by TCs as a means of providing younger, less-experienced scientists an opportunity to participate in **IFIP.** So far, no TC has created a SIG that exactly fits President *Rolstadås's* concept: a young group with no restrictions at all on membership. The Technical Assembly voted that no membership fee need be charged SIG members. ■

PAPERLESS CONF. cont. from p. 1

The title of this working conference was Interactive Multimedia in University Education: Designing for Change in Teaching and Learning, and the format of the "interactive proceedings" exemplified the change. All Conference participants joined in the task of designing the proceedings. The following questions were asked: In what way does an electronic publication add value to the standard print publication? How, in theory, is information enhanced by interactivity? Are hypertext links and multiple forms of media sufficient justification for this task? What are the copyright concerns in international electronic publishing?

Interactive Multimedia

Interactive multimedia is the merging of previously separate media — video, text, audio, graphics, and animation — under computer control. It claims to offer advantages over traditional computer-based learning, by means of its ability to combine an appeal to multiple senses with the engaging power of interactivity. The Conference focused on the challenges of developing interactive multimedia for use in teaching and learning at the university level, including open university education.

Conference participants included academics, graphic designers, video producers, and instructional designers, all actively engaged in multimedia development. Case studies were used to address issues under three main themes: Evaluation, Implementation, and Design. The Conference was concerned with techniques rather than technology, and aimed at portraying the best international practice, leading to a blueprint for strategic planning in universities.

Conference participants with their CD-ROM proceedings.

Prof. Alfred Bork (USA), a member of WG3.2 who attended the Conference, provided the ***IFIP*** *Newsletter* with the following notes on some highlights of the Conference.

The Conference was run, very effectively, by *Sandra Wills (AUS),* vice-chair (Asia-Pacific) of the **IFIP** Technical Committee on Education (TC3) [and one of the three International Program Committee chairs for **IFIP** Congress '96 in Canberra, Australia]. Since the papers were mostly available in the preliminary proceedings, ***Sandra*** persuaded people to give short speeches, so that much of the time could be spent on discussions. This format worked well, and the discussions were very good.

Interesting CD ROM products were shown, including two products from the University of Melbourne. The first of these, something of an advertising mechanism for the University, is based on an earlier printed docu-

continued on page 10

ACTION AGENDA OF IFIP CONGRESS '94 TO APPEAR AS "WHITE PAPERS"

One product of IFIP Congress '94 will be a collection of "white papers" that address the seven Issues (significant problems associated with the linkages between the Congress tracks) that were discussed at the Congress. A discussion of the Issue Process can be found on page 7 of the December 1994 ***IFIP*** *Newsletter,* along with the Congress Message. The white papers will be an expansion of the Congress Message. They will be distributed at the March IFIP Technical Assembly in New York and discussed at that time, and ultimately disseminated to the Technical Committees, Specialist Groups, and Working Groups, as well as to the IFIP Member societies.

The decision to prepare these white papers was reached during an international telephone conference on 22 December among five of the seven Issue Champions or their representatives, *Dr. Karen Duncan (USA),* organizer of the Congress Issues Process, *Dr. Ronald Uhlig (USA),* chairman of the Congress International Program Committee, and the ***IFIP*** *Newsletter* Editor. The Issue Champions agreed to prepare 10-20-page white papers that would be expansions of their Congress Messages, which were presented at the closing session of the Congress and printed in the *Newsletter.* Rather than simply amplifying the original Congress Message, the white papers would contain further ideas on the subject, developed by the Issue Champions and their colleagues. The recommendations for action would be addressed to specific **IFIP** Technical Committees, Specialist Groups, and Working Groups or to Member societies, which would be expected to act on the recommendations.

Drs. Duncan and *Uhlig* expressed gratitude to the Issue Champions for the immense effort this undertaking required. ■

CORRECTION

Following is the correct address to use in requesting information about **IFIP** Congress '96:

Mrs. Anette Palm
IFIP Congress '96 Secretariat
do Australian Convention and Travel Services
GPO Box 22 00
Canberra ACT 2601, Australia
tel: +61-6-257-3299, fax: +61-6-257-3256
e-mail: acts@ozemail.com.au

An incorrect e-mail address was given on page 10 of the December 1994 ***IFIP*** *Newsletter.* ■

SUMMER SCHOOL ON INFORMATION TECHNOLOGY AND SOCIAL ACCOUNTABILITY

IFIP's Working Group on Social Accountability (WG9.2) announces the second **IFIP** International Summer School on Information Technology and Social Accountability, which will be held at Katholieke Universiteit Nijmegen, The Netherlands, 13-18 August 1995.

The central theme of the Summer School will be the accountability of information technology — more specifically, the question How can we handle information technology? Keynote speakers will address some of the following themes:

- Is an information society sustainable?
- Can informatics empower the user?
- Who owns information?
- Can we control information technology?
- Ethical issues of the future

Workshops will be conducted on topics that include the following:

- Privacy in a controlled world
- The information society and culture
- Sustainable telematics
- The digital city: the Amsterdam experiment
- Information society and the disabled
- Electronic highways

The aims of this **IFIP** summer school are to convey the deliberations of WG9.2 to a new generation of researchers and young people working (or about to work) in information technology; to introduce young researchers and students to study and research perspectives from a diversity of viewpoints, interests, types of society, and regions of the world; to increase the range of research, study, and learning experiences available to young researchers and students; and to forge new networks of young researchers and students.

For further information please contact

Katholieke Universiteit Nijmegen
P.O. Box **9111**
6500 HN Nijmegen
THE NETHERLANDS
tel: +31 80 61 21 56, fax: +31 80 56 79 56
marcvl@cs.kun.nl ■

TCI3 continued from page 4

Looking to the future, *Prof. Shackel* says that hot topics in the HCI area are computer-supported cooperative work (CSCW), MultiMedia / Graphical User Interface (MM and GUI), and virtual reality (VR). Although computer-technology professionals seem to be taking over the VR field and leaving human factors professionals behind, the former are just beginning to look into usability issues. *Prof. Shackel* foresees TC13 actively pursuing these areas. ■

PROFESSOR RICHARD A. BUCKINGHAM

We regret to announce that *Professor Richard (Dick) A. Buckingham (GB)* died on August 13, 1994, at the age of 83.

Dick's contributions to **IFIP** were invaluable, including the chairmanship of its Technical Committee on Education (TC3) from 1963 to 1973. Typical of *Dick* was the unstinting help he gave to the development of **IFIP** Working Group 3.1 on Secondary Education, from its initial role as an international information exchange in the late 1960s through its later success as an international forum for experts.

Dick Buckingham was the first and only Director of the London University Institute of Computer Science, playing a key role in the development of computer science as a mainstream subject before moving to become, in 1974, the Professor of Computer Education at Birkbeck College, from which post he retired in 1978. He was the founder Director of the University of London Computer Unit in 1957, which later became the Atlas Computing Service and the University of London Computing Centre. He was a numerical analyst who recognized before many of his colleagues that academic computing should be related to areas far removed from its science and engineering origins and that these areas would become increasingly important.

Dick was a great supporter of the work of the British Computer Society, a member of its Council for 12 years, serving on many of its education committees, and was the first chairman of the BCS Examinations Council.

David Tinsley
member of WG3.1

AIMS AND SCOPES OF NEW WORKING GROUPS

The September 1994 **IFIP** Technical Assembly, meeting in Hamburg, approved three new Working Groups. Their Aims and Scopes are printed here. Note that the numbers WG6.2 and WG6.3 were taken from unrelated WGs that had been previously disbanded.

WG6.2: Broadband Communication

AIMS

To identify and study current issues related to the development of broadband communication networks and applications, with a special emphasis on broadband networks, e.g., networks that are based on ATM (Asynchronous Transfer Mode) technology.

SCOPE

The concept of broadband communication implies that the digital access to the network from the user's premises is done at rates higher than 2 megabits/second, and that there will be, wherever required, an integration of data, audio, and video communication. Broadband networks will constitute adequate support for multimedia communication, both in the local and wide area. ATM is thought to be the optimum technology for the development of broadband networks. The WG studies will, therefore, focus on issues related to ATM but are not restricted to it, since different technologies, which can also contribute to a future integrated broadband network, should also be addressed.

Some of the items of current research interest in this area are switching, signaling, resource management, traffic characterization and control, protocols, network control, testing, inter-networking, and multimedia communication services.

WG6.3: Performance of Communication Systems

AIMS

The work of the WG is directed towards improving the state of the art of performance evaluation of new and existing communication systems.

SCOPE

- Analysis of the performance (i.e., throughput, response time, buffer occupancy distribution, etc.) of various aspects of current communication networks, such as ATM (Asynchronous Transfer Mode) networks, wireless networks, and LANs/MANs
- Congestion and call-admission control in communication systems
- Performance evaluation of future high-speed networks as they would be deployed over optical switching networks
- Performance evaluation of bridge and gateway technology towards internetworking of communication systems
- Analysis of protocol enhancement for LANs/MANs
- Traffic characterization of existing and future networks and services
- Monitoring and tuning communication systems, for better performance
- Knowledge acquisition for performance evaluation of communication systems
- Development of relevant performance evaluation techniques, as motivated by real-life communication systems
- Understanding the performance of communication software systems as they interact with kernels, and applications such as multimedia
- Analysis of future networks that will become possible when link capacity becomes "cheap and unlimited"

WG14.5: Cellular Automata

AIMS

- To support the development of cellular automata theory and its applications (especially in parallel computing, in the study of complex systems, and in physics, biology, artificial life, etc.).
- To pursue the design and utilization of cellular automata machines.

SCOPE

- Cellular automata as models of parallelism, complex systems, dynamical systems, interactive behavior, physical systems, and biological systems.
- Cellular automata machines. ■

HOME-ORIENTED INFORMATICS, TELEMATICS AND AUTOMATION

*by Gisela Lehmer (D)**

"It is necessary to consider home-oriented information technologies as a whole in order to clarify how long-term interests can be taken care of in future development." This was the starting point two years ago when WG9.3, the **IFIP** Working Group on Home-Oriented Informatics and Telematics (HOIT), decided that too much time had elapsed since the successful Home Interactive Telematics Conference in Amsterdam, the Netherlands, in 1987 and that it was about time to "do it again." The WG thought that many questions were still not answered at all: e.g., How can these technologies be used to empower private households? Can they contribute to the development of a new home concept, re-establishing the private household as a living and production unity (like Oikos in ancient Greece), embedded in and interacting with the surrounding society in a sustainable way?

* secretary of WG9.3

Consequently, the WG organized the second international conference on HOIT June 27 – July 1, 1994 in Copenhagen, Denmark. The International Programme Committee was chaired by *Felix van Rijn (NL),* chair of WG9.3. The Organising Committee, *Kresten Bjerg (DK)* chair, set up an attractive ambience with numerous social events, which provided much opportunity for informal discussions. The conference brought together 85 participants from industry, science, and the public sector from 14 countries to give highly qualified responses to the key questions.

The Goals

The major conference goals were to develop strategies for creating professional and public awareness of the potentials and implications of constructive domestic information technology innovations for everyday life and for economic, social, cultural, educational, and energy policies; to promote international exchange of knowledge and experience; and to bridge the difference between scientific research and practical usefulness.

Organised in 5 cross-disciplinary working groups, supported by keynote presentations and plenary discussions, we succeeded in articulating more clearly a series of general problems, differences of perspective and interests regarding the key questions:

- how both users and suppliers can get the optimal benefits from possible new technologies — and with what global impact
- whether these technologies can contribute to the emergence of a new home concept, a new Oikos
- how these technologies can be used to empower private households, both as consumers and as producers.

At the end of the Conference, the keynote presentation, "Pulling the Threads Together" by *Felix van Rijn,* gave a final

continued on page 10

THE IAPR INDUSTRIAL AFFILIATE PROGRAM

[The following is taken from an article in the newsletter of the International Association for Pattern Recognition (IAPR), an Affiliate Member of **IFIP,** by its former president, *Prof. Jake Aggarwal (USA).* It addresses an issue of interest to IFIP.]

To increase the interrelationship between the IAPR and industry, the IAPR Governing Board has voted to establish an "Industrial Affiliate" membership programme. This programme is intended to enhance IAPR's visibility in industry and increase the participation of industrialists in our International Conferences on Pattern Recognition and other IAPR-sponsored activities, as well as to contribute to IAPR' s revenues.

Any company in a member country can become an Industrial Affiliate of the IAPR by applying in writing and paying the administration fee and annual membership fee. Industrial Affiliates will receive a subscription to IAPR's official magazine, *Pattern Recognition Letters,* ten copies of each issue of the *Newsletter,* and periodic mailings of informative materials such as calls for papers. The annual membership fee will be $250 U.S., with a one-time administration fee of $500 U.S. charged to initiate membership. Industrial Affiliates will be encouraged to join for a two-year term of membership. ■

NO-SHOW AUTHORS

*by Dr. Stephen Kahne (USA)**

[The following article was published in the newsletter of the International Federation of Automatic Control, a federation with which **IFIP** cooperates closely. Its secretariat is a neighbor of the new **IFIP** headquarters in Laxenburg, Austria. Because the article discusses an issue of concern to organizers of **IFIP** events, we publish it here.]

The "no-show author" problem is an issue of professional ethics based on a set of complicated factors. Over the years, I have developed a rather simplified approach to this issue, which I would like to share with you. . . . Let us begin with a definition: A "no-show author" is one who satisfies the following three conditions:

- has a paper accepted at a conference
- does not show up at the conference
- does not inform the organizers that he/she will not show up.

I claim that such a no-show author violates professional ethics and should be ostracized for such unacceptable behavior. No-show authors are unfair to conference attendees, to organizers who have worked hard to assemble a conference program, and to their colleagues in general.

We all understand that there are occasions when the author of an accepted paper is unable to attend the conference in question. Moreover, there are situations in which governmental or other organizational constraints make it impossible for the author to know whether or not he/she will be allowed to attend until the last minute. In some countries, this can be literally the night before the planned trip. . . .

What is entirely unacceptable is that the author fails to inform the conference organizers as soon as it is clear that the trip has been cancelled, even if that is the day before the paper is to be presented. It is this part of the author's behavior that must be stopped. . . . There is simply no excuse for violating this ethical requirement.

There are certain countries that are gaining a reputation for having no-show authors regularly submitting papers to conferences. It is unfair that responsible authors from those countries might be discriminated against by conference organizers just because some of their colleagues are irresponsible. . . .

Conference organizers should be very clear about the requirement that prior notification must be provided in case a paper cannot be presented. Names of no-show authors should be made available to future conference organizers and suitable sanctions arranged for such individuals. ■

* president of IFAC

HOIT continued from page 9

appreciation of the conference conclusions and implications.

The papers are collected in the more than 500 pages of the conference proceedings, distributed to the participants: *HOIT 94,* edited by *Bjerg* and *Kim Borreby (DK).* A selection of the best papers is planned for publication early in 1995 by Chapman & Hall. Establishment of an electronic international quarterly journal, whose first volumes will be mainly devoted to the conference proceedings, is being investigated. Also, a discussion group on the Internet (Comp.Home.Misc, moderated by *Bjerg* and *Borreby),* which served as a vehicle in the process of preparing the conference, will be used to maintain and develop the international network of researchers in the HOIT area and create further awareness of the relevant activities and publications. ■

PAPERLESS CONF. cont. from p. 7

ment. They are starting to work on a "second edition," and the discussion focused on how it could be made more interactive. The other product is an extensive collection of material for a course in veterinary medicine. I kept asking about technology-based courses without lectures, and this was the only example I heard about. Generally, there was little presented on new organizations for technology-based courses. This seems to me to be an important issue.

CD ROM Costs Are Lower

Another interesting direction was the report on the recent British program for technology in university education, the Computers in Teaching Initiative. This is a much more focused program than any I am familiar with in the United States, but still with no full course development. A similar Australian project was also reviewed. The British project, described by *Jonathan Darby (GB),* reported statistical data on the various projects. Perhaps the most surprising information was the fact that, as a whole, the CD ROM projects cost *less* than the projects without multimedia. **He** also took a survey, of those present in Melbourne, about current projects or proposals. From this, he calculated the cost per student hour. As might be expected, larger projects often turned out to cost less per student. A talk related to this was delivered by *Jef Moonen (NL),* who stressed the difficulty of getting reliable figures for costs of any educational projects, not just computer projects.

Conventional proceedings, in book form, edited by *Ms. Wills, Kate Beattie (AUS),* and *Carmel McNaught (AUS),* were published by Elsevier/North-Holland. ■

CANADIAN MEMBER SOCIETY HOLDS SEMINARS BY NATION-WIDE TELECASTS

*by Mr. Alex St. Croix (CDN)**
and Ms. Gina van Dalen (CDN)t

The Canadian Information Processing Society (CIPS) is Canada's largest association representing information technology professionals. The association currently has over 6,200 members geographically dispersed in 23 cities or "sections" in Canada. Since its inception in 1958, CIPS has been committed to the professional development of the information technology professional. By hosting and facilitating educational events, CIPS provides IT professionals an opportunity to take advantage of high-quality, industry-specific, affordable education.

In the late 1970s, CIPS initiated the National Seminar — a professional-development program designed to give its local sections the opportunity to provide education directly to local members. The National Seminar followed a "traveling roadshow" format. That is, over a 12-month period, a group of program facilitators traveled to each section and delivered a day-long series of seminars that focussed on one specific topic or theme.

Because of ongoing challenges, CIPS decided in 1989 to cancel the National Seminar and in its place introduce the National Telecast Symposium (NTS), a program that would be less time-sensitive, more cost-effective, and more open to the full participation of the local CIPS sections. CIPS presented the first NTS in February 1990. The program originated from Toronto and was broadcast via satellite to 12 sections across Canada. All subsequent telecasts have followed the same basic format: two presentations by well-known speakers in the information technology field, each followed by a 20-minute interactive period for questions from audience members across Canada.

The NTS, on average, attracts approximately 700 attendees plus interested students and faculty at 15 colleges and universities across Canada. Typically, educational institutions have a satellite dish and facilities to watch the program. CIPS has allowed these institutions to participate on a non-interactive basis (view only) for a nominal fee.

There are, of course, some challenges organizers must face when planning an event as complex as the NTS, and there are disadvantages with this format as well. One of the largest disadvantages is the relatively high production costs of the program, which run to approximately 62,000 Swiss francs. Typically, this cost of an NTS is divided between the sections; with the larger sections assuming a larger percentage of the cost.

As well as costs, the issue of income generation is also causing concern on the part of organizers. While the four Telecast Symposiums to date have been successful in terms of audience appreciation, they have all failed to reach their budgeted financial targets. Although the expenses for the technology have decreased by almost 50% over the last four years, broadcasting to 12 sites across seven time zones is still a costly undertaking. In addition, speaker expenses usually account for 1/5 of the budget.

Given this substantial capital outlay to produce and broadcast the NTS, sponsorship is key to the financial success of the program. Over the four NTS to date, sponsorships have covered speakers' fees and 10% of production costs.

Another major challenge in organizing the NTS is obtaining a consensus from all participating sections on speakers and topic. Sections not only have individual education agendas, but each section also has a different target audience with specific needs. To accommodate most sections' educational calendars and professional development needs, planning a symposium's content usually starts one year in advance.

Developing a strategy to market the NTS to an audience that is used to interacting with "live" speakers is also a major challenge facing the telecast organizers. Although this problem has diminished over the last four years, it is still an obstacle to effective marketing, and unfamiliarity with the technology still makes it difficult to attract a wide audience. Currently, CIPS is concentrating on a marketing strategy that communicates how the technology works, emphasizes interesting speakers, and demonstrates the educational and professional benefits of attending the symposium.

* Communications Coordinator of the Canadian Information Processing Society

t Professional Development Coordinator

SHRINKING THE WORLD WITH E-MAIL*

by Mr. Chris Guy (Z4)**

A few weeks ago, I was engaged in a game of telephone tag with *Peter Davies,* who is the President of the Computer Society of South Africa (CSSA). He called me, I wasn't in, he left a message. I called him, he wasn't in, I left a message. This went on for some days. Finally, getting somewhat irritated with our mutual inability to communicate by telephone, I left a message suggesting that he actually send me an e-mail message. Back came an e-mail message saying that he had been invited to speak at a conference in Namibia, but he couldn't make it, so could I fill in for him? I sent a message to our travel agents, asking them to book the flight. Then another message arrived asking whether I could contribute the Guest Writer piece for *Computers & Communications in Africa,* which is what you're reading now. All this has been achieved by e-mail, without my speaking to, or meeting with, any of the people involved. I still haven't even spoken to Peter Davies.

I have used a company e-mail system for the last ten years. But it is only recently that the rest of the world seems to have woken up to the use of e-mail. It is even more recently that different e-mail systems have started talking to each other.

About a year ago, I proposed that the CSSA should start an initiative to enable members to communicate with other members by e-mail. After all, the members of any society should have some interests in common, and consequently there should be a need to communicate with each other.

Once a significant base of members with e-mail facilities has been established, we can move on to offer such things as bulletin boards and electronic forums. E-mail also enables members to participate in such things as the Working Groups of **IFIP** without having to finance the cost of attending meetings overseas. It is in these areas that digital electronic communication shows its true strength, since most of the communication described above could have been achieved with

continued on page 12

* This article has been adapted from a "Guest Writer" presentation in *Computers & Communications in Africa* and is reprinted here with their permission.

** representative to the **IFIP** GA from South Africa

BRA UER IS PRESIDENT OF EUROPEAN ASSOCIATION FOR THEORETICAL COMPUTER SCIENCE

In July 1994, at the 21st International Colloquium on Automata, Languages and Programming (ICALP) in Jerusalem, ***Prof. Wilfried Brauer*** was elected president of the European Association for Theoretical Computer Science (EATCS). ***Prof. Brauer,*** the German representative to **IFIP** and a vice-president, was General Chairman of **IFIP** Congress '94 and chairman of the International Program Committee for Congress '92, and is Cognizant Officer of the Specialist Group on Foundations of Computer Science (SG14). The EATCS has a close relationship with SG14.

EATCS was founded in 1972. Its aim is to facilitate the exchange of ideas and results among theoretical computer scientists and to stimulate cooperation between the theoretical and the applied communities in computer science. At present, EATCS has over 1600 members from 51 countries: approximately 1200 members from 29 European nations, and the remainder from the Americas, Africa, Asia, and Australia.

The major activities of EATCS are

- organizing ICALP. The papers presented are of very high quality, including all topics in theoretical informatics, from computability theory to models of concurrency and robotics. Typical attendance is 150 to 200 persons.
- publishing the EATCS Monographs in Theoretical Computer Science, the *Bulletin of the EATCS,* and the journal *Theoretical Computer Science*
- awarding the annual Gödel Prize for outstanding papers in the area of theoretical computer science (sponsored jointly by the Special Interest Group on Algorithms and Computing Theory of the U.S. Association for Computing Machinery)

(It is interesting to note that for ICALP 95, which will take place in Szeged, Hungary, in July, the registration fee will be only $220 (U.S.) and hotel room $35. The registration fee includes reception, excursion, conference dinner, lunches, refreshments, a copy of the proceedings, and one year's membership in EATCS.) ■

WG13.3 continued from page 6

on the design of interfaces for disabled people, supported by the CEC TIDE programme and WG13.3. WG13.3 also joined with TC9/WG9.2 and others in supporting the September 1994 International Conference on Computers for Handicapped Persons in Vienna. [See the article on page 6.] Possible ways to contribute to the 1995 INTERACT **(IFIP** International Conference on Human-Computer Interaction) and IEEE Conference on Systems, Man and Cybernetics are being pursued.

WG13.3 looks forward to collaboration with other interested **IFIP** WGs and individual designers who are keen to promote the concept of universal accessibility. ■

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E-MAIL continued from page I1

simple telephone answering machines. (Answering machines, however, don't provide a permanent record nor permit forwarding or editing of messages.)

Yet another aspect to this initiative is that right now South Africa has a great need to re-establish effective but affordable lines of communication with other countries, particularly with other countries in Africa.

The response from my Executive Council was: "Good idea. Do it!"

The South African Experience

This wasn't quite as easy as it might sound. Our first idea was to identify a service provider. We would then inform all our members, who would rush out, buy modems, and sign up with the service provider. That didn't happen, partially because a number of our members already had access to various e-mail facilities.

Once we recognised this fact, we realised that the most urgent task was to build critical mass. So we started compiling a directory of members with e-mail addresses. The minimum requirement is that the member must have either direct access to the Internet, or at least access via a gateway. At the moment, this is where we are, and the response so far has been extremely positive.

Our next step is to identify a number of different service providers and inform those members who do not already have an e-mail address how they can obtain one. In other words, the CSSA must act as a facilitator. This step is in progress now.

As we pursue this initiative, we are increasingly aware that this is not a trivial task. It has taken a lot of effort, and we are constantly learning as we go along. But the response has been overwhelmingly enthusiastic, and we are beginning to experience a snowball effect as people become aware of what we are trying to do and want to become part of it themselves.

Those who want more information about accessing the Internet system in their countries can acquire a primer describing how to access the Internet from many nations around the world. Copies (on diskette, as hardcopy, or via e-mail) are available to members of the IFIP community from

Mr. Howard Funk
tel: 1 (914) 232-9375
fax: 1 (914) 232-3530
e-mail: funk@vnet.ibm.com ■

National Abbreviations Used in Newsletter

A	Austria	E	Spain	NL	The Netherlands
AUS	Australia	GB	United Kingdom	S	Sweden
BG	Bulgaria	IL	Israel	SF	Finland
CDN	Canada	IRL	Ireland	USA	U.S.A.
CH	Switzerland	J	Japan	ZA	South Africa
D	Germany	N	Norway	ZW	Zimbabwe
DK	Denmark				

Essential reading from
CHAPMAN & HALL
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IFIP TITLES

Advanced CAD/CAM Systems

State-of-the-art and future trends in feature technology

R Soenen, Laboratory of Industrial and Human Automatics, University of Valenciennes, France and **G Oiling,** Chrysler Corporation, USA

This book presents a state-of-the-art review of feature techniques in CAD/CAM, outlining recent evolutions and promising research opportunities. It presents a selection of the most representative contributions of an international working conference arranged by the International Federation for Information Processing, held in Valenciennes, France, in May 1994. The key feature modelling issues addressed are organisation, management, representation, recognition and validation.

The book is essential reading for researchers in the field of CAD/CAM, as well CAD/CAM software developers who need to anticipate end-user requirements. The book will also prove a valuable resource to production managers and engineers in industry.

Contents: Organisational aspects. Management aspects. Representation aspects. Recognition aspects. Validation aspects.

December 1994: 234x156: 288pp, 160 line illus: 1 halftone inns:
Hb: 0-412-61730-7: £55.00

Software Quality and Productivity

Theory, practice, education and training

M Lee, Department of Information Systems, City Polytechnic **of** Hong Kong, **B Z Barta,** Ministry of Education, Haifa, Israel and **P Juliff,** Deakin University, Victoria, Australia

As the world becomes increasingly dependent on the use of computers, the need for quality software which can be produced at reasonable cost increases. These proceedings brings together the work of leading researchers and practitioners who are concerned with the efficient production of quality software. Key topics addressed include: requirements, design and development methodologies; object-oriented analysis, design and development; software process and capability; project management; quality, reliability and standards; specifications, metrics, assessment; reusability; intergrated environment. CASE tools; education and training.

Researchers and practitioners, as well as students in the broad area of software engineering, will find this book invaluable.

Contents: Preface. Keynote papers. Requirements, design and development methodologies. Object-oriented analysis, design and development Software process and capability . Project Management. Duality, reliability standards. Specifications, metrics, assessment, Reusability . Integrated environments , case tools. Education and training.

December 1994: 234x156: 416pp, 45 line illus, 5 halftone illus:
Hb: 0-412-62960-7: £56.00

Protocol Specification, Testing and Verification XIV

Edited by **S Vuong** and **S T** Chanson, both of University of British Columbia, Vancouver, Canada

This volume presents the latest research worldwide on communications protocols, emphasising specification and compliance testing. It presents the complete proceedings of the fourteenth meeting on 'Protocol Specification, Testing and Verification' arranged by the International Federation for Information Processing and held in Vancouver, Canada, in August 1994.

As computer networks proliferate, their protocols also become more diverse and complex. Formal methods and tools have thus become essential in all phases of the protocol design process. This book contains a selected set of papers which address various important topics in protocol engineering, including FDT-based protocol specification and design methodology, theoretical issues as well as practical methods and tools for protocol testing, and modelling and verification of realtime systems.

A wide range of contributors drawn from industry and the universities in North America, Europe and the Pacific Rim countries provide detailed insights into the latest research directions in this crucial area for communications development.

Contents: Preface. Committee members and invited speakers. List of referees.Full **Papers.** Session one FDTs and enhancements. Invited address I. Session two verification methodology based on FDTs. Session three testing-architecture. fault coverage and interoperability. Session four protocol specification and design methodology. Invited address H. Session five testing • theoretical issues. Session six verification methods. **Short papers.** Session seven modelling and verification of realtime systems. Invited address HI - abstract. Session eight testing - tools and methods. Session nine FDT-based design, specification and implementation. Index of contributors. Keyword index,

November 1994: 234x156: 416pp, 145 line illus:
Hb: 0-412-63640-9: £50.00

Information Technology in Educational Management

B Barta and Y Gev, both **of** Ministry of Education, Culture and Sport, Israel, and **M Telem,** School of Education, Tel Aviv University, Israel

This volume reviews the state-of-the-art in information technology in educational management with emphasis on research, approaches, methodologies, applications and tools. It presents the complete proceedings of an international working conference arranged by the International Federation for Information Processing and held in Jerusalem, Israel in July 1994. Most of the issues presented relate to the schooling system - primary and secondary - with a few papers relating to higher education.

Subjects covered by this volume include: general approaches and basic issues; description of actual systems around the world; staff and teachers; training, support and updating; educational decisions support systems; use of telecommunication and voice response systems; human resources management; geographic planning of educational systems.

All those concerned with information technology in educational management will find this book of particular interest, especially those policy makers, heads of department and senior staff dealing with planning and running of educational systems, as will teaching staff and system designers.

- *discusses the pedagogical and educational aspects of ITEM - ideal for use in both education and IT areas*
- *addresses use of software packages and educational decision support systems - provides practical advice*
- *covers applications of ITEM from class scheduling to financial support*

Contents Pretace. Issues in information technology in educational management. Implementation status - national reports. Higher education. Educational decision support systems. Specific applications. Panels and discussions summaries. Index of contributors. Keyword index.

December 1994: *234x156: 264pp, 40 line illus: Hb: 0-412-62090-1: £45.00*

Reliability and Optimization of Structural Systems

R Rackwitz, Technical University, **Munich, Germany**

The 6th meeting sponsored by IFIP WG 7.5, on reliability and optimisation of structural systems took place in September 1994 in Assisi, Italy. This book contains the papers presented at the working conference and topics include reliability of special structures, fatigue, failure modes and time-variant systems relibility.

- *present up-to-date research including practical real-world examples based on the contributors' experience*

February 1995: 234x156: 352pp: Hb: 0-412-63630-1: £50.00

Benchmarking: Theory and Practice

A Rolstadås , Department of Production and Quality Engineering, TU Trondheim, Norway and President of IFIP

This volume reviews the methods and techniques of benchmarking, evaluates the ways of implementation and discusses industrial experience and requirements. The aim is to generate a generic benchmarking approach and propose future research topics within the field.

January 1995: *234x156: 408pp, 150 line illus: Hb: 0-412-62680-2: £49.00*

Integrating Information Technology into Education

Edited by **D** Watson and **D Tinsley**

This book takes a forward look at the issue of integration of information technology and related problems of quality. It discusses current developments in society and education influencing integration and the successes and failures in existing practice. It covers the perspective of teachers, looking at their roles and concerns and also that of the learners, studying their expectations of and behaviour in an integrated environment. The organization and management of integrated environments is also covered.

February 1995: 234x156: c.336pp, 40 line illus, 32 halftone illus:
Hb: 0-412-62250-5: £49.00

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R V Ragahavan
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CALENDAR OF EVENTS

(continued from page 16)

Event	Date	Location	Sponsored by
Work. Conf. on *Information Technology and Changes in Organizational Work*	7-9 Dec 95	Cambridge, U.K.	**IFIP** WG8.2
Third Intl. Conf. on *Achieving Quality in Software — AQuIS'96*	24-26 Jan 96	Florence, Italy	**IFIP** WG5.4
Work. Conf. on *International Office of the Future: Design Options and Solution Strategies*	9-11 Apr 96	Tucson, AZ, U.S.A.	**IFIP** WG8.4 U. of Arizona
Work. Conf. on *Impact of Information Technology from Practice to Curriculum*	Apr 96	Neve-Ilan, Israel	**IFIP** WG3.2 WG9.5 et al.
Work. Conf. on *Domain Analysis and Modelling for Interactive Systems*	9-12 May 96	Geneva, Switzerland	**IFIP** WGI3.2 WG8.I
Twelfth Intl. Open Conf. on *Information Systems Security: Facing the Information Society of the 21st Century — IFIP/SEC'96*	21-24 May 96	Island of Samos, Greece	**IFIP** TC11 Greek Comp. Soc. Cyprus Comp. Soc.
Thirteenth *IFAC World Congress '96*	1-5 Jul 96	San Francisco, CA, U.S.A.	IFAC
Work. Conf. on *Place of Information Technology in Management Education*	8-12 Jul 96	Melbourne, Australia	**IFIP** WG3.4 Deakin U.
Fourteenth *IFORS World Congress*	8-13 Jul 96	Vancouver, B.C., Canada	IFORS
IFIP Congress '96 — Fourteenth World Computer Congress	**2-6 Sep 96**	**Canberra, Australia**	**IFIP**
Work. Conf. on *Mathematical and Scientific Computing: Quality of Numerical Software*	96	Oxford, U.K.	**IFIP** WG2.5
Fourteenth *IMEKO World Congress*	2-h Jun 97	Tempaere/Helsinki, Fin.	**IMEKO**
IFIP Congress '98 — Fifteenth World Computer Congress	**23-29 Aug 98**	**Vienna, Austria, and Budapest, Hungary**	**IFIP**

The **IFIP** Secretariat can furnish details of most of the events listed. The schedule of **IFIP** administrative meetings is below.

FUTURE IFIP MEETINGS

GENERAL ASSEMBLY AND COUNCIL (and related meetings)

Council	5-9 Mar 95 (Sun.—Thurs.)	New York, NY, U.S.A.
GA	6-10 Sep 95 (Wed.—Sun.)	Calgary, Canada
Council	3-7 Mar 96 (Sun.—Thurs.)	South Africa
GA	(contiguous to **IFIP** Congress '96)	Canberra, Australia
GA	(contiguous to **IFIP** Congress '98)	Vienna, Austria, or Budapest, Hungary

TECHNICAL COMMITTEE AND WORKING GROUP MEETINGS

WG2.1	23-27 Sep 95	Ulm, Germany
WG2.2	13-17 Jun 95	Amsterdam, The Netherlands
WG2.3	24-28 Jul 95	Ithaca, NY, U.S.A.
WG2.4	6-10 Jun 95	near Pittsburgh, PA, U.S.A.
	Apr 96	The Netherlands
	97	North America
WG2.9	23-25 Mar 95	Hampshire, U.K.
TC3	29-30 Jul 95 (with WCCE'95)	Birmingham, U.K.
	Aug—Sep 96	Australia (Canberra?)
WG3.6	26 Jul 95 (during WCCE'95)	Birmingham, U.K.
TC5	15 May 95	Beijing, China
WG5.11	18-19 Apr 95 (with WG5.7 conf.)	Galway, Ireland
	Nov—Dec 95 (with **IFIP/IFAC** conf.)	Queensland, Australia
TC6	30 Mar — 1 Apr 95 (after TELKOM conf.)	Johannesburg, South Africa
	Sep—Oct 95	Cambridge, U.K., or Palma, Spain
	first half 96	Montreal, Canada
	second half 96	Australia
TC8	24-25 Aug 95	Trondheim, Norway
	12-13 Apr 96	Tucson, AZ, U.S.A.
WG8.2	7-9 Dec 95	Cambridge, U.K.
	Dec 96	Cleveland, OH, U.S.A.
TC9	19-20 Aug 95	Copenhagen, Denmark
WG9.2	Sep 96 (with **IFIP** Congress '96)	Canberra, Australia
WG9.6	10-12 Mar 95	France
TC 10	14-15 Mar 95	Munich, Germany
WG10.2	95 (with conf.)	U.S.A.
WG10.4	Jun 95	California, U.S.A.
WG10.5	Apr 95	Japan
TC 12	95	Wroclaw, Poland
TC 13	25 Jun 95 (during INTERACT'95)	Lillehammer, Norway
SG14	Apr 95 (with Latin 95?)	Sao Paulo, Chile

This information is furnished to the *Newsletter* by the Secretariat. 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. Some meetings are scheduled in conjunction with Working Conferences, for which the conference dates are listed.

CALLS FOR PAPERS

Fifth **IFIP** Work. Conf. on **Dependable Computing for Critical Applications — DCCA-5**
27-29 Sep 95, Urbana-Champaign, IL, U.S.A.
papers due: 17 Mar 95
contact: Dr. Michele Morganti
ITALTEL — Central Research Labs
Via Reiss Romoli
1-20019 SETTIMO MILANESE (MI), ITALY
tel: +(39) 2-4388-7353, fax: +(39) 2-4388-7962
e-mail: morganti@settimo.italtel.it

Twelfth **IFIP** TC 1 I Intl. Open Conf. on **Information Systems Security: Facing the Information Society of the 21st Century — IFIP/SEC'96**
21-24 May 96, Island of Samos, Greece
papers due: 15 Jul 95
contact: Prof. Sokratis Katsikas
Univ. of the Aegean, Research Unit
30 Voulgaroktonou St.
Athens, GR-11472, GREECE
tel: +30-1-6442727, fax: +30-1-6448428
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CHANGES IN IFIP

Because a revised ***IFIP*** *Information Bulletin* will be distributed soon and the Geneva Secretariat personnel were busy transferring files and equipment to the new headquarters in Laxenburg, Austria, no Changes in IFIP column is included in this ***IFIP*** *Newsletter.*

CALENDAR OF EVENTS

Event	Date	Location	Sponsored by
Third Intl. Conf. *TELKOM/AFRICOM '95*	27-29 Mar 95	Johannesburg, S. Africa	CSSA IFIP TC6
Third Work. Conf. on *Information System Concepts — Towards a Consolidation of Views — ISCO-3*	28-30 Mar 95	Marburg, Germany	IFIP WG8.1 GI-FG 2.5.2 (EMISA)
Third Work. Conf. on *Visual Database Systems — VDB.3*	29-31 Mar 95	Lausanne, Switzerland	IFIP WG2.6
Second Intl. Symp. on *Latin-American Theoretical Informatics — LATIN'95*	3-7 Apr 95	Valpraiso/Vina del Mar, Chile	U. of Chile IFIP SG14 SCCC SBC EATCS
Work. Conf. on *Re-engineering the Enterprise*	20-21 Apr 95	Galway, Ireland	IFIP WG5.7 WG5.8
Workshop on *Personal Wireless Communications*	24-25 Apr 95	Prague, Czech Republic	IFIP TC6
Fourth Intl. Symp. on *Integrated Network Management — ISINM'95*	1-5 May 95	Santa Barbara, CA, U.S.A.	IFIP WG6.6 IEEE Comm. Soc.
Eleventh Intl. Open Conf. on *Computer Security — IFIP/SEC'95*	9-12 May 95	Cape Town, South Africa	IFIP TC11 CSSA
Fifth Intl. Conf. on *Computer Applications in Production and Engineering — CAPE'95*	16-18 May 95	Beijing, China	IFIP TC5 et al.
Workshop on *Algorithms & Architecture for Real Time Control — AARTC'95*	31 May — 2 Jun 95	Ostend, Belgium	IFAC IFIP WG5.4
Workshop on *Stochastic Methods and Global Optimization*	12-15 Jun 95	Vilnius, Lithuania	IFIP WG7.7
Workshop on *Formal Design Methods for Computer-Aided Design*	12-15 Jun 95	Berkeley, CA, U.S.A.	IFIP WG5.2
Intl. Symp. on *Environmental Software Systems — ISESS'95*	13-15 Jun 95	Malvem, PA, U.S.A.	IFIP WG5.11 et al.
Fifteenth Intl. Symp. on *Protocol Specification, Testing, and Verification — PSTV'95*	13-16 Jun 95	Warsaw, Poland	IFIP TC6/WG6.1
Fifth Intl. Conf. on *Human-Computer Interaction — INTERACT'95*	25-30 Jun 95	Lillehammer, Norway	IFIP TC13 NCS
Sixth Work. Conf. on *Database Applications' Semantics — DS-6*	30 May — 2 Jun 95	Stone Mount., GA, U.S.A.	IFIP WG2.6 Georgia Tech
Symp. on *Modelling and Control of National and Regional Economics*	2-5 Jul 95	Brisbane, Australia	IFAC IE IFIP WG7.6
Seventeenth Conf. on *System Modelling and Optimization*	10-14 Jul 95	Prague, Czech Republic	IFIP TC7 IFAC IFORS CSCI
Work. Conf. on *Modeling and Optimization of Distributed Parameter Systems with Applications to Engineering*	17-21 Jul 95	Warsaw, Poland	IFIP TC7/WG7.2 PAS
World Conf. on *Computers in Education — WCCE '95*	23-28 Jul 95	Birmingham, U.K.	IFIP TC3 Aston Univ.
Eighth IMIA World Congress on *Medical Informatics — MEDINFO'95*	23-28 Jul 95	Vancouver, B.C., Canada	IMIA
Ninth Work. Conf. on *Database Security*	13-15 Aug 95	Avery Point, CT, U.S.A.	IFIP WG11.3
Work. Conf. on *Engineering for Human-Computer Interaction — EHCI'95*	14-18 Aug 95	Grand Targham, WY, U.S.A.	IFIP WG2.7/13.4
Workshop on *Information Systems Development for Decentralized Organizations*	21-23 Aug 95	Trondheim, Norway	IFIP WG8.1 et al.
Intl. Conf. on *Intellectual Property Rights for Specialized Information, Knowledge, and New Technologies — KnowRight'95*	21-25 Aug 95	Vienna, Austria	Austrian Comp. Soc. IFIP et al.
Eighth Intl. Conf. on *Very Large Scale Integration — VLSI'95*	29 Aug — 1 Sep 95	Makuhari, Chiba, Japan	IFIP WG10.5
Intl. Conf. on *Computer Hardware Description Languages and Their Applications — CHDL'95*	29 Aug — 1 Sep 95	Makuhari, Chiba, Japan	IFIP WG10.2/10.5 et al.
Work. Conf. on *Managing Concurrent Manufacturing to Improve Industrial Performance*	11-15 Sep 95	Seattle, WA, U.S.A.	IFIP WG5.7
Sixth Conf. on *High Performance Networks — HPN'95*	11-15 Sep 95	Palma de Mallorca, Spain	IFIP WG6.4
Work. Conf. on *Communications and Multimedia Security*	20-21 Sep 95	Graz, Austria	IFIP TC6 TC11 Austrian Comp. Soc.
Joint Intl. Conf.: *Modelling Techniques and Tools for Computer Performance* and *Measuring, Modelling, and Evaluating Computing and Communication — PT'95/MMB'95*	20-22 Sep 95	Heidelberg, Germany	GI IFIP WG7.3 et al.
Fifth Work. Conf. on *Dependable Computing for Critical Applications — DCCA-5*	27-29 Sep 95	Urbana, IL, U.S.A.	IFIP WG10.4, TC11 lEE TC-FTC EWICS U. Ill.
Eighth Symp. on *Information Control Problems in Manufacturing — INCOM'95*	4-8 Oct 95	Beijing, China	IFAC IMACS IFORS ISPE IFIP
Intl. Conf. on *Computer Safety, Reliability and Security — SAFECOMP'95*	11-13 Oct 95	Belgirate, Italy	IFIP WG5.4 EWICS TC7 et al.
Work. Conf. on *Diffusion and Adoption of Information Technology*	14-17 Oct 95	Oslo, Norway	IFIP WG8.6
Seventh Open Conf. on *Formal Description Techniques on Distributed Systems and Communication Protocols — FORTE'95*	17-20 Oct 95	Montreal, Quebec, Canada	IFIP WG6.1
First Workshop on *Knowledge-Intensive CAD — KIC-1*	Oct 95	Helsinki, Finland	IFIP WG5.2
Intl. Work. Conf. on *Upper Layer Protocols, Architectures and Applications — ULPAA '95*	6-8 Dec 95	Sydney, Australia	IFIP TC6 WG6.5 et al.

(continued on page 15)

IFIP Congress '96 — 14th World Computer Congress	2-6 Sep 96	Canberra, Australia	IFIP
IFIP Congress '98 — 15th World Computer Congress	23-29 Aug 98	Vienna, Austria and Budapest, Hungary	IFIP

This calendar information is furnished to the *Newsletter* by the Secretariat. It contains only approved IFIP events, arranged by local Organizing Committees. IFIP does not assume any financial or legal liability. The Secretariat can furnish details of most of the events listed. Please see page 15 for a schedule of IFIP administrative meetings.