IFIP newsletter
International Federation for Information Processing

Editor:
Dr. Jack L. Rosenfeld

Distributed by
IFIP Secretariat

Vol. 11, no. 3; September 1994

Greetings to the Delegates of IFIP Congress '94, the 13th World Computer Congress

I welcome all participants to a completely new type of **IFIP** Congress! You are about to experience a challenging program — in the sense that your contributions, together with those of all other delegates, will result in a Congress message. You are expected to work actively, and not *only* to listen to condensed presentations but to ask questions now and then.

The Congress theme in itself is formidable: "Computer and Communications Evolutions — the Driving Forces." The theme also indicates that the information technology industry faces challenges. At this Congress, you are invited to discuss, from different viewpoints, how these challenges should be met.

You can select one of the five interlinked tracks, and within each of these, participate in three different phases. The first phase, the *learning phase*, contains traditional papers — invited and submitted. The links among the five tracks are identified. These links represent strategic challenges, which will be discussed during the second phase, the *assessment phase*. A number of issues arise from the strategic challenges, such as "How much is safety worth?" In the third phase, the *feedback phase*, key problems and their solutions will be formulated, resulting in a number of "action agendas." You are expected to participate in the creation of these action agendas.

The **IFIP** Congress offers an excellent opportunity to meet with the world's leading computer professionals. As a participant, you should take advantage of this and use the opportunity to make new and stimulating acquaintances.

IFIP is proud to offer you excellent Congress facilities in Hamburg, and I thank the German Computer Society (Gesellschaft fiir Informatik e.V.) and its representatives, who have worked hard to make your stay a pleasant one. I also extend **IFIP's** warmest thanks to all who have volunteered so much time and effort to sow the seeds of the program. Now it is up to you to harvest it!

I wish you a challenging and fruitful Congress.

Prof Asbjørn Rolstadds
IFIP President

BUSINESS PROCESS RE-ENGINEERING

TC8 Conference in Australia

*by Dr. Bernard Glasson (AUS)**

Business process re-engineering is the restructuring of organisational processes through the innovative use of information systems and technology (IS/T). The aim is to refit or revamp the organisation to survive today's economic downturn and to emerge, refreshed and revitalised, to meet its social obligations and accept its economic challenges into the next century. Effective business process re-engineering requires an integrated approach to IS/T research, development, application, and education.

The IS opportunities and challenges facing business process re-engineers revolve around integration. Too often in IS/T

* vice-chairman of TC8

continued on page 10

CONTENTS

Greetings from **IFIP** President 1
Business Process Re-Engineering 1
The German Computer Society 2
Gotlieb to Receive First Auerbach Award 3
Conf. on Intellectual Property Rights 4
Conf. on Computer Hazards 4
Aims and Scopes of New WGs 5
Technical Committee TC5 Summary 6
Hörbst to be Co-chair of **IFIP** Cong. '96 . 8
Software Quality and Productivity 8
Nominations for 1995 Namur Award 9
Obituary: Acad. Anatol Dorodnicyn 10
WG3.1 Designs UNESCO Curriculum ... 13

National Abbreviations 9
Changes in **IFIP** 9
Calls for Papers 14
Future **IFIP** Meetings 14
Calendar of Events 16

IFIP NEWSLETTER

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

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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.*

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THE GERMAN COMPUTER SOCIETY

Twenty-five years ago, the German Computer Society (Gesellschaft für Informatik e.V., or GI), was founded in Bonn, in order to promote research and education (including continuing education) in informatics and its applications. The 18 600 Individual and 330 corporate members come from the research, educational, industrial, and applications sectors, and also include students of informatics.

To achieve its objectives, the society organizes scientific events and exhibitions, participates in national and international scientific events, promotes scientific publication, organizes Divisions and Special Interest Groups, cooperates with standards bodies and develops standards, develops position papers and comments on questions related to the informatics profession, including guidelines for education, promotes informatics education, including non-university education, and informs the public about questions of information processing and informatics.

Scientific Work

Scientific work within GI is done by more than 200 Expert Committees, Special Interest Groups, and Working Groups, which are combined into nine Divisions:

- Foundations of Informatics
- Artificial Intelligence
- Software Technology and Information Systems
- Telematics and Computer Architecture
- Information Technology and Technological Applications
- Business Informatics
- Informatics in Law and Public Administration
- Informatics in Education and the Professions
- Informatics and Society

Twenty-five regional groups organize many regional events. In addition, they serve members and other interested individuals, as far as professional and regional questions are concerned.

The scientific journal *Informatik Spektrum,* which is published by Springer, is the organ of GI. It contains papers about informatics and its applications and is supplemented by *Informatik Magazin,* which contains reports about informatics and related topics.

The German Informatics Academy (Deutsche Informatik Akademie GmbH), located in Bonn, initiated and supported primarily by GI, offers a high-level program of continuing education in informatics. It offers innovative courses and seminars to German and foreign informatics professionals.

Affiliations

In 1990, the International Conference and Research Center for Computer Science (IBFI) in Dagstuhl Castle was founded. It is jointly organized by GI and the Universities of Saarbruecken, Kaiserslautern, and Karlsruhe. Financial support comes from the Saarland and Rheinland-Palatinate. The goal of IBFI, research in computer science at an international level, advanced education with high standards, and stimulating the exchange of knowledge between research and practice, has already been reached, to a great extent.

GI has a seat in the council of the Werner-von-Siemens-Ring foundation and is a member of the Deutscher Verband Technisch-Wissenschaftlicher Vereine, which comprises all technological associations in Germany. GI is also a member of the Council of European Professional Informatics Societies (CEPIS), where questions concerning the European Union and informatics are handled.

Every two years, GI awards the Konrad Zuse Medal for outstanding contributions in computer science, in honor of the famous German computer inventor, who is an honorary member of GI. Also, GI is one of the main supporters of the Bundeswettbewerb Informatik, an informatics contest for students supported by the Federal Ministry of Science and Education, well accepted by the Federal Conference of States Ministries for Education, and under the patronage of the Federal President.

Shortly after its founding, GI joined **IFIP.** It is a Full Member and is active in all **IFIP** Technical Committees. GI is very proud of the honour of being host of **IFIP** Congress '94 in Hamburg, as well as the **IFIP** General Assembly that will follow.

PROFESSOR CALVIN C. GOTLIEB TO RECEIVE FIRST ISAAC L. AUERBACH AWARD

Presented at IFIP *Congress '94*

The first **IFIP** *Isaac L. Auerbach* Award will be presented to *Prof. Calvin C. (Kelly) Gotlieb (CDN)* at the opening ceremony of **IFIP** Congress '94, in Hamburg on 28 August, by *Mrs. Carol Auerbach (USA),* widow of the key founder of **IFIP.** *Mr. Auerbach (USA)* died in December 1992. The Award is to be presented every other year "to the individuals whose service in support of **IFIP** in its mission is deemed by their peers to be extraordinary." The recipients are nominated by Full Member societies of **IFIP;** the selection is made by the **IFIP** Executive Board. A medallion and cash award will be conferred.

Prof. Gotlieb has been called the "Father of Computing" in Canada. His promotion of information technology and support of national and international forums have had far-reaching influence. He has made significant original contributions in numerous areas of computer science. Throughout his lengthy academic career, he has provided leadership in education, both at home and abroad.

He received the B.A., M.A., and Ph.D. degrees in physics from the University of Toronto. His work with computational science began in 1945, immediately after he returned to the University from wartime service. In 1948, *Prof. Gotlieb,* with *Dr. Josef Kates* and *Dr. Harvey Gellman,* formed the first team in Canada assembled to design and construct digital computers and to provide computing services.

Not only did he promote the use of computing technology, but he also facilitated the exchange of ideas among computer professionals. He was a founding father of the Canadian Information Processing Society (CIPS) and served as its president from 1960 to 1961. In 1988, CIPS established the *C.C. Gotlieb* Award, which is presented each year to a member who is widely recognized for outstanding contributions to CIPS.

Major Role in IFIP

Prof. Gotlieb contributed to the planning of the First International Conference on Information Processing (the first **IFIP** Congress, sponsored by UNESCO in 1959). With *Mr. Auerbach* and others, he participated in the discussions leading to the foundation of **IFIP.** *Prof. Gotlieb* was Canada's representative from **IFIP's** inception in 1960 until 1966. During IFIP's formative years, he served on numerous committees, including the International Program Committees for four **IFIP** Congresses. In 1974, he received the Silver Core Award for service to **IFIP.** He has presented papers at IFIP Congresses and was an invited speaker twice.

Professor Gotlieb

His book, *Social Issues in Computing* (1973). co-authored with *Prof. Alan Borodin (CDN),* put him among the first computer scientists to recognize how computing would transform our daily lives. In 1975, his intense interest in the impact of computing on all aspects of society prompted him to organize the **IFIP** Technical Committee on Relationship between Computers and Society (TC9), which he chaired until 1981.

Professor Gotlieb and Mr. Auerbach in 1965

Prof. Gotlieb has long been active in the Association for Computer Machinery (ACM). He was program chair for the ACM National Conference in 1948, co-founder and the second Editor-in-Chief (1962-65) of the *Communications of the ACM,* and the second Editor-in-Chief of the *Journal of the ACM* (1966-69).

Scientific Contributions

His first book, *High-speed Data Processing* (1958), co-authored with *Prof. Pat Hume (CDN),* was one of the first books to introduce the benefits of computing technology to business enterprises. His paper "General Purpose Programming for Business Applications" (1960) was the first paper in the first volume of the annual series *Advances in Computers,* now in its 34th year. In addition, through his considerable research and over 100 publications, he has contributed to the fields of graph theory, combinatorial optimization, time-tables, file and data structures, abstract data types, computer system performance, resource-allocation policy, information retrieval, library automation, and privacy. His deep involvement in the acquisition of a wide range of computers and his work in managing large computer systems have placed him among the world's leading experts on economic factors relating to computing.

Prof. Gotlieb, throughout his long career as a university professor, has taken a keen interest in fostering the growth of education in information processing. In 1948, he was co-founder of the original Computation Centre at the University of Toronto. Three years later, he established the first university credit course on computing in Canada and offered the first Canadian graduate courses in computing the following year. In 1964, he founded the first graduate department of computer science in Canada, at the University of Toronto.

Prof. Gotlieb has been recognized with a number of prestigious awards and honorary doctorates. He is a fellow of the Royal Society of Canada, the British Computer Society, and the ACM. ■

NEW TELEPHONE NUMBERS FOR NEWSLETTER EDITOR

Effective 26 September, the following telephone numbers should be used to contact the ***IFIP*** *Newsletter* Editor:

tel: 1 (914) 945-2362
fax: 1 (914) 945-2018

CONFERENCE ON INTELLECTUAL PROPERTY RIGHTS

Because of the ever-increasing proliferation of information by improved communication means and computer systems, and because of the problems associated with this proliferation, the **IFIP** Technical Committee on Relationship between Computers and Society (TC9) is sponsoring a conference to deal with these issues. Entitled KnowRight '95 — International Congress on Intellectual Property Rights for Specialized Information, Knowledge and New Technologies, it is being organized by the Austrian Computer Society and will be held in Vienna 21-25 August 1995. Co-sponsors include the Austrian National Commission for UNESCO, CEPIS, UNIDO, ISO, FID, and TermNet.

Computer hardware and software technology increasingly allow us to record and process complex information and knowledge in various languages and in different forms of representation. The exponential growth of information and knowledge requires more and more sophisticated computer applications, especially networking and multimedia. **In** the course of these developments, the increasingly unrestricted possibilities for manipulating representations of information and knowledge make it difficult to distinguish clearly between the original and its offspring. Moreover, the transfer of information via information highways will require legal and organizational means to assist the transfer of related rights.

Research and development of information and knowledge systems exist everywhere in the world. New databases are created that lead to an increased need for retrieval languages. At the same time, the world of information and communication becomes more and more multilingual, but the methodology for managing complex information structures lags behind the development of information technology itself. In this context, the legal provisions concerning the protection of intellectual property rights are still based on traditional hardcopy-oriented technology. New representation methods and technologies are not sufficiently covered by these provisions. Information users and customers may welcome this development, claiming that specialized information and knowledge is the intellectual property of all mankind. The originators of specialized information and knowledge, however, may be very interested in the maximum protection of their intellectual property.

Increasingly, information and knowledge are created in international cooperation networks, with division of labor and shared efforts transcending national borders. National legislation and jurisdiction concerning intellectual property, however, show substantial discrepancies and are equally inadequate everywhere. This calls for standardization at the international level.

Legal measures, however, do not suffice. Technical methods and tools — not to mention ethics — have to contribute to the solution of the problems outlined above. There is clearly a need for a conference with an interdisciplinary and integrated approach at the international level, to deal with the highly complex and unsatisfactory situation with regard to intellectual property for specialized information and knowledge, in order to prepare the ground for adequate solutions.

Topics planned for KnowRight '95 are

- Knowledge bases, databases, information, and communication services
- KnowRight-related aspects of software
- Terminology and lexicography
- Scientific-technical publishing
- Multimedia
- Graphics and design

In addition, tutorials and introductory seminars will precede the conference.

Prof. Klaus Brunnstein (D), chairman of TC9, is chairman of the International Program Committee of the conference, and *Dr. Walter Grafendorfer (A),* an **IFIP** trustee, is Organizing Committee chairman. For further information, see the Calls for Papers column on page 14.

CONFERENCE ON COMPUTER HAZARDS AND VULNERABILITY HELD IN BELGIUM

*by Mr. Jean Navez (B)**

The meeting of the **IFIP** Council in Brussels, Belgium, from February 28 to March 3, provided an opportunity to gather three specialists in the field of computer hazards and vulnerability and present a conference on this subject. The conference, with over 40 participants, was held during the afternoon of March 2 at the Royal Military Academy of Brussels, which housed the Council for its meeting.

Entitled Vulnerability, Risk, and Security in Informatics, the conference was introduced by *Prof. Asbjørn Rolstadås (N),* president of **IFIP,** who was presented by *Mr. Jean Navez,* president of the host society (F.A.I.B./F.B.V.I.), the Belgian Member society of **IFIP.**

The first speaker, *Prof. Jacques Berleur (B),* chairman of the **IFIP** Working Group on Social Accountability (WG9.2), presented a conceptual framework with the title "Risk and Vulnerability: Perspectives and Recommendations." After presenting an overview of the way people realize and feel risks related to the use of computers, he exposed his thesis, according to which the accepted structure of values and power plays a central role in the way we evaluate our vulnerability. He concluded with a proposal of various kinds of measures to be taken in order to reduce our vulnerability; those measures concern not only the technical, but also the legal, social, organizational, and other aspects of the systems involved.

The next speaker, ***Prof. Dr.*** *Klaus Brunnstein (D),* chairman of the **IFIP** Technical Committee on Relationship between Computers and Society (TC9), talked about "Malicious Attacks in Information Technology (IT) Systems and Networks, and Preventive and Curative Measures." He gave detailed descriptions of a few examples of serious accidents that could be directly connected to the malfunctioning of computer systems. The part on "measures" was somewhat less detailed, but it mentioned a number of tips to the users of computers or the designers of systems for avoiding exposure to severe harm.

One may conclude from both speeches that our knowledge of the mechanisms of our vulnerability, which governs our abil-

continued on page 13

* Belgian representative to **IFIP**

The March **IFIP** Technical Assembly, meeting in Brussels, Belgium, approved three new Working Groups (WGs). Their Aims and Scopes (A&S) are printed here. In addition, the A&S of WG5.10 was revised in order to reflect the addition of "virtual worlds" to the WG5.10 title and charter. That ,A&S is also printed below.

WG8.6: Transfer and Diffusion of Information Technology

AIM

To foster understanding and improve research in the practice, methods, and techniques for the transfer and diffusion of information technology to the design of systems and to the development process.

SCOPE

- Diffusion, transfer, and implementation of both mature and immature information technologies and systems in organizations and among organizations, sectors, and countries.
- Transfer of technology to be incorporated in systems for customers and clients.
- Transfer of both system and development technologies to technologists, developers, managers, and sponsors of systems.
- Development of frameworks, models, and terminology for information technology transfer and diffusion.
- Identification of risk factors and barriers to success in technology transfer, and strategies for addressing them.
- Conditions or scenarios under which specific transfer and diffusion techniques are applicable.
- Methods to evaluate the efficiency, effectiveness, and value of technology transfer programs and approaches, including time and effort estimators and metrics.
- Organization design and process issues related to technology transfer and diffusion.
- Case studies of technology transfer and diffusion to provide instances to guide research, development, and practice.
- Standards and intellectual-property issues that inhibit or facilitate information technology transfer.

WG 10.1: CAST — Computer-Aided Systems Theory

AIMS

To explore problem areas and solutions in the development of tools for the application of systems theory in the field of computer systems and computer-based engineering systems. CAST research and development supplements current computer-aided design (CAD) research and development activities by providing applicable formal modeling methodologies to systems and circuit designers. By such goals, CAST research aims to provide the theoretical backbone for many methods and tools of interest to other TC10 Working Groups.

SCOPE

- Exploration of theoretical frameworks for formal specification of computer systems, both at component and system levels.
- Provision of formal methods and related tools for multi-level modeling of computer systems of different kinds.
- Realization of a method base to develop tools for the application of formal methods to functional design in microelectronics and computer systems.
- Support for the integration of different tools by providing a common conceptual basis.

WG10.7: Microsystems

AIMS

To explore problem areas and solutions in the development of miniaturized, intelligent, autonomous electronic control systems, working under severe real-time conditions in difficult operating environments (e.g., medical, automotive, environmental, and industrial control applications). A typical system will include sensors to capture electrical and non-electrical signals from the real-world environment, circuitry for signal conditioning and conversion, digital and analog signal processing, system control, communication to other systems, power supplies and smart power electronics, as well as actuators to close the feedback loop to the real-world environment.

SCOPE

- Methodologies and tools for formal and non-formal specification of complex heterogeneous systems. System, subsystem and component modeling and simulation. System design, verification, and test.
- Architectural concepts for innovative, complex heterogeneous systems. Interrelations between microtechnologies (microelectronics, micromechanics, microoptics, microfluidics), packaging and interconnection technologies, system technologies (system architecture, hardware-software codesign) and systems engineering (concurrent engineering, project management, design methodologies, and tools).
- Improvement of sensor/actuator performance through signal processing. Control of sensor and actuator arrays for performance, lifetime, or quality improvement.
- System-level design tools vs. component-level design tools. Design flow and data management, version control. Framework integration. Interface formats and standards.
- Mixed-mode, multi-level simulation for discrete and continuous systems. Component characterization and macromodeling. Simulation techniques for cross-coupled physical effects.
- Aspects of quality assurance for design, verification, and test. Safety aspects.

WG5.10: Computer Graphics and Virtual Worlds

AIMS

To promote and encourage the advancement of the fields of computer graphics and virtual worlds and their applications in technology.

SCOPE

- Graphics systems: architectures and workstations, user interfaces, graphics interfaces, VLSI for graphics.
- Graphics and CAD for engineering and scientific applications: electrical, electronic, mechanical, civil, and architectural engineering; robotics; virtual factories; cartography; transportation systems; etc..
- Graphics modeling and rendering: techniques for data capture, curve and surface modeling, surface and volume rendering, and simulation of natural phenomena.
- Graphics and multimedia: integration of text, graphics, vision, video, voice, and sound; communication and networking; storage and compression techniques.
- Virtual reality: virtual environments, 3D interaction, techniques of immersion, senseware, teleoperation, telepresence.
- Animating virtual worlds: physics-based animation, simulation of articulated bodies, facial animation, and virtual communication.
- Modeling and animating human beings for medical applications: understanding anatomy through virtual bodies, learning surgical techniques on solid, 3D, modeled humans.
- Artificial life in virtual worlds: autonomous synthetic actors, behavioral animation, models of decision-making processes, simulation of plants and animals, and computer viruses. ■

IFIP TC5: COMPUTER APPLICATIONS IN TECHNOLOGY

IFIP's Technical Committee on Computer Applications in Technology (TC5) is unlike any of the ten other **IFIP** TCs. One aspect of its uniqueness is the significant number of people from industry who belong to the TC or who participate in its conferences, workshops, and other events. Another aspect is the stress placed on the *application* of information technology. In addition, TC5 is one of only two **IFIP** TCs that publish scientific journals.

Although the TC5 title is rather general, the activity of the TC covers the total manufacturing process, from product specification, through the entire product life cycle, to the disposal of waste products. In the past couple of years, the scope of the TC has been expanded even further, to incorporate activities that go beyond manufacturing, e.g., computer graphics and application of information technology (IT) to the environment.

TC5 was founded in 1970 as the result of the effort of *Dr. Edwin Harder,* **IFIP** treasurer and U.S. representative. In 1969, he was chairman of a very successful joint conference between **IFIP** and IFAC (International Federation of Automatic Control) on PROgramming LAnguages for MAchine Tools (PROLAMAT) in Rome. Because the **IFIP** Working Groups that existed at that time were primarily theoretical and not interested in manufacturing, and because this was judged to be an important area within the scope of **IFIP,** it was decided that **IFIP** should form a TC in this area, while continuing its cooperation with IFAC. Thus, TC5 was inaugurated, and *Prof. Theodore J. Williams (USA)* was named the first chairman.

Williams rapidly formed Working Groups to carry out activities in the major fields of importance at that time: Transportation (WG.5.1, subsequently disbanded), Computer-Aided Design (WG.5.2), and Computer-Aided Manufacturing (WG5.3). The chairmen of the latter two WGs were *Mr. Jakob Vlietstra (NL)* and *Dr. Jozef Hatvany* ***(H),*** respectively. They lost no time in organizing events: in October 1992, a working conference on CAD was held in Eindhoven, the Netherlands, run by *Vlietstra,* and a second PROLAMAT conference was organized in Budapest, Hungary, in April 1973 by *Hatvany.*

The second TC5 chairman, *Mr. Vlietstra,* proposed a joint conference for all the TC5 WGs — Computer Applications in Production and Engineering (CAPE), which took place in Amsterdam in 1983. It was highly successful, with the top professionals in this field in attendance. The proceedings of that conference are still referred to in the scientific literature. Four other CAPE conferences have followed.

The third TC5 chairman, *Prof. Asbjørn Rolstadås (N),* who is now the president of **IFIP,** continued the work of his predecessors. In addition to forming new WGs, he introduced a unique and invaluable administrative measure: an annual meeting of the TC officers and WG chairmen, which was held in addition to the annual TC meeting. *Mr. Marco Tomljanovich (I)* succeeded *Prof. Rolstadås* in 1988 and continued to expand the scope of TC5. He, in turn, was followed by *Dr. Toru Mikami (J)* in 1993.

At the heart of TC5 is its WGs, which we now describe briefly.

WG5.2 on Computer-Aided Design covers a wide range of applications of computers to design problems: from huge oil-drilling platforms to tiny electronic circuits, from automobiles to aircraft. At the heart of the design-methodology activity is product modeling, which is common to virtually all the activities of TC5. Key concerns of WG5.2 include databases, software, knowledge systems, modularity, tolerances, and human-computer interaction. WG5.2 organizes frequent working conferences and workshops.

The WG on Computer-Aided Manufacturing (WG5.3) concentrates on the use of computers for discrete manufacturing. Stress is placed on process planning, i.e., choosing the optimum manufacturing process. The WG deals in robotics, expert systems, and a variety of other "hot" topics. WG5.3 continues to organize the very successful triennial PROLAMAT conferences; however, the name has been changed to Software for Discrete Manufacturing, to reflect the change that has occurred in the focus of the conference.

WG5.4 on Industrial Software Quality and Certification initially focussed on process control, and cooperation with IFAC was close. Now, the WG concentrates on the quality and correctness of software used in industry, as well as on programming for real-time processes. Software standards, testing, verification, and related issues are also considered.

(WG5.5 on Continuous Process Manufacturing was disbanded.)

The WG on Maritime Industries (WG5.6) deals with IT applications to all types of maritime industries, including ship design and construction, fisheries, and shipping companies. WG5.6 holds a pair of triennial conferences on Computer Applications in the Automation of Ship Operation, and on Computer Applications in Shipbuilding (ICCAS).

WG5.7 on Computer-Aided Production Management is close to the heart of *Prof. Rolstadås.* When he joined TC5 as the Norwegian representative in 1976, he strongly urged the establishment of a WG in production management. WG5.7 was founded in 1978, with *Rolstadås* as chairman. The WG, whose membership includes the world's leaders in this field, has remained productive, with several task forces organizing many small meetings. WG5.7 sponsors the triennial APMS conferences (Advances in Production Management Systems).

WG5.8 on Product Specification and Product Documentation is now being restructured.

WG5.9 on Computers in Food Production and Agriculture might be better entitled Advanced Technology in Agriculture and Food Production, since it deals with all applications of IT to its subject area, from economic systems to ecology. The WG is especially interested in computer modeling. This WG treats a topic important to developing countries.

WG5.10 on Computer Graphics and Virtual Worlds, established in 1987, deals with the entire field of computer graphics. A major component of WG5.10 activity is graphics related to CAD. Just recently, the scope of the WG was expanded to include "virtual worlds," including virtual reality, animating virtual worlds, modeling and animating human beings for medical applications, and artificial life in virtual worlds.

The newest WG in TC5, Computers and Environment (WG5.11), was established by *Mr. Tomljanovich* in 1991. It too has a scope that extends beyond manufacturing. Although a fledgling

continued on page 13

IFIP TECHNICAL COMMITTEE 5

Deals with applications of computers in industry, but is especially concerned with manufacturing and the use of computers in all aspects of the manufacturing process, beginning with product planning and continuing throughout the product life cycle.

TC5 Chairman: Dr. Toni Mikami
Position: Associate Senior Vice-President
Employer: NEC Corporation
Location: Tokyo, Japan
Interests: strategic and technological application of computers and communications, affecting manufacturing systems and organizations

TC5 Vice-Chairman: Prof. Dr. Detlef Kochan
Position: Professor of Production Automation
Employer: CEO, SFM — Gesellschaft zur Schnellen Fertigung von Modellen mbH
Location: Dresden, Germany
Interests: production automation, computer-aided manufacturing (CAD/CAM, CIM), solid freeform manufacturing

TC5 Secretary: Prof. Fumihiko Kimura
Position: Professor
Employer: Department of Precision Machinery Engineering, University of Tokyo
Location: Tokyo, Japan
Interests: CAD/CAM, geometric modeling, product modeling, virtual manufacturing

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Working Group 5.2: Computer-Aided Design Studies all aspects of the use of computers in product design.

WG5.2 Chairman: Dr. Michael Wozny
Position: Director, Manufacturing Engineering Lab.
Employer: National Institute of Standards and Technology
Location: Gaithersburg, MD, U.S.A.
Interests: design, CAD, rapid prototyping, geometry, computer graphics

Working Group 5.3: Computer-Aided Manufacturing Deals with discrete (as opposed to continuous) manufacturing. Process planning is a major concern.

WG5.3 Chairman: Dr. Laszlo Nemes
Position: Research Program Leader
Employer: Commonwealth Scientific & Industrial Research Organisation (CSIRO)
Location: Preston, Victoria, Australia
Interests: enterprise integration, control architectures, machine tool control systems

Working Group 5.4: Industrial Software Quality and Certification Deals with issues related to correct software for process control and real-time processes. Software standards and certificatinn are mainr icctlec

WG5.4 Chairman: Dr. Sandro Bologna
Position: Head of a Research Unit
Employer: Italian National Agency for New Technology, Energy, and the Environment (ENEA)
Location: Rome, Italy
Interests: software engineering, knowledge engineering, software safety, real-time embedded systems, decision-support systems

Working Group 5.6: Maritime Industries Deals with all aspects of computers applied to maritime industries.

WG5.6 Chairman: Mr. Malvin Villabø
Position: Deputy Managing Director
Employer: **MARINTEK**
Location: Trondheim, Norway
Interests: ship design, ship automation

Working Group 5.7: **Computer-Aided Production** Management Studies computer systems for the production management of manufacturing industries.

WG5.7 Chairman: Prof. Guy Doumeingts
Position: Director of GRAI/LAP
Employer: Bordeaux University
Location: Talence, France
Interests: production management, CIM, methodology for designing and implementing manufacturing systems, GRAI approach

Working Group 5.9: Computers in Food Production and Agriculture Is concerned with using computer power to model agricultural and food-production systems.

WG5.9 Chairman: Dr. Fred Robson
Position: Head of Farm Extension and Agricultural Policy
Employer: Royal Agricultural College
Location: Cirencester, U.K.
Interests: systems development, modeling of biological and policy systems

Working Group 5.10: Computer Graphics and Virtual Worlds Considers graphics related to computer-aided design, as well as other graphics issues and "virtual worlds."

WG5.10 Chairman: Prof. Jose Encarnação
Position: Professor of Computer Science
Employer: Technical University of Darmstadt
Location: Darmstadt, Germany
Interests: interactive graphics, computer graphics applications

Working Group 5.11: Computers and Environment Studies t pplications to enviornmental problems.

WG5.11 Chairman: Prof. Giorgio Guariso
Position: Professor of Systems Analysis
Employer: Politecnico di Milano
Location: Milan, Italy
Interests: environmental modeling, applications of simulation and AI, decision support systems

HORBST TO BE CO-CHAIR OF IFIP CONGRESS '96

At the March meeting of the **IFIP** Council, *Prof. Asbjørn Rolstadås (N),* the president of **IFIP,** announced the appointment of *Prof. Dr. Egon Hörbst (A),* who is chairman of the **IFIP** Technical Committee on Computer Systems Technology (TC10), as co-chairman of the International Program Committee (IPC) for **IFIP** Congress '96, which will be held 2-6 September in Canberra, Australia.

Prof. Hörbst , with experience in industry, a broad academic background, and a major role in **IFIP,** brings tremendous assets to the Congress leadership.

He was born in Innsbruck, Austria, in 1941 and earned his doctorate in mathematics from the University of Innsbruck in 1967. In 1970, he joined the Siemens AG, Munich, Corporate Research and Development Division, where he presently serves as Executive Director and head of the Department of Components and Devices.

In the past quarter century, he has worked in the areas of computer-aided design (CAD) software for electronic circuits, graphics systems for CAD programs, multiprocessor systems, bit-slice microprocessors, high-level-language systems, RISC architectures, and research and development management methodologies. He designed the VENUS CAD system for future VSLI circuitry, was project leader of the MEGA Logik project, and developed the ADVANCELL ASIC cell library. He has nearly 50 publications to his credit. He is also editor of *Informatik-Forschung and Entwicklung,* a journal published by Springer-Verlag. In addition, he has served as guest professor at several European universities.

Prof. Hörbst's work in **IFIP** dates back to 1980, when he joined the Working Group on System Description and Design Tools (WG10.2). In 1981, he and colleagues founded WG10.5 on Very Large Scale Integration, and he served as its chairman from 1985 to 1989. He was IPC chairman of the **IFIP** VLSI 85 conference and played a significant role for other major conferences. In 1989, he received the **IFIP** Silver Core Award in recognition of his service.

He and his wife Christine love skiing, tennis, and scuba diving.

Regarding **IFIP** Congress '96, he says, "We can see dramatic changes in the international information infrastructure, and we look forward to providing an exciting, innovative program for **IFIP** Congress '96. which will be focused on this theme and so be attractive to the Pacific Rim audience as well as to delegates from the rest of the world."

Prof. Hörbst joins *Dr. Prem Gupta (IND),* the other IPC co-chairman, and *Prof. Ashley Goldworthy (AUS),* chairman of the Organizing Committee, in leading **IFIP** Congress '96. For further information about the Congress, one may contact

IFIP Congress '96 Secretariat
do Australian Convention and Travel Services
GPO Box 2200
Canberra ACT 2601, Australia
tel: +61 6 257 3299, fax: +61 6 257 3256
e-mail: IFIP96@vallona.act.acs.org.au

CONFERENCE ON SOFTWARE QUALITY AND PRODUCTIVITY

ICSQP '94 to be Held in Hong Kong in December

As the world becomes increasingly dependent on the use of computers, the need for quality software that can be produced at reasonable cost increases. Yet the goal of improving software quality and productivity remains an elusive one. This is so in almost all application areas, including business. Software development is not yet an engineering practice.

It is now widely recognized that improving software quality and productivity requires more than just good programming practices. It entails a variety of issues and tasks centered on the process of software development, from abstract user-requirements analysis and modeling to machine-level coding and the education and training of software developers. The focus is now clearly on the entire software process instead of individual, isolated elements of software development.

In recognition of these issues, **IFIP's** Working Groups on Vocational Education and Training (WG3.4) and Industrial Software Quality and Certification (WG5.4) are organizing the First International Conference on Software Quality and Productivity (ICSQP '94): Theory, Practice, Education, and Training, which will be held 5-7 December 1994 in Hong Kong. The Software Quality Institute of Australia, the Hong Kong Computer Society, and the City Polytechnic of Hong Kong are co-sponsors. *Dr. Ben Barta (IL),* chairman of WG3.2, is chairman of the International Program Committee, and *Dr. Matthew Lee (HK)* and *Dr. S.L. Hung (HK)* are joint chairs of the Organizing Committee.

This conference aims to bring together researchers and practitioners who are interested in the efficient production of quality software, so that views across a variety of issues may be exchanged and a rich perspective on quality and productivity may be obtained. In addition, this conference will bring to the fast-growing Asia-Pacific region a much-needed focus on software quality and productivity. It is anticipated that this conference will become a biennial event. Papers presented will appear in the conference proceedings, published by Chapman & Hall, the new **IFIP** publisher.

For further information, please contact

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ICSQP '94 Programme Committee Co-Chair
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e-mail: ismatlee@cphkvx.cphk.hk

NOMINATIONS SOLICITED FOR 1995 NAMUR AWARD

The Namur Award is a biennial award accorded for an outstanding contribution, with international impact, to the awareness of social implications of information technology. The contribution may be in the form of a publication, design, lecture, or any other project. The Namur Award may also be granted for a special action or achievement within the scope of the Award. It may be granted to a person, group, or association. The purpose of the Award is to draw attention to the need for a holistic approach in the use of information technology, **in** which the social implications have been taken into account. The Award consists of a commemorative plate and a certificate.

The Namur Award is made by the **IFIP** Working Group on Social Accountability (WG9.2), upon the recommendations of its Award Committee. Anyone may nominate a candidate. (Current members of WG9.2. are not eligible.) All submissions, discussions, and votes relating to the Award are kept strictly confidential.

Well-considered nominations for the 1995 Award are now solicited. Nominations, with "Namur Award 1995" on the exterior, should be sent in a sealed envelope to the chair of the Namur Award Committee at the following address:

Dr. J. Holvast
Drakenstein 55
1121 HD LANDSMEER, the Netherlands.

The deadline for nominations for the 1995 Award is 1 November 1994; the winner will be selected at the WG9.2 meeting in January 1995.

The winner will be invited to a (special) WG9.2 meeting in Namur, Belgium, for the presentation of the Award. **It** will be hosted by dignitaries of the city of Namur and open to the public. The winner will be invited to give a lecture during this presentation.

Prior recipients of the Award are *Prof. Joseph Weizenbaum (USA)* in 1991 and *Dr. Riccardo Petrella* (Commission of the European Communities) in 1993. ■

CHANGES IN IFIP

NEW APPOINTMENTS

AFFILIATE MEMBER:

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(succeeding Dr. D.E. Walker)

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TC and WG MEMBERS:

WG2.6:
T. Dillon (AUS) W. Klas **(D)**

TC3: I. Kalas (SK)

TC5: I. Plander (SK)

TC8: A. Scheber (SK)

WG8.5: (revised membership list)

M. Bazewicz (PL)	A. Martino (I)
H. Bonin **(D)**	W. 011e **(GB)**
P. Bots (NL)	G. Quirchmayr (A)
E.N. El-Sayed (ET)	A. Schramm (A)
P. Drazan (NL)	D. Shapiro **(GB)**
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WG10.5:
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E. Hörbst (D) C. Svensson (S)
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TC11: M. Dupuy (F)
(succeeding G. Eizenberg)

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S. Kaplan (USA)	A.M. Pejtersen (DK)

ADDRESS AND OTHER CHANGES

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WG14.3 chairman: Prof. H.-J. Kreowski
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CORRECTION

The correct name of the GA **rep. for China** is Prof. X. Yan (not X. Lang) ■

National Abbreviations Used in Newsletter

A	Austria
AUS	Australia
B	Belgium
CDN	Canada
CH	Switzerland
CZ	The Czech Republic
D	Germany
DK	Denmark
E	Spain
ET	Egypt
F	France
GB	United Kingdom
H	Hungary
HK	Hong Kong
	Italy
IND	India
IRL	Ireland
	Japan
N	Norway
NL	The Netherlands
PL	Poland
S	Sweden
SF	Finland
SGP	Singapore
SK	Slovakia
T	Thailand
USA	U.S.A.
ZW	Zimbabwe

ACADEMICIAN ANATOL A. DORODNICYN

(2 Dec 1910 – 7 June 1994)

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

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

Acad. Dorodnicyn was on the committee for the first World Computer Congress in 1959 in Paris and, together with *Acad. Panov,* was one of the two Soviet founders of **IFIP.** He served as the delegate of the U.S.S.R. (later, Russia) to **IFIP,** from its founding in 1960 until his death. Over this period, he missed very few Council and General Assembly meetings. Holder of the Silver Core since its first awarding in 1974, he was **IFIP** trustee (1965-1967, 1973-1977, and 1980-1984), vice-president (1977-1980), and president (1968-1971). During his presidency, the **IFIP** Technical Committee on Computer Applications in Technology (TC5) was launched, and the first attempts were made to establish the **IFIP** Secretariat in Geneva. The first PROLAMAT conference (Rome, 1969) marked the entry of **IFIP** into the industrial application area, and he was instrumental in bringing the TC on System Modelling and Optimization (TC7) into **IFIP.** His **IFIP** Congress was held in Ljubljana, Yugoslavia, in 1971.

The position of the U.S.S.R. delegate to **IFIP** was not easy, either in **IFIP** or at home. He had to live with the political system that existed, sometimes defending it, in order to reach the scientific and professional goals he had set for himself.

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

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

His family has lost an engaged father and grandfather. They all can be proud of a mathematician and computing pioneer, and of an irreplaceable **IFIP** representative.

Heinz Zemanek
Honorary Member of **IFIP**

RE-ENGINEERING continued from p. 1

theory and practice, we have adopted unidimensional, specialised, segmented, and piecemeal approaches that do not work. If IS/T is to achieve its full potential for social and economic good, there is a need for holistic, multi-dimensional, comprehensive approaches. IS/T researchers and practitioners should look to integrate their efforts with those of others in a number of ways.

In order to address these pressing issues, the **IFIP** Technical Committee on Information Systems (TC8) organized an open conference on Business Process Re-Engineering: Information System Opportunities & Challenges, which was held 8-12 May in Queensland, Gold Coast, Australia. The theme was business process re-engineering through integrated information systems efforts. Over 200 delegates from around the world assembled to hear luminaries of the IS profession speak.

Prof. Alan Underwood (AUS), chairman of the Organizing Committee, reported that those IS practitioners attending the Conference who had expected an academic bias were unanimously impressed with the relevance and treatment of the material presented and discussed during the course of the Conference. Highlights were the opening day's presentations by nominees of the TC8 Working Group chairmen, as well as a most creative presentation by Australian Systems Integrator *Graeme Simsion,* who captured the audience's attention when he donned a chef's hat and a passable French accent in his presentation on the methodology of re-engineering. The international audience voted the Conference a huge success.

Prof. Ashley Goldsworthy (AUS), a vice-president and former president of **IFIP,** was general chair of the Conference, and *Dr. Bernard Glasson (A US)* was chair of the International Program Committee

NEW TELEPHONE NUMBERS FOR NEWSLETTER EDITOR

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Proceedings of the IFIP WG8.2 Conference on Information Technology and New Emergent Forms of Organizations, Ann Arbor, MI, USA, 11-13 August 1994

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Proceedings of the Second IFIP Working Conference, London, UK, 7-10 September 1993

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Information Processing 94

Proceedings of the 13th World Computer Congress - IFIP Congress '94, Hamburg, Germany, 28 August - 2 September 1994

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Proceedings of the IFIP WG5.7 Working Conference, Gramado, Brazil, 21-24 March 1994

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SEPTEMBER 1994

WG3.1 DESIGNS INFORMATICS CURRICULUM FOR SECONDARY EDUCATION

Sponsored by UNESCO

*by Mr. Tom J. van Weert (NL)**

UNESCO has sponsored a project by IFIP Working Group 3.1 (Informatics in Secondary Education) to develop an informatics curriculum for secondary schools. The curriculum was produced during a one-week working meeting in September 1993, hosted by *Mr. Raymond Morel (CH)* at the Centre Informatique Pédagogique in Geneva, Switzerland. The working party, chaired by *Mr. Tom van Weert (NL),* chairman of WG3.1, consisted of 7 members of WG3.1. Editors were *Mr. David Tinsley (GB)* and *Mr. van Weert.* The curriculum was delivered to UNESCO late in 1993.

Information technology now permeates the business environment, underpins the success of modern corporations, and provides government with cost-efficient civil service systems. At the same time, the tools and techniques of information technology are of value in the processes of learning and in the organisation and management of learning institutions. The trends in the need for qualified personnel give a clear demonstration of the need for effective informatics learning at all levels. For example, it is expected that the need for professionals competent in the use of informatics tools will grow to 40% of the professional population in 2000 (from 3% in 1970).

In light of these indications, it is timely for UNESCO to promote the introduction of informatics in all secondary schools in all countries. The commissioning of IFIP WG3.1 to design the recommended curriculum draws on its wide experience in developing effective informatics education during the past quarter of a century. The working party aimed at producing a document that defines a practical and realistic approach to the secondary education informatics curriculum for both developed and developing countries, and one that can be implemented quickly and at minimum cost.

The curriculum was designed in modular form, so that education authorities can select elements appropriate for meeting their objectives at the phase of development reached in their countries. Sufficient detailed description of each objective is given, so that textbook writers can produce course materials that meet local cultural and developmental conditions. The recommended curriculum has been arranged in the form of units, grouped together in modules that are designed for different levels of secondary education. Depending on local circumstances, however, the units could be used at other levels.

Foundation-level modules are for all students. These units have been further grouped into a computer literacy core module and a computer literacy core elective module. Advanced-level modules are for secondary school students who will remain in full-time education. Here again, there is a grouping of units into a general module, aimed at students aspiring to higher education, and a vocational module, for students entering the work place after a period of technical training. Optional modules of computer literacy are targeted at either foundation or advanced levels; also, two units on programming are prerequisites for those proceeding to advanced-level informatics.

After printing the curriculum, UNESCO will distribute it through its information channels.

* chairman of WG3.1

TC5 continued from page 6

organization, WG5.11 has already organized working conferences, on environmental impact assessment and on computer-based environmental education.

Currently, activity is under way to form a new WG on Architectures for Enterprise Integration, representing IFIP's work in a joint IFIP/IFAC task force under the chairmanship of *Prof. Williams,* which has been active since 1990.

TC5 chairman *Mikami* has the following words to say about the future of the TC: "We are now living through one of the most fundamental and profound changes in industrial structure. Today, information is by far our most important resource. Manufacturers and their engineers have to change everything: their way of thinking and performing their tasks. The academic world should play a leading role in technological and theoretical innovations, revolutionizing industrial structure with broad and deep insights. To meet these requirements, TC5 is working hard to bring about this revolution."

HAZARDS continued from page 4

ity to take suitable countermeasures, is still evolving.

The subject of the final speaker, *Prof. Dr. Bart De Schutter (B),* a member of WG9.6 (Information Technology Misuse and the Law), was "Is International Law on Information Systems Security Evolving? Norms and Standards in the Organization for Economic Cooperation and Development (OECD) Guidelines." The main statement was that law lags far behind technology, social evolution, and the new needs arising from them. One of his conclusions was in favour of relying not only on law, but also on ethics, to master the new risks we are facing in using computers.

A panel concluded the afternoon. *Prof. Dr. Kurt Bauknecht (CH),* a vice-president of IFIP, joined the speakers for this panel discussion. Two topics, among others, were highlighted: the medical responsibility aspects of complex IT systems for health care, and the nine "cornerstones" of the guidelines of the OECD concerning possible regulations (the Ethics principle, the Awareness principle, the Proportionality principle, etc.).

The presence of the speakers in Brussels for the **IFIP** Council meeting enabled F.A.I.B./F.B.V.I. to organize this valuable conference.

TECHNICAL COMMITTEE and SPECIALIST GROUP CHAIRMEN

TC2:	P.C. Poole	AUS 89-94
TC3:	P. Bollerslev	DK 91-94
TC5:	T Mikami	J 93-96
TC6:	0. Spaniol	D 92-95
TC7:	P. Thoft-Christensen	DK 89-95
TC8:	G.B. Davis	USA 89-95
TC9:	K. Brunnstein	D 89-95
TC10:	E. Hörbst	A 93-96
TC11:	W.J. Caelli	AUS 88-93
TC12:	R.A. Meersman	NL 89-95
TC13:	B. Shackel	GB 89-95
SG14:	J. Gruska	SK 89-95
SG15:	M. Novak	GB 93-96

CALLS FOR PAPERS

IFAC/IFIP/IFORS/SEDC Symposium on **Modelling and Control of National and Regional Economics — IFAC 95**
2-5 Jul 95, Gold Coast, Qld., Australia
extended abstracts due: 15 Sep 94
contact: Convention Manager (IFAC 95)
P.O. Box E181
Queen Victoria Terrace ACT 2600
Australia
tel: +61 6 270 6562, fax: +61 6 273 2918

Eleventh **IFIP** TC11 Intl. Conf. on **Computer Security — IFIP/SEC'95**
9-12 May 95, Cape Town, South Africa
extended abstracts due: 30 Sep 94
contact: Prof. Jan Eloff
Dept. of Computer Science
Rand Afrikaans Univ.
P.O. Box 524
2006 Auckland Park, South Africa
tel: +27 11 489 2842, fax: +27 11 489 2138
e-mail: ifipsec95@rkw.rau.ac.za

Third **IFIP** TC6 Intl. Conf. on **Open Distributed Processing — ICODP'95**
20-24 Feb 95, Brisbane, Australia
papers due: 14 Oct 94
position papers due: 25 Nov 94
contact: ICODP'95
DSTC
Level 7, Gehrmann Laboratories
University of Queensland, 4072, Australia
tel: +61 7 365 4310, fax: +61 7 365 4311
e-mail: icodp95@dstc.edu.au

Seventeenth **IFIP** Conf. on **System Modelling and Optimization**
10-14 Jul 95, Prague, The Czech Republic
extended abstracts due: 15 Oct 94
contact: IFIP'95 Conference
Attn. Dr. J. Dolezal
Institute of Information Theory and Automation
P.O. Box 18
Pod vodárenskou veil' 4
CZ-18208 Prague, The Czech Republic
tel: 42 2 66052062, fax: 42 2 824755
e-mail: ifip@utia.cas.cz

IFAC/IFIP Workshop on **Algorithms & Architecture for Real Time Control — AARTC'95**
31 May – 2 June 95, Ostend, Belgium
abstracts due: 31 Oct 94
contact: AARTC'95
c/o **BIRA**
Desguinlei 214
B-2018 Antwerp, Belgium
tel: +32 3 216 09 96, fax: +32 3 216 06 89
e-mail (Internet): 100045.2621 @ CompuServe.COM

Fifth **IFIP** TC13 Intl. Conf. on **Human-Computer Interaction — INTERACT'95**
27-29 Jun 95, Lillehammer, Norway
papers due: 1 Nov 94
contact: INTERACT'95
Ms. Kersti Flamme Larsen
Norwegian Computer Society
Daelenggt. 20P
N-0503 Oslo, Norway
tel: +47 22 37 02 13, fax: +47 22 35 46 69
e-mail: office@i95.no

Third **IFIP** WG5.4 Intl. Conf. on **Achieving Quality in Software — AQuIS'96**
24-26 Jan 96, Florence, Italy
abstracts due: 2 Jan 95
contact: Rosella Cortesi – CESVIT
Palazzina Lorenese, Viale Strozzi 1
50129, Firenze, Italy
tel: +39 55 485333, fax: +39 55 485345
e-mail• aquis96@aguirre.ing.unifi.it

FUTURE IFIP MEETINGS

GENERAL ASSEMBLY AND COUNCIL (and related meetings)

GA	1 & 3-6 Sep 94 (Thurs. & Sat.–Tues.)	Hamburg, Germany
Council	5-9 Mar 95 (Sun.–Thurs.)	New York, NY, U.S.A.
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	Sep 94	Japan
	9-13 Jan 95	Hong Kong
	Sep 95	Ulm, Germany
WG2.3	24-28 Jul 95	Ithaca, NY, U.S.A.
WG2.4	Jan 95	eastern U.S.A.
WG2.9	2-9 Mar 95	Hampshire, U.K.
TC3	22 Jan 95	Geneva, Switzerland
	22, 29, 30 Jul 95 (with WCCE'95 conf.)	Birmingham, U.K.
WG3.1	Oct 94	Barcelona, Spain ?
WG3.4	28 Sep – 2 Oct 94 (with conf.)	Hong Kong
WG3.6	26 Jul 95 (with WCCE'95)	Birmingham, U.K.
TC6	7-8 Oct 94 (with SEACOMM conf.)	Kuala Lumpur, Malaysia
	23-24 Mar 95 (with conf.)	Durban, South Africa
	third quarter 95	U.S.A. or Turkey
	10-11 Jun 96	Hawaii, U.S.A.
	Sep 96	Australia ?
TC7	17 Dec 94	Prague, The Czech Republic
WG8.1	26-29 Sep 94 (with conf.)	Maastricht, The Netherlands
WG8.2	17 Dec 94 (following ICIS'94 conf.)	Vancouver, B.C., Canada
	7-9 Dec 95 (before ICIS'95 conf.)	Amsterdam, The Netherlands
WG8.3	6-8 Sep 94 (with conf.)	San Sebastian, Spain
	end Jan. 95 (with conf.)	Delft, The Netherlands
WG8.5	end Jan. 95 (with conf., joint mtg.)	Delft, The Netherlands
TC9	27-28 Aug 94	Hamburg, Germany
WG9.2	28 Aug – 2 Sep 94 (with **DTP** Congress '94)	Hamburg, Germany
	14-16 Jan 95	Namur, Belgium
WG9.6	18-20 Nov 94	Bergen an Zee, The Netherlands
	10-12 Mar 95	France
WG10.2	95 (with conf.)	U.S.A.
WG10.4	Jan. or Feb. 95	Melbourne, Australia
	June 95	California, U.S.A. ?
WG10.5	19-23 Sep 94 (with EURODAC conf.)	Grenoble, France
	Apr 95	Japan ?
WG12.1	Nov 94 (with workshop)	Mexico City, Mexico
WG12.2	Sep 94	Hamburg, Germany
WG12.5	3rd quarter 94	Madrid, Spain, or Brussels, Belgium
TC13	28 Aug 94 (during **IFIP** Congress '94)	Hamburg, Germany
	25 Jun 95 (during INTERACT'95)	Lillehammer, Norway
SG14	1-2 Sep 94	Hamburg, Germany
WG14.1	16-21 Oct 94	Schloss Dagstuhl, Germany
SG15	8 Feb 95 (with Fractal'95 conf.)	Marseilles, France

* 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.

Intl. Conf. on **Intellectual Property Rights for Specialized Information, Knowledge, and New Technologies — KnowRight'95**
21-25 Aug 95, Vienna, Austria
papers due: 13 Jan 95
contact: W. Grafendorfer
Austrian Computer Society
Wollzeile 1-3,
A-1010 Vienna, Austria
tel: +43/1/512 02 35, fax: +43/1/512 02 35-9
e-mail: OCG@VM.UNIVIE.AC.AT

Asia and South Pacific Design Automation Conference (ASP-DAC'95) and **IFIP** WG10.2/10.5 Intl. Conf. on **Computer Hardware Description Languages and Their Applications (CHDL'95)** and eighth **IFIP** WG10.5 Intl. Conf. on **Very Large Scale Integration (VLSI'95)**
29 Aug – 1 Sep 95, Chiba, Japan
papers due: 24 Feb 95
contact: Noriko Uehara
ASP-DAC'95/CHDL'95NLSI'95 Secretariat
Business Center for Academic Societies Japan
2-4-16 Yayoi, Bunkyo-ku
Tokyo, 113 Japan
tel. and fax: +81-3-3817-5860
or
tel: +81-3-5814-5800, fax: +81-3-5814-5823 ■

On-Line IFIP Database

All readers are reminded that a database of **IFIP** information (including this *Newsletter)* is now available through international computer networks. Access is possible via ftp from the repository at

software.watson.ibm.com

and via ordinary e-mail from the listsery @cearn (Bitnet) repository. In addition, the database can be accessed through GOPHER. An article giving details of how to access the database can be found on page 10 of the March 1993 ***IFIP*** *Newsletter* or requested from the **IFIP** Secretariat. Member societies of **IFIP** are urged to bring the **IFIP** database to the attention of their members.

CALENDAR OF EVENTS

(continued from page 16)

Event	Date	Location	Sponsored by
Third Intl. Work. Conf. on *Fractals — FRACTAL 95*	7-10 Feb 95	Marseilles, France	**IFIP** SG15
Third Intl. Conf. on *Open Distributed Processing — ICODP'95*	21-24 Feb 95	Brisbane, Australia	**IFIP** TC6 DSCT
Third Intl. Conf. *TELKOM/AFRICOM '95*	27-29 Mar 95	Johannesburg, S. Africa	**IFIP** TC6 CSSA
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 2.5.1 (EMISA)
Fourth Intl. Symp. on *Integrated Network Management — ISINM'95*	2-6 Apr 95	Santa Barbara, CA, U.S.A.	**IFIP** WG6.6 IEEE Comm. Soc.
Second Intl. Symp. on *Latin-American Theoretical Informatics — LATIN'95*	3-7 Apr 95	Vina del Mar, Chile	U. of Chile **IFIP** SG14 et al.
Workshop on *Personal Wireless Communications*	24-25 Apr 95	Prague, Czech Republic	**IFIP** TC6
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 June 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
Fifteenth Intl. Symp. on *Protocol Specification, Testing, and Verification — PSTV'95*	13-17 Jun 95	Warsaw, Poland	**IFIP** TC6/WG6.1
Fifth Intl. Conf. on *Human-Computer Interaction — INTERACT'95*	27-29 Jun 95	Lillehammer, Norway	**IFIP** TC13 NCS
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*	23-27 Jul 95	Vancouver, B.C., Canada	IMIA
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.
Eighth Symp. on *Information Control Problems in Manufacturing — INCOM'95*	4-8 Oct 95	Beijing, China	IFAC IMACS IFORS ISPE **IFIP**
Work. Conf. on *Information Technology and Changes in Organizational Work*	7-9 Dec 95	Cambridge, U.K.	**IFIP** WG8.2
Work. Conf. on *Approximations and Applications in Stochastic Programming*	? 95	Tallinn, Estonia	**IFIP WG7.7 IIASA**
Third Intl. Conf. on *Achieving Quality in Software — AQuIS'96*	24-26 Jan 96	Florence, Italy	**IFIP WG5.4**
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**
Thirteenth ***IFAC** World Congress '96*	? 96	San Francisco, CA, U.S.A.	IFAC
Fourteenth ***IMEKO** World Congress*	2-6 Jun 97	Tempaere/Helsinki, Fin.	IMEKO
IFIP Congress '98 — Fifteenth World Computer Congress	**23-29 Aug 98**	**Vienna, Austria, and Budapest, Hungary**	**IFIP**

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	Sponsored by
***IFIP** Congress '94 — Thirteenth World Computer Congress*	28 Aug — 2 Sep 94	Hamburg, Germany	IFIP
Eighth Intl. Conf. on *Computer Applications in Shipbuilding — ICCAS'94*	5-9 Sep 94	Bremen, Germany	IFIP WG5.6 et al.
Thirteenth ***IMEKO** World Congress*	5-9 Sep 94	Torino, Italy	IMEKO
Work. Conf. on *Decision Support and Organizational Transformation*	6-8 Sep 94	San Sebastian, Spain	IFIP WG8.3
Sixth Conf. on *Reliability and Optimization of Structural Systems*	7-9 Sep 94	Assisi, Italy	IFIP WG7.5 et al.
Fourth Intl. Conf. on *Computers for Handicapped Persons — ICCHP'94*	14-16 Sep 94	Vienna, Austria	OCG IEV IFIP TC9/WG9.2 et al.
Symp. on *Robot Control — SYROCO'94*	19-21 Sep 94	Capri, Italy	IFAC/ IFIP WG7.6, IMACS
European Conf. on *Design Automation — EURO-DAC'94 (with EURO-VHDL'94)*	19-23 Sep 94	Grenoble, France	GI, **IFIP** WG10.5, et al.
Workshop on *Virtual Prototyping — VP'94*	21-23 Sep 94	Providence, RI, U.S.A.	**IFIP** WG5.10 et al.
Third Intl. Workshop on *Hardware/Software Codesign — Codes/CASHE '94*	22-24 Sep 94	Grenoble, France	**IFIP** WG10.5 WG10.2 ACM SIGDA, ACM SIGSOFT
Work. Conf. on *Methods and Associated Tools for the Information Systems Life Cycle — CRIS'94*	26-28 Sep 94	Maastricht, Netherlands	IFIP WG8.1
Work. Conf. on *Expert Systems in Computer Integrated Manufacturing*	*?* Sep 94	Kiev, Ukraine	**IFIP** WG5.3
Second Symp. on *Artificial Intelligence in Real Time Control*	3-5 Oct 94	Valencia, Spain	IFAC IFIP WG5.4
Conf. on *South East Asia Communications '94 — SEACOMM '94*	4-6 Oct 94	Kuala Lumpur, Malasia	**IFIP** TC6
Intl. Conf. on *Formal Description Techniques for Distributed Systems and Communications Protocols — FORTE'94*	4-7 Oct 94	Bem, Switzerland	**IFIP** WG6.1 ACM SIGCOMM IEEE Comp. Soc. (appr. pend.)
Fifth Intl. Workshop on *Distributed Systems: Operations and Management — DSOM'94*	10-11 Oct 94	Toulouse, France	**IFIP** WG6.6 IEEE CNOM
Work. Conf. on *Integrating Information on Technology into Education*	17-21 Oct 94	Barcelona, Spain	IFIP WG3.1
Work. Conf. on *Virtual Environments — VE*	24-25 Oct 94	Coimbra, Portugal	**IFIP** WG5.10 CCG
Second Asia-Pacific Conf. on *Hardware Description Languages — APCHDL'94*	24-25 Oct 94	Toyohashi, Japan	IEEE IFIP WG10.2 Toyohashi U. of Tech.
First Conf. on *Smart Card and Advanced Application — CARDIS'94*	24-26 Oct 94	Lille, France	IFIP
Work. Conf. on *Mathematical and Scientific Computing: Interfaces in and Integration of Scientific Environments*	24-29 Oct 94	Raleigh, NC, U.S.A.	**IFIP** WG2.5
Work. Conf. on *ISON in Distance Education*	27-30 Oct 94	Nantes, France	IFIP WG3.6
Workshop on *Large Scale Stochastic Programs: Applications and Solutions*	*?* Oct 94	Jalta, Russia	**IFIP** WG7.7
Intl. Symp. on *Advanced Research in Asynchronous Circuits and Systems* — SARACS'94	3-5 Nov 94	Salt Lake City, UT, U.S.A.	IEEE **IFIP** WG10.2/10.5
Seventh Intl. Workshop on *Protocol Test Systems — IWPTS'94*	8-10 Nov 94	Tokyo, Japan	**IFIP** TC6/WG6.1 et al.
First Conf. on *Software Quality and Productivity: Theory, Practice, Education and Training — ICSQP'94*	5-7 Dec 94	Hong Kong	WIP TC3 SQI HKCS
Fourth Intl. Conf. on *Local and Metropolitan Communication Systems: LAN & MAN — LAN&MAN'94*	7-9 Dec 94	Kyoto, Japan	**IFIP** WG6.4
Fifteenth Intl. Conf. on *Information Systems — ICIS '94*	15-17 Dec 94	Vancouver, B.C., Canada ICIS	**IFIP** TC8
Intl. Conf. *NETWORKS'94*	30 Dec 94-2 Jan 95	Madras, India	**IFIP** TC6
Work. Conf. on *Information Technology and Socio-Economic Development: Challenges, Opportunities, and Actions*	9-11 Jan 95	Cairo, Egypt	**IFIP** WG9.4 et al.

(continued on page 15)

IFIP Congress '94 — 13th World Computer Congress	28 Aug — 2 Sep 94	Hamburg, Germany	**IFIP**
IFIP Congress '96 — 14th World Computer Congress	2-6 Sep 96	Canberra, Australia	IFIP
IFIP Congress '98 — 15th World Computer Congress	23-29 Aug 98	Vienna, Austria and Budapest, Hungary	IFIP

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