

IFIP TC6 Activity Report

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Categories and Subject Descriptors

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1. INTRODUCTION

The International Federation for Information Processing (IFIP) is an international umbrella organization for national academic computer societies such as ACM. It was established in 1960 under the auspices of UNESCO as a result of the first World Computer Congress held in Paris in 1959. Today, IFIP has 56 society members that contribute to 13 technical committees (TCs), and its principal activity is the sponsorship of roughly 100 conferences throughout the world.

Notwithstanding their multinational membership and scope, ACM and the IEEE Computer Society are joint “USA” members of IFIP and its technical committees.¹ Since 1995 SIGCOMM has sponsored ACM’s participation in IFIP TC6, Communication Systems. The author serves as the ACM representative; Arun Iyengar, at IBM’s T. J. Watson Research Center, represents the IEEE Computer Society. Joe Turner, at Clemson University, is the current ACM representative to the IFIP General Assembly.

2. IFIP

IFIP has the inevitable bureaucracy of centralized oversight bodies, including an Executive Board, general assembly, technical assembly, and Council, but essentially all of its activities are carried out by technical committees and their working groups:

- TC1 Foundations of Computer Science
- TC2 Software: Theory and Practice
- TC3 Education
- TC5 Computer Applications in Technology
- TC6 Communication Systems
- TC7 System Modelling and Optimization
- TC8 Information Systems
- TC9 Relationship between Computers and Society
- TC10 Computer Systems Technology
- TC11 Security and Protection in Information Processing Systems
- TC12 Artificial Intelligence

¹ Until ACM and the IEEE Computer Society were admitted as separate members of IFIP in 1999, the U.S. was represented first by the American Federation of Information Processing Societies (AFIPS) and later (from 1991) by the Federation on Computing in the United States (FOCUS).

- TC13 Human-Computer Interaction
- TC14 Entertainment Computing

Because IFIP is a “society of societies,” it receives financial support from its national-society members but has no dues-paying individual members. It also receives revenue from conferences and publications.

3. IFIP CONFERENCES

Most IFIP conferences are organized and operated by IFIP technical committees and/or their working groups, usually in cooperation with other groups outside of IFIP. The two exceptions are the biannual World Computer Congress and World IT Forum, held in alternating years.

Unlike ACM, IFIP and its technical committees do not as a rule provide administrative or financial support to conference organizers, who are expected to underwrite the financial risks of a conference and to pay a fee to IFIP based on the number of attendees and the type of conference. In principle, conferences that for one reason or another fail to generate sufficient revenue are still expected to pay the contractually stipulated fee to IFIP, although in practice this requirement has occasionally been difficult to enforce.

3.1 World Computer Congress

The World Computer Congress (WCC) is intended to provide a broadly multinational, apolitical forum for the presentation and discussion of the issues that are most important to IFIP, the mission of which is “to stimulate research, development, and applications and to encourage education and the dissemination and exchange of information on all aspects of computing and communication.” In practice, the WCC is a relic of the past, when large multidisciplinary conferences were vital and viable; today, it is overshadowed by conferences that focus on a specific technical field or policy debate. The 20th WCC will take place in Milan, Italy in September 2008.

3.2 World IT Forum

The World IT Forum (WITFOR) has an explicit focus on information and communications technology (ICT) development in less economically developed countries. It attracts politicians and senior officials responsible for information development from both the developing and industrialized nations, representatives of non-governmental organizations, representatives of inter-governmental organizations, and business leaders, and as such is much more a public policy conference than a technical conference. The 3rd WITFOR will take place in Addis Ababa, Ethiopia, in August 2007.

4. IFIP TC6

IFIP’s Technical Committee 6 on Communication Systems was launched in 1972. The Internetwork Working Group (INWG), which was formed in the same year at the seminal International Conference on Computer Communication (ICCC 72) in Washington, DC (USA), joined itself to TC6 in January 1974 to become the first TC6 working group (WG6.1). In the 1970s and

early 1980s, TC6 and WG6.1 were active focal points for many of the technical discussions that led to today's Internet.²

Unlike IFIP and TC6 itself, TC6 working groups have individual members, and in the past have provided the context for discussions of technical and other issues on mailing lists and at WG meetings. In recent years, however, TC6 and its working groups have focused primarily on conferences and workshops.

The flagship TC6 conference is the International Conference on Networking. Networking 2007 will take place in Atlanta, Georgia (USA) in May 2007.

5. IFIP TC6 Working Groups

The ten TC6 working groups sponsor activities in almost every area of computer communication, and frequently engineer collaborations among themselves, with other IFIP technical committees, and with professional societies outside of IFIP.

WG6.1 Architecture and Protocols for Distributed Systems

WG6.1 focuses on three areas: formal description techniques, including models, methods, and tools; open distributed systems, including distributed system platforms and architectures for networked environments and distributed applications; and quality of service. It sponsors two main conferences: FORTE (Formal Techniques for Networked and Distributed Systems) and TESTCOM (Testing Communicating Systems). In 2007 these two conferences will be colocated in Tallinn, Estonia in June.

WG6.2 Network and Internetwork Architectures

WG6.2 is concerned with the provision of services at the network layer and with the integration of current and future data link and physical layer technologies.

WG6.3 Performance of Communication Systems

The scope of WG6.3 is performance analysis theory and techniques, including congestion control, call admission, and traffic characterization. It co-sponsors, with IEEE, the Modeling and Optimization in Mobile, AdHoc and Wireless Networks conference (WiOpt); WiOpt'07 will take place in Limassol, Cyprus in April.

WG6.4 Internet Applications Engineering

WG6.4 is concerned with Internet applications—particularly world wide web applications—that typically reside above the network layer. Its flagship conference is the International World Wide Web Conference (WWW). The 16th WWW will take place in Banff, Alberta (Canada) in May 2007.

WG6.6 Management of Networks and Distributed Systems

The scope of WG6.6 is operations and management models and technologies for network system configuration, accounting, performance, security, and fault monitoring. It sponsors two main conferences: the 10th IFIP/IEEE International Symposium on Integrated Network Management (IM 2007) will take place in Munich, Germany in May 2007, and the 10th IEEE/IFIP Network Operation and Management Symposium (NOMS 2008) will take place in Salvador, Bahia (Brazil) in April 2008.

WG6.7 Smart Networks

WG6.7 is concerned with the way in which the familiar “intelligent network” concept developed for voice and telephony services is now applied to mobile networks for service creation and integration. It co-sponsors the Autonomic Networking Conference, which combines formerly separate conferences sponsored by WG6.2, WG6.6, and WG6.7. The 2nd Autonomic Networking Conference will take place in Lake Como, Italy in October 2007.

WG6.8 Wireless Communications

The broad scope of WG6.8 covers mobile and wireless architecture and protocols, including modulation, coding and decoding, methods of communication, security, implementation, user aspects, and legal, economic, and social issues. It sponsors the Personal Wireless Communications conference and, with WG6.2, the Conference on Mobile and Wireless Communication Networks; PWC2007 will take place in Prague, Czech Republic, and MWCN 2007 will take place in Ireland, both in September.

WG6.9 Communication Systems in Developing Countries

WG6.9 is concerned with issues of access to, understanding of, and application of network and telecommunications technology in developing countries or regions, and promotes dialogues that encourage the exchange of concepts and techniques among developing countries and between developing countries and developed countries. With ACM SIGCOMM and CLEI (Centro Latinoamericano de Estudios en Informática), it sponsors the IFIP/ACM Latin America Networking Conference; LANC 2007 will take place in San José, Costa Rica in October.

WG6.9 also sponsors the Workshop on Wireless Communications and Information Technology in Developing Countries; WCIT 2008 will take place in South Africa.

WG6.10 Photonic Networking

The focus of WG6.10 is all-optical communication networks. It sponsors the Optical Network Design and Modeling Conference; ONDM 2007 will take place in Athens, Greece.

WG6.11 Electronic Commerce

The scope of WG6.11 is communication platforms and services for e-commerce pre-sales support, sales and service management, settlement, and virtual enterprises. It sponsors the Conference on E-Commerce, E-Business, E-Government; the 7th I3E will take place in October 2007 in Wuhan, China.

6. PUBLICATIONS

IFIP and its technical committees rely heavily on the sale of conference proceedings, in the form of bound, hardcover books, for much of their revenue. The current publication agreement is with Springer Verlag, which selects a number of IFIP titles each year for publication in its well-respected Lecture Notes in Computer Science series.

Although IFIP and its TCs recognize the importance of on-line access to conference papers and other technical publications, a digital library facility is still in the planning stages, constrained by the publication agreement with Springer (which holds the copyright to the IFIP conference papers that it publishes).

² For example, before their landmark paper “A Protocol for Packet Network Intercommunication” was published in the May 1974 number of *IEEE Transactions on Communications*, Vint Cerf and Bob Kahn presented a precursor—INWG Note 39, “Towards Protocols for Internetwork Communication”—at the September 16, 1973 INWG meeting in Brighton, England.