

Conference Report

SIXTH INTERNATIONAL CONFERENCE ON THE APPLICATION OF STANDARDS FOR OPEN SYSTEMS Gaithersburg, MD October 2–4, 1990

Report prepared by

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1. Introduction

Worldwide interest in advancing open computing systems was highlighted at the Sixth International Conference on the Application of Standards for Open Systems. Held in the United States for the first time, the conference was co-sponsored by the IEEE Computer Society, the Institute of Electrical and Electronics Engineers, and the National Institute of Standards and Technology. An exhibit of technical and educational products related to open systems was organized by the Corporation for Open Systems.

Chaired by Kevin Mills, Chief of the Systems and Network Architecture Division at the Computer Systems Laboratory, the conference featured papers and discussion on key issues affecting the

implementation of open systems including policy development, international collaboration, trade issues, implementation, conformance, and security.

The conference committee included Allan Maclean of Australia, William McCrum of Canada, Michel Audoux of the European Community, Bernard Gondran and Claude Mahy of France, Hideaki Okino of Japan, George Sidey of the United Kingdom, James H. Burrows of the United States, and Wolfram Berger and Heinrich Wortmann of West Germany.

2. Requirements for Open Systems

Requirements for open systems are being driven by users who want to move away from proprietary systems to standard interfaces and interoperable software, hardware, and communications products that are developed by different vendors. No single vendor can supply systems to meet the diversity of many user requirements, or respond to enterprise-wide needs for common application architectures, communications, and networks. Users need flexible and modular systems that can be acquired and added to with equipment supplied by a variety of vendors in an open competitive market, and that can support the portability of software applications.

3. Opening the Conference

In welcoming the conference participants, James H. Burrows, Director of the Computer Systems Laboratory, said that “the cooperative efforts of users, governments and industry have taken us down the road toward open systems,” and that efforts must be maintained to continue to build on

these achievements and to augment open systems standards and applications. Mr. Burrows cited the need for standards to protect the confidentiality, integrity, and availability of information transmitted in global networks for electronic mail, business data interchange and other strategic business functions.

Robert White, Under Secretary of Commerce for Technology, delivered the keynote address. In his talk, Dr. White said that new alliances will be needed to unify and to present user requirements for open systems to industry and to standards organizations. He announced that the U.S. Government was forming the Federal Open System Users Council comprising senior-level government executives. The council will develop common architectural frameworks for open systems to meet government requirements for interconnection and interoperation of systems from different vendors and for the portability of software. The Council will work with users and vendors to promote better understanding of common requirements.

Dr. White said that open systems, based on standards, will integrate software and hardware components, and provide standard interfaces to application programs and to the user. But, these systems must be based on industry-wide standards, be commercially available, and be capable of being extended or modified. A consensus based process for decisions regarding definitions, specifications and other issues must be available.

Calling for an integrated world market for open systems, Dr. White said that these markets would allow for competition based upon price, performance, and added value. Such competition helps buyers by lowering prices and improving quality. He also stated that the development of tests was essential to give users confidence that systems conform to standards and will interoperate. International cooperation among standards groups, technical organizations, and governments is needed to achieve mutual recognition of tests, testing methods, and test results. Such efforts will be effective in minimizing regional differences, reducing the need for multiple product testing cycles, and getting products to users more quickly and cheaply, he said.

4. Conference Papers

The proceedings of the Sixth International Conference on the Application of Standards for Open Systems were published by the IEEE Computer Society Press, 10662 Los Vaqueros Circle,

P.O. Box 3014, Los Alamitos, CA 90720-1264. Most of the presentations referenced below are included in the proceedings.

New Open Systems Interconnection (OSI) Policies

Johansson, B., OSI Strategies for Scandinavian Governments
Statskontoret
Sweden

Okino, H., Japanese Activities for Promoting OSI
Ministry of Trade and Industry
Japan

Ramakrishnam, S., OSI Policy in India
Department of Electronics
India

Houser, W., Implementing GOSIP in VA
Department of Veterans Affairs
United States

International Collaboration

Hartmann, U., Open Systems Standards: Status of International Harmonization and European Activities
ZVEI (Siemens)
Federal Republic of Germany

Read, C., Global Harmony, The Delivery of Proof
Digital Equipment Co., Ltd.
United Kingdom

Therrien, J., International Collaboration in the Public Sector
Treasury Board Secretariat
Canada

Free Trade and Standards

Mills, K., Standards and Trade: What's the Connection?
National Institute of Standards and Technology
United States

Cameron, P., Impact of Trade Agreements on Standardization
Canadian General Standards Board
Canada

Wilkinson, C., Economic Implications of Standardization:
OECD
GATT
CEC, DGXIII
Belgium

Applications

Tunstall, J., Using OSI for the Exchange of Information between Financial Institutions
Association for Payment Clearing Services
United Kingdom

Pinson, P.H., Business Case for Open Systems
Dupont
United States

Ochiai, T., Numura OSI: An Example of the OSI-Based Transaction Processing
Nomurs Research Institute, Ltd.
Japan

Ono, K., The Applications OSI to ISDN Promotion in Japan
The Telecommunication Technology Committee
Japan

Staudinger, W., Telematic Terminals for ISDN: OSI As A
Market Drive or a Conflict with User Needs?
Deutsche Bundespost TELEKOM
Federal Republic of Germany

Corrigan, M. L., The Integrated Federal Telecommunications
System (IFTS)
General Services Administration
United States

Calder, C., The Emergence of Information Networks
The Automobile Association
United Kingdom

Virol, L., Vans and OSI Promotion
Ministere PTE
France

Becker, I. B., Electronic Data Interchange by UN/EDIFACT
Standards
VDMA (IBM)
Federal Republic of Germany

Dreyfous, E., The Integration of Trade and Industry EDI
Requirements in International Telecommunications
EDIFRANCE
France

Applications Portability

Hankinson, A., Open System Standards for Application
Portability
National Institute of Standards and Technology
United States

Saito, N., Japanese Standardization Activities for the Interfaces
for Application Portability (IAP)
Keio University
Japan

Griffiths, P., Technological Change, Distributed Processing, and
Applications Portability
The Instruction Set, Hoskyns Open System Division
United Kingdom

Conformance and Interoperability Assurance

Mulvenna, G., The OSINET Testing and Registration Service
National Institute of Standards and Technology
United States

Nilsson, S., ETIC—The European System for IT Testing and
Certification
ECITC
Sweden

d'Oultremont, P., COS/SPAG/POSI Open Integrated Tool Set
SPAG
Belgium

Asano, S., Conformance Testing, Certification and
Interoperability Assurance in Japan
National Center for Science Information System
Japan

Favreau, J., The U.S. GOSIP Testing Program
National Institute of Standards and Technology
United States

Davis, W., Canadian Open Systems Testing
Canadian Open Systems Testing Corporation
Canada

Corsi, N., Conformance Testing Services in Europe
Open Systems Testing Consortium
Italy

Security

Troye, A., Legal Problems of Electronic Documents
CEC, DGXIII
Belgium

Kowalski, B., Security Protocols for Open Communications
Deutsche Bundespost TELEKOM
Federal Republic of Germany

Wood, J., European Harmonised IT Security Evaluation
Criteria
Department of Trade and Industry
United Kingdom

The Future

Pouzin, L., Ten Years of OSI, Maturity of Infancy
THESEUS
France

Kahn, R., Open Systems in Future Technology
National Research Initiatives
United States