Advance Program

ACM SIGCOMM '84

COMMUNICATIONS ARCHITECTURES AND PROTOCOLS

Tutorials and Symposium
Montréal, Québec, Canada

Tutorials and Symposium to be held at the Hotel Méridien in Montréal, Canada
Pre-registration is strongly encouraged.

TUTORIALS — Wednesday, June 6, 1984

1—NETWORK INTERCONNECTION

DR. CARL SUNSHINE
9:00 a.m. - 5:00 p.m.

The proliferation of personal computers and intelligent workstations is causing an explosion in the number of computer networks. We will be faced with a feudal system where the barriers between domains are difficult to cross, a strictly centralized system dominated by large-haul public nets, or something else. The focus will be on technological problems of interconnection, possible solutions, and developments for the future. Illustrations will be taken from research, commercial, and military networks.

- Protocol architectures and layering
- Slide-based protocol designs
- Addressing and routing
- Flow and congestion control
- Accounting and monitoring
- Gateway functions
- Policy and regulatory issues
- Case studies: ISDN, Internet, X.25, PTTs, Protocols for local networks

The language of instruction will be English.

2—L'ÉTAT DE NORMALISATION DES PROTOCOLES POUR L'INTERCONNECION DES SYSTÈMES OUVERTS

HERVÉ LAYEC
9:00 h - 17:00 h

La prolifération des réseaux de télécommunications au cours de la dernière décennie a mis en évidence la nécessité d'une meilleure compréhension des processus impliqués et de leur normalisation. Le modèle d'interconnexion des systèmes ouverts tel que défini par l'IOS et le CCITT fera l'objet de ce séminaire principalement dans ses applications aux réseaux et service télématique. On s'attacherait aussi à l'état de la normalisation dans ce domaine.

- Le modèle d'interconnexion des systèmes ouverts
- Les niveaux physiques et l'application
- Le niveau réseau
- Les services de communication
- Les protocoles de communication
- Les protocoles de transport
- Les protocoles d'applications

Le séminaire se déroule en français.

3—VIDEOTEX SYSTEMS: TECHNICAL ASPECTS, STATE OF THE ART, AND DEVELOPMENTS

DR. JAN GECSEI
9:00 a.m. - 5:00 p.m.

The meaning of the term videotex has changed drastically in the last ten years—from a rather simple-minded TV-based terminal network for home use to complex information utilities involving distribution of data processing and serving many different user communities. This tutorial will review the history, principles, current situation, problems and perspectives of videotex on a worldwide scale.

- Applications: gross classification
- System architecture
- Example systems
- Delivery media and networks
- Broadcast teletext
- Image coding options and standards
- Terminals: structure and classification
- Database organization and distribution
- Gateways and external data.bases
- User interface issues
- Trends in research problems

Dr. Jan Gecsei worked for several years with the IBM research center in San Jose, Calif., before becoming Professor of Computer Science at the Université de Montréal. His main current research interests are videotex and similar public information systems. He is the author of a number of technical articles on the subject and of the comprehensive book The Architecture of Videotex Systems published in 1983.

The language of instruction will be English.

RECEPTION 5:00 p.m. - 7:30 p.m.

REGISTRATION AND ACCOMMODATIONS

ACCOMMODATIONS

Reservations are required. Please directly contact:

Hotel Méridien
4 Complexe des Jardins
C.P. 130
Montréal, P.Q.
Canada
Tel: (514) 285-1450
Telex: 05-25265

Rates:

Single: $75 CDN
Double: $85 CDN

Complete and mail to:
Mme. Nicole Rosenberg
SIGCOMM '84
2, Rue de l'Université
Montréal, P.Q.
Canada
Tel: (514) 761-5831

REGISTRATION CARD

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For your convenience: payment will be accepted in either Canadian or US dollars in the amounts indicated below.

Make checks payable to ACM SIGCOMM '84 Symposium. No purchase orders or phone reservations will be accepted. The symposium and tutorial fees include lunches. All symposium registrants will receive one copy of the proceedings and tickets to the receptions. Tutorial registrants will receive a copy of the author's notes. The proceedings will be issued as a SIGCOMM newsletter. For additional information contact Mme. Nicole Rosenberg at the above address. ACM Membership No.

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$155 CDN, $135 CDN
$38 CDN, $33 CDN

Student no lunches symposium
Proceedings Only Mailed after symposium
1: Multicasting: Techniques and Use
Chair: David Wood, Minx Corp., USA

3a: Multicasting: Techniques and Use
Chair: David Wood, Minx Corp., USA
The use of Broadcast Techniques on the UNIVERSE Network
 Datagram Routing for Internet Multicasting
L. Aguilar, SW International, USA
One-to-many Interprocess Communication in the V-system
D.R. Cheriton and W. Zwaenepoel, Stanford Univ., USA

2a: The UNIVERSE Network
Chair: Peter Livinston, Rutherford-Appleton Lab., UK
The Architecture of the UNIVERSE Network
Managed File Distribution on the UNIVERSE Network
C.S. Cooper, Rutherford-Appleton Lab., UK
The Satellite Transmission Protocol of the UNIVERSE Network
A.G. Waters and C.J. Adams, Rutherford-Appleton Lab., UK

3b: Protocol Specification and Verification — I
Chair: Michel Daz, LAAS, Toulouse, France
Pay-Nete are Good for Protocols
J.P. Courtier, J.M. Ayache, and B. Alaywan, LAAS, Toulouse, France
Formal Specification and Validation of ISO Transport Protocol Components using Petri Nets
W. Jurgenstein, J.T. Wong, Univ. of British Columbia, Canada
Automatic Verification of Connection Management of NBS Class 4 Transport Protocol
D.P. Sath and T.P. Blumer, SDC, USA

4a: Panel: LAN Interconnection
Chair: Carl Sunshine, Sytek, USA
Panel: Dave Clark, MIT
Valerie Lister, Bridge Communications, USA
Raja Parmar, Digital, USA

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4b: Protocol Specification and Verification — II
Chair: Deepinder Suth, SDC, USA
Interactive Verification of Communication Software on the Basis of SDL
H. Krumm and D. Dosch, Univ. Karlsruhe, Germany
A Method for Automated Proof for the Specification and Verification of Protocols
A.R. Cavalli, Universite Paris VII, France
A Temporal Ordering Specification of some Session Services
V. Carcchio, A. Faro, and G. Scala, Univ. di Catania, Italy

5a: LAN: Experience and Performance
Chair: Kayoshi Maruyama, IBM, Yorktown Hts., USA
Network Factors Affecting the Performance of Distributed Applications
K.A. Lautz, J.W. Noecke, and M.W. Thomson, Stanford Univ., USA
Interfacing the 10 Mbps Ethernet Observations and Conclusions
J. Nenadov, Minx Corp., USA
A Performance Model for Hardware Software Issues in Computer Aided Design of Protocol Systems
C.M. Woodside, R. Montealegre, and R.J.A. Buhr, Cartron Univ., Canada

5b: Network Topology and Protocol Testing
Chair: Colin West, IBM Armonk, USA
Automatic Update of Replicated Topology Data Bases
J.M. Jaffe and A. Segal, IBM, Yorktown Hts., USA
Automated Testing of Protocols Specifications and Their Implementations
H. Ural and R.L. Probert, Univ. of Ottawa, Canada
Some Operational Tools in an OSI Study Environment
J.P. Ansart, A.D. R. Castanet, Univ. de Bordeaux I; P. Guottoni, A.D. and O. Rou, Univ. De Bordeaux I, France

6a: LAN: Performance Analysis
Chair: Gerard Le Lann, INRIA, France
Analysis of Channel Access Schemes for High Speed LANs
J.W. Pedersen and R. Sharp, Tech Univ. of Denmark, Denmark
Performance Analysis of an Access Method suitable for the Integration of Voice and Data
J.P. Behn and K. Keller, Philips Gmbh, Hamburg, Germany
Twannier, A. LAN with massage priorities, Design and Performance
G. Niemegger and C.A. Vissers, Twannier Univ. of Tech, Netherlands

6b: Panel: Experiences in Protocol Testing
Chair: Robert Blank, NBS, Washington, USA
Panel: Edward Cerri, Univ. de Montreal, Canada
Valerie Melar, A.T.I. Comm., USA
Eckard Bredt, DGM, Darmstadt, Germany

7a: High Level Protocols
Chair: Alan Cunningham, BNR, Canada
Some Critical Considerations on the ISO/OSI RM from A Network Implementation Point of View
R. Papasliou, Zaleznik, Hahn-Meter Inst., Germany
A Minimal Duplex Connection Capability in the Top Three Layers of the ISO/OSI RM
M.F. Dolen, Bell Laboratories, USA
Communication Primitives Supporting the Execution of Atomic Actions at Remote Sites
K. Rothamer, Univ. of Stuttgart, Germany

7b: Protocol Performance
Chair: John Wong, Univ. of Waterloo, Canada
The Derivation of Performance Expressions for Communication Protocols from Timed Petri Net Models
R.R. Raczuk, Univ. of Calif., Irvine, USA
An Analysis of Naming Conventions for Distributed Computer Systems
0.B. Terry, Univ. of Calif., Berkeley, USA
Analytic Solution of an Integrated Performance Model of a Computer Communication Network with Window Flow Control
A. Thomsen, Burroughs and P. Bey, Univ. of Southern Calif., USA

8a: Panel: Distributed Operating Systems
Chair: E. Douglas Jensen, Carnegie-Mellon Univ., USA
Panel: Norm Peschkoch, IBM, USA
Richard Schmeltz, IBM, USA
Marvin Solomon, Univ. of Wisconsin (Madison), USA

8b: Satellites — Performance
Chair: Wesley Chu, UCLA, USA
On the Performance of Slotted Aloha in a Spread Spectrum Environment
P. Economou and M.J. Moile, Univ. of Toronto, Canada
A Class of Tree Algorithms with Variable Message Length
D.F. Gerla, T.M. Sastaw and D.L. Schilling, City College of New York, USA
A Simple Algorithm for Setting an Optimal Timetable for End-to-End Intercomputer Access via Packet Switching Network
S.W. Edge, University College London, UK