

Contents

High Speed LANs and MANs

- Analytical Modeling and Performance of Dual-Bus High-Speed Networks Under the Adaptive Cycle Cell Insertion (ACCI) Protocol
L. F. M. de Moraes and R. C. A. Ferreira 3

- Schemes for Slot Reuse in CRMA
O. Sharon and A. Segall 27

- Performance of the Cooperative Random Token Protocol for High-Speed Radio LANs
J. Konorski, K. Nowicki and J. Wozniak 47

ATM Switches

- Performance Analysis of an ATM Switching Node with Three-State Markovian Traffic Generators and Random Spacing
Y. Xiong and B. Steyaert 63

- The Departure Process of a Finite Capacity Polling System with Bursty and Correlated Input Traffic
Y. F. Jou, A. A. Nilsson and F. Lai 83

- Route Discovery in Multistage Switch Fabrics
A. Herkersdorf, L. Heusler and E. Maeble 103

Congestion Control and Error Recovery

- Discrete-Time Analysis of Adaptive Rate Control Mechanisms
E. Altman, F. Baccelli and J.-C. Bolot 121

- A Lost Cell Recovery Technique Using Convolutional Coding at the ATM Adaptation Layer in B-ISDN/ATM
A. Dholakia, M. A. Vouk and D. L. Bitzer 141

Quality of Service I

- Estimating Packet (L3_PDU) Loss Probabilities from Cell (L2_PDU) Loss Probabilities for Networks Supporting the SMDS Service
F. Y. S. Lin and J. C. Lu 163

- On the Cell Loss Distribution of Protocol Data Units in ATM Networks
H. Yamashita and R. O. Onvural 183

- A Fast Performance Model for Real-Time Multimedia Communications
S. S. Wang and J. A. Silvester 199

Quality of Service II

- A Study of the Jitter in ATM Multiplexers
C. Bisdikian, W. Matragi and K. Sohraby 219

- Cell Delay Variation in a FIFO Queue: A Diffusion Approach
S. Blaabjerg 237

- VBR Video on the FODA Satellite Network
M. Conti and E. Gregori 257

Protocols

- Performance of Frame Relay Services on ATM Networks
L. Fratta, L. Musuneci, A. Passalia and G. Rigolio 273

- A Medium Access Control Protocol for an ATM Access Network
O. Casals, J. Garcia and C. Blondia 289

- Hierarchical Simulation of Layered Protocol Architectures Using
 Formal Specifications
A. E. Conway, D. Dimitrijevic and R. Hwang 309

Protocol Measurements and Implementation

- Protocol Performance Measurements in a Heterogeneous
 Network Environment
C. Fan and R. Ruppelt 329

- Protocol Processing in Communication Subsystems for High
 Speed Networks
D. N. Serpanos 351

Queueing Theory

- Stochastic Fluid Models for a Buffer Loaded by Markov Modulated
 Traffic with Near Complete Decomposability Characteristics
K. P. Kontovasilis and N. M. Mitrou 363

- Approximate Analysis of Discrete-Time Networks with or
 without Blocking
D. D. Kouvatssos, N. M. Tabet-Aouel and S. G. Denazis 399

- Queueing Analysis of a Versatile Class of Service Policies
S. Tsakiridou and I. Stavrakakis 425

- Improving the Stability Characteristics of Asynchronous Traffic
 in FDDI Token Ring
E. Altman and Z. Liu 441