

2nd IASTED International Conference on Communication Systems and Networks 2003

**Benalmadena, Spain
8-10 September 2003**

ISBN: 978-1-61567-578-4

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2003) by ACTA Press
All rights reserved.

Printed by Curran Associates, Inc. (2009)

For permission requests, please contact ACTA Press
at the address below.

ACTA Press
B6 Suite 101
2509 Dieppe Avenue SW
Calgary, Alberta T3E 7J9
Canada

Phone: (403) 288-1195
Fax: (403) 247-6851

www.actapress.com

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

393-078 Proactive Distance-vector Multipath Routing for Wireless Ad Hoc Networks	1
<i>R. Jansen, S. Hanemann, B. Freisleben</i>	
393-113 Managing Security within Heterogeneous Wireless Communication Systems.....	7
<i>O. Lazaro, J. Irvine, D. Girma, J. Dunlop</i>	
393-143 Wireless LAN Deployment in Large Extension Areas: The Case of a University Campus.....	13
<i>J. Lloret, J.J. Lopez, G. Ramos</i>	
393-801 Differentiated QoS Queue System.....	19
<i>C. Oottamakorn, D. Bushmitch</i>	
393-106 Inter-piconet Scheduling for QoS Support in Bluetooth Scatternet.....	25
<i>H. Chen, T.V.L.N. Sivakumar, L. Huang, T. Kashima, Y. Nakagawa</i>	
393-065 A Testbed for the Evaluation of QoS Provisioning in WCDMA based 3G Wireless Networks	31
<i>A.Y. Elbatji, T. Rachidi, H. Bouzekri</i>	
393-046 Impact of End-to-end QoS Connectivity on the Performance of Remote Wireless Local Networks.....	37
<i>V. Rakocovic</i>	
393-122 Performance of the Medium Access Control Protocol for the High Speed Downlink Packet Access.....	42
<i>G. Manuel, M. Rinne</i>	
393-072 A Robust Amorphous Hierarchy from Persistent Nodes	48
<i>J. Beal</i>	
393-062 Adaptive Algorithms for Advanced Scheduling in SIP Proxies.....	56
<i>J. Stadler, I. Miladinovic</i>	
393-121 Stream Cipher Sequence Matching using Reconfigurable Hardware	62
<i>S. Bojanic, G. Caffarena, S. Petrovic, O. Nieto-Taladriz</i>	
393-030 A Non-adaptive Distributed System-level Diagnosis Method for Computer Networks.....	68
<i>H. Masuyama, T. Miyoshi</i>	
393-116 An Analysis of Medical Device Communication Standard IEEE 1073.2	74
<i>A.J. Mooij, N. Goga, W. Wesselink, D. Bošnacki</i>	
393-055 SRMSh: A Multiple Layer Mechanism for Multicast Congestion Control Providing Detection and Recovery Loss	80
<i>O. Martinez Bonastre, C. Palau Salvador</i>	
393-031 An Adaptive Slot Allocation Scheme for Wireless ATM.....	86
<i>R.M.R. Silveira, I.S. Bonatti</i>	
393-147 Performance Analysis of Bluetooth Piconet	92
<i>S.Y. Shin, W.H. Kwon, H.S. Park</i>	
393-156 Convergence Rate Comparison of Distributed Power Control Algorithms of Wireless Communication.....	98
<i>M. Elmusrati, R. Jäntti, H. Koivo</i>	
393-152 Performance of Turbo Codes in Asynchronous DS-CDMA Systems with Space-time Detection over Frequency-selective Fading Channels	101
<i>W. Hamouda, P. McLane</i>	
393-125 HSDPA Adaptation Scheme of a MAC-hs PDU Size for Retransmissions	107
<i>R. Bestak, P. Godlewski, P. Martins</i>	
393-023 Image Transmission using Joint Source Channel Coding over Wireless Channel.....	113
<i>J. Chebil, M. Deriche</i>	
393-114 A Review on Cellular Location Methods Targeting Location based Services	118
<i>T.S. Stamoulakatos, E.D. Sykas</i>	
393-144 A Design for Integrated Wireless Network with Flexible Bandwidth Assignment	125
<i>T. Nomura, K. Kawano, K. Kinoshita, K. Murakami</i>	
393-118 A Context-aware Information Delivery System Architecture using UMTS Network	131
<i>E. Kamioka, S. Yamada, T. Sanda</i>	
393-128 Fault-tolerant Exactly-once Reliable Multicast Protocol for Distributed Mobile Systems.....	138
<i>M.A. Maluk Mohamed, D.J. Ram</i>	
393-154 Mobile IPv6 Support for Highly Mobile Hosts	144
<i>S. Zeadally, N. Deepak Mavatoor</i>	
393-027 Statistical Analysis of the Performance of IEEE 802.11 LANs	151
<i>T.K. Apostolopoulos, G.C. Oikonomou, C. Nikolaos</i>	

393-085 Design and Implementation of Protocol Analyzer for Mobile IP Networks	157
<i>O. Kobayashi, A. Idoue</i>	
393-074 Efficient Address Lookup Algorithms for IPv6	163
<i>K. Seppänen</i>	
393-047 Optimal RED Parameterization for TCP-friendliness	169
<i>S. Hassan</i>	
393-133 "One for All": A New Perspective for Modeling and Updating Location Information in Moving Objects Databases	175
<i>O. Karam, A. El Nahas, A. Hamad, I. Ramzy</i>	
393-134 Delay Distribution of Data Traffic in Integrated Voice/Data CDMA Systems	181
<i>J. Yang, Y.-I. Kim, A. Ahmad, K. Kim</i>	
393-129 Real-time Multimedia Communication Architecture with Hybrid Flow Control in Wireless Home Network	187
<i>S.N. Woo, S. Ahn, S. An, J.-H. Kim, K.-H. Won</i>	
393-067 Analysing Integrated Terrestrial-satellite Networks	193
<i>A. Jayasuriya</i>	
393-150 Performance Analysis of the CSMA/CA Protocol for the IEEE 802.11 DCF	199
<i>M.S. Ryou, H.S. Park, J.Y. Choi, W.H. Kwon</i>	
393-049 An Improvement in a Simple Adaptive Error Control Scheme for Wireless ATM Networks	205
<i>J.M.C. Brito, I.S. Bonatti</i>	
393-061 Reduced Complexity GA/RBF Multiuser Detectors for DS/CDMA Communications	211
<i>L.M.S. José Revuelta</i>	
393-153 Performance Analysis of Space-time MMSE Multiuser Detection for DS-CDMA Systems using FEC in Frequency-selective Fast Fading Channels	217
<i>W. Hamouda, P. McLane</i>	
393-141 Analysis of a Proposed Error Correction Algorithm over ADSL for TCP Applications	223
<i>F. Bzinelli, W. Godoy Jr.</i>	
393-057 Application Protocol for SCADA on a Wireless Metropolitan Area Network	227
<i>F.J. Molina, J. Barbancho, J. Luque</i>	
393-119 A Methodology for the Implementation of Communications Systems	233
<i>F.J. Sánchez-Roselly, J. Poncela, J.T. Entrambasaguas</i>	
393-018 Information Retrieval Agents using Emotional Features	239
<i>M.-G. Kim, Y.-T. Park</i>	
393-136 Two Low-complexity Techniques to Improve Equalizer Performance in Wireless Burst Data Communications	244
<i>G. Wang, K. Dombrowski</i>	
393-145 Implementation and Performance Evaluation of High Speed Real-time Network, ERCNet	250
<i>J.Y. Choi, H.S. Kim, W.H. Kwon, S.W. Lee, S.K. Kim, S.I. Song</i>	
393-070 Telemedicine Network-based Broadband CATV	254
<i>R. Volner, L. Pousek</i>	
393-032 Accurate Location based Services for Elderly and Disabled	260
<i>C. Benevente, J.L. Jiménez, J.M. Pardo, F.J. Ortega</i>	
393-101 The Behaviour of Self-similar Queueing Processes in Telecommunication Networks	266
<i>J.-S.R. Lee, H.-W. Park, H.-D.J. Jeong</i>	
393-025 Implementation of Encoder for Logical Triangle Method with Logical Prediction	272
<i>T. Irie, K. Shiba, Y. Mieno, M. Murata</i>	
393-097 Adaptive Minimum Signal-to-interference-plus- noise Ratio	277
<i>R.Y. Yen, H.-Y. Liu, C.-W. Li, W.-C. Cheng</i>	
393-059 Modulation Classification using the Power Spectrum of Detected Signals	282
<i>V. Matic, V. Tadic</i>	
393-108 A Population-based Multicast Routing Algorithm for Multimedia Communication	287
<i>S. Al-Sharhan, F. Al-Anzi</i>	
393-075 Frequency-domain Precoding for Multitone Systems without Cyclic Prefix	293
<i>F.J. Simois, J.I. Acha</i>	
393-019 Design of Real Random Number Generator	299
<i>J. Hong, S. Park, J. Yoon, J. Koh, D. Kim</i>	
393-010 Router Buffering and Caching Techniques for Multi-session Reliable Multicast	305
<i>Q. Xu, J. Li, A.K. Elhakeem, M. Bennani, M. Kadoc</i>	
393-102 Novel High-selectivity Open-loop Resonator Filter	311
<i>D. Cañete-Rebenaque, A. Alvarez-Melcon, F. Losilla-Lopez, F.D. Quesada Pereira</i>	

393-138 A Review of Scalability and Its Application in the Evaluation of the Scalability Measure of AntNet Routing	317
<i>L. Carrillo, J.L. Marzo, D. Harle, P. Vilà</i>	
393-131 Security and Performance on the Basis of the Access Control Policy Implemented by Secure Operating System	324
<i>J.-N. Kim, S.-W. Sohn, C.-H. Lee</i>	
393-024 A Ciphertext Only Attack on Stream Ciphers with Irregular Clocking	330
<i>S. Petrović, A. Fúster-Sabater</i>	
393-026 Traffic Model of Data Transmission on Hybrid Fiber Coax Network	336
<i>M. García, D.F. García, V.G. García, R. Bonis</i>	
393-120 Simulation Analysis of Cell Coverage and Capacity Planning in a UMTS Environment: A Case Study	342
<i>E. Zola, F. Barceló, I. Martín</i>	
393-045 SPLIT: An Efficient, Scalable Receiver-based Rate-adaptation Protocol	349
<i>S.C. Brennan, N.K. Chilamkurti, B. Soh</i>	
393-043 Improvement of an Assured Forwarding Traffic Measurement Tool on Linux	353
<i>J.M. Arco, M.A. López, A. García, A. Navarro</i>	
393-802 Blind Multiuser Recursive Constant Modulus Detectors for DS/CDMA Signals with QPSK Modulation	359
<i>H.M. Al-Neyadi, C.G. Guy</i>	
393-117 Building a Multicast Synchronous File Transfer Application	365
<i>J.J. Sánchez-Manzanares, J.C. Sánchez-Aarnoutse, P. Manzanares-López, J.J. Alcaraz-Espín</i>	
393-148 Distributed Security Methods for Mobile Agent Systems	370
<i>M. Moriguchi, K. Kinoshita, N. Yamai, K. Murakami</i>	
393-080 Idiosyncratic Signatures for Authenticated Execution: The TrustedFlow™ Protocol and Its Application to TCP	375
<i>M. Baldi, Y. Ofek, M. Yung</i>	
393-008 Analytical Formulation of the Error Probability of a QPSK Transmission Impaired by the Joint Action of Gaussian and Impulse Noises	381
<i>V. Moeyaert, P. Megret, J. Froidure, L. Robette, M. Blondel</i>	
393-111 Electromagnetic Simulator for the Analysis of Complex Wire Antenna Structures	386
<i>F. Losilla-Lopez, D. Cañete-Rebenaque, F.D. Quesada Pereira, A. Alvarez-Melcon</i>	
393-135 Distributed Network Emulator with a Graphical User Interface	391
<i>N. Naoufal, M. Shell, H. AbdelNour, A. El-Haj-Mahmoud, A. Kayssi, A. Chehab</i>	
393-077 Heuristic Method for Synthetic Traffic Generation for Multicast Networked Games	396
<i>Hernandez Serrano, M. Soriano, J. Pegueroles, F. Rico-Novella</i>	
393-006 Performance Monitoring Challenges of Next Generation Networks	402
<i>A. Vukovic, M. Savoie, H. Hua</i>	
393-060 An Experimental Hybrid FSO/RF Communication System	406
<i>A. Akbulut, M. Efe, A.M. Ceylan, F. Ari, Z. Telatar, H.G. Ilk, S. Tugac</i>	
393-034 Code Acquisition with Search/Lock Strategy in Optical Orthogonal CDMA Systems	412
<i>A.T. Pham, H. Yashima</i>	
393-073 Analysis of Optical Packet Switching Performance with Spatial Contention Resolution for Optical Access Networks	418
<i>L.H. Bonani, M. Tosi Furtado, E. Moschim, F. Rudge Barbosa</i>	
393-079 Asynchronous Performance of Multidimensional PPM Codes for Optical CDMA Systems	424
<i>J.S.G. Panaro, C. de Almeida</i>	
393-068 A Novel Gain-clamping Technique for EDFA in WDM Add/Drop Networks	430
<i>S. Shin, J. Park, S.-H. Song</i>	
393-069 Dynamic Traffic Engineering Method with Priority Control	435
<i>T. Ogura, M. Kato, T. Aoyama</i>	
393-093 Moment Generating Functions of Filtered Phase Noise in Heterodyne Optical Receivers	441
<i>M.M. Banat</i>	
393-126 SONET Frame Generator for Test-bench Applications	445
<i>R. Dahrouj, W. Renno, T. Tohme, A. Chehab, A. Kayssi</i>	
393-087 Digital Feedforward Sampling Frequency Synchronization based on New Timing Error Detection for OFDM Systems	450
<i>E. Oswald</i>	
393-088 OFDM Frequency Offset Estimation using Root- music Algorithm	456
<i>K.K. Chai, S.A. Jimaa , T. Alukaidey, B. Sharif</i>	

393-042 A Differentiated Services Scheme with Feedback Preference Information in the Case of Strict Queueing Algorithm	461
<i>Runtong Zhang, Hongke Zhang, Dongxiao Yang</i>	
393-064 Performance Analysis of a Security Architecture for Active Networks in JAVA	467
<i>Bernardo Alarcos, Enrique de la Hoz, Marifeli Sedano, María Calderón</i>	
393-092 Development and Evaluation of a Cyclic Multicast Server	473
<i>Manuel Cava, Adrián Ridaura, Jesús Sáez, Carlos Palau, Juan C. Guerri, Manuel Esteve</i>	
393-158 On the Effect of Token Bucket Performance in Voice Quality Over Internet	479
<i>F.D. Trujillo, A.J. Yuste, E. Casilar, A. Díaz Estrella, F. Sandoval</i>	
393-041 Improving the Performance of TCP/IP Over Wireless Atm Network	485
<i>F.J. Ogwu, G.A. Aderounmu</i>	
393-142 Polyphase Matrices Whose Cubes Are Unit Matrices and Their Application to Mobile Communication.....	491
<i>Naoki Suehiro, Toshiaki Imoto</i>	
Author Index	