

International Association of Science  
and Technology for Development

4<sup>th</sup> IASTED Asian Conference on  
Communication Systems  
and Networks  
2007

April 2-4, 2007  
Phuket, Thailand

Printed from e-media with permission by:

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571  
[www.proceedings.com](http://www.proceedings.com)

ISBN: 978-1-60423-764-1

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

Copyright© (2007) by ACTA Press  
All rights reserved.

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

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

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

[www.actapress.com](http://www.actapress.com)

## TABLE OF CONTENTS

<b>561-102 Optimum ISI-Free DMT Systems with Arbitrary Data Rates and PSK Modulation: When Does Orthonormality Suffice?</b> .....	1
<i>Xuejie Song</i>	
<b>561-805 A Symbol Synchronization Algorithm for PCC OFDM Systems</b> .....	6
<i>T. Salim</i>	
<b>561-047 The New Method for Analyzing Bounds of OOC for OCDMA System Based on Optical Code-Hop.</b> .....	11
<i>Li Chuanqi</i>	
<b>561-178 Development of an AOA Location Method Using Covariance Estimation.</b> .....	14
<i>Dong-Hyouk Kim</i>	
<b>561-059 PAPR Reduction in OFDM Systems by Hybrid Algorithm Based on the PTS and APPR Methods</b> .....	19
<i>Chusit Pradabpet</i>	
<b>561-083 A Tibetan Mobile Phone Based on CDMA System</b> .....	24
<i>Nyima Trashii</i>	
<b>561-084 Optimum Detector for HF Radio Links Using Genetic Algorithm</b> .....	29
<i>Farid Ghani</i>	
<b>561-095 An Adaptive Step Size Power Control with Transmit Power Control Command Aided Mobility Estimation.</b> .....	34
<i>Rachod Patachaianand</i>	
<b>561-129 Performance Analysis of MIMO Adaptive Modulation System Over Fading Channel Model</b> .....	40
<i>Phichet Mougnoul</i>	
<b>561-130 Performance Improvement of MC-FH-CDMA System Using Multi Linear Chirp Technique</b> .....	44
<i>Phichet Mougnoul</i>	
<b>561-151 An Iterative Bit and Power Allocation Scheme for Multi-Cell OFDM Systems</b> .....	49
<i>Yung-Fang Chen</i>	
<b>561-153 Bit and Power Allocation for OFDM Systems in Interference Channels with MVDR Beamforming</b> .....	55
<i>Liang-Ying Chen</i>	
<b>561-162 Joint Estimation and Compensation for Frequency Independent and Frequency Selective IQ Imbalances in OFDM Systems</b> .....	61
<i>Injae Hwang</i>	
<b>561-163 Obtaining Diversity Gain in OFDM Systems Distorted by TX/RX IQ Imbalances</b> .....	67
<i>Hyojoong Kim</i>	

<b>561-177 A Subcarrier, Bit, and Power Allocation Scheme for MIMO OFDM-Based Multiuser Communication Systems .....</b>	72
<i>Chun-Ye Lin</i>	
<b>561-096 RSVP-TE Extensions to Offer Guarantee of Service to Privileged Flows in MPLS Networks .....</b>	77
<i>Javier Rodriguez-Perez</i>	
<b>561-105 Systolic Array for String Matching in NIDS.....</b>	84
<i>Tran Ngoc Thinh</i>	
<b>561-116 Intelligence System Approach for Computer Network Security .....</b>	89
<i>Surat Srinoy</i>	
<b>561-126 A Hybrid Multi-Application Authentication and Authorization Model Using Multi-Agent System and PKI .....</b>	96
<i>Somchart Fugkeaw</i>	
<b>561-136 An Improved End-to-End Secure Authentication Scheme for CDMA Networks .....</b>	102
<i>Mounita Saha</i>	
<b>561-157 Dynamic Separated Host Configuration Protocol (DSHCP) .....</b>	108
<i>Atikhom Siri</i>	
<b>561-173 Graphical Passwords: Drawing A Secret with Rotation as a New Degree of Freedom.....</b>	114
<i>Saikat Chakrabarti</i>	
<b>561-175 Fast End-to-End Encryption for Voice in GSM Networks .....</b>	121
<i>Marko Hassinen</i>	
<b>561-808 Coverage Restoration of Wireless Sensor Networks Through the Usage of Decision Trees .....</b>	126
<i>Mashael Al-Mutairi</i>	
<b>561-155 Interference and Backbone Sensor Network .....</b>	131
<i>Min Tun</i>	
<b>561-023 Towards Dual Fallible Agreement in a Virtual Subnet Network .....</b>	137
<i>Shu-Ching Wang</i>	
<b>561-042 An Adaptive Physiological Homeostasis Congestion Control .....</b>	143
<i>Xiumei Fan</i>	
<b>561-046 Connectivity Performance for CDMA-Based Wireless Sensor Networks with Variations of Deployment.....</b>	147
<i>Yung-Fa Huang</i>	
<b>561-058 The Study of Transmission Performance for Integrated TFRC and ARQ Over WLANS .....</b>	153
<i>Chu-Chuan Lee</i>	
<b>561-061 Statistical Texture Analysis Methods for Network Traffic Classification.....</b>	158
<i>Thorsten Kisner</i>	
<b>561-070 Path Selection Strategies for Multipath AD HOC Network .....</b>	164
<i>Supachote Lertvonatham</i>	
<b>561-075 A Bit-Serial Word-Parallel Finite Field Multiplier Using Redundant Basis in F2M .....</b>	171
<i>Ashkan Hosseinzadeh Namin</i>	

<b>561-079 Secure Localization in Wireless Sensor Networks.....</b>	177
<i>Tanveer Zia</i>	
<b>561-085 A Discovery Method for Node-Disjoint Multi-Paths by Valid Source-Destination Edges.....</b>	181
<i>SeokHo Jung</i>	
<b>561-090 A New Hybrid ANT Based Routing Mobile AD HOC Networks.....</b>	186
<i>Sunita Prasad</i>	
<b>561-137 Throughput Performance of Modified Inhibit Sense Multiple Access Protocol in Packet Satellite System .....</b>	191
<i>Phichet Mougnoul</i>	
<b>561-141 Mobility Mechanism Between MIPv4 and MIPv6.....</b>	196
<i>Kuljaree Tantayakul</i>	
<b>561-146 Performance Comparison of Probabilistic and Closed Loop Fast Rate Control in Wireless Cellular Data Networks .....</b>	202
<i>Wiklom Teerapabkajomdet</i>	
<b>561-147 A Comparison of M-Commerce and E-Commerce Transport Layer Security Protocols.....</b>	207
<i>Ntima Mabanza</i>	
<b>561-148 Error Rate Performance of MC DS-CDMA System with Multiple Receive Antennas in Nakagami-m Fading Channel .....</b>	212
<i>Abdel-Awal Hashem</i>	
<b>561-156 Adaptive Access Points Selection for 802.11 Wireless Networks .....</b>	218
<i>I-Ping Hsieh</i>	
<b>561-161 About the Random Walker Merging Problem .....</b>	223
<i>Hauke Colzau</i>	
<b>561-024 Reaching Reliable Agreement on Wireless Mobile Network .....</b>	227
<i>Kuo-Qin Yan</i>	
<b>561-027 Modelling Internet Delay Dynamics: Comparative Study .....</b>	233
<i>H.R. Karimpoorian</i>	
<b>561-063 Design on Efficient User-Cooperation Scheme with Cyclic Coding Using Leach .....</b>	239
<i>Ho Van Khuong</i>	
<b>561-064 Quality of VOIP Traffic Over Multi-Hop Wireless LAN Networks .....</b>	243
<i>Nabil Affifi</i>	
<b>561-066 N2R vs. DR Network Infrastructure Evaluation: A Case Study from North Jutland.....</b>	248
<i>Lars Jessen Roost</i>	
<b>561-068 Performance and Protocol Testing of User Equipment in 3G Networks.....</b>	254
<i>Teemu Kanstren</i>	
<b>561-078 Performance Analysis of Sigcomp for 3G Cellular Networks .....</b>	260
<i>Woojin Han</i>	
<b>561-120 Optimal Contention Windo Assignment for Best Effort Services in IEEE 802.16 Systems.....</b>	265
<i>Chien-Chung Chen</i>	

<b>561-138 Mobility Based Call Admission Control in Hierarchical Mobile IPv6 Networks .....</b>	271
<i>Shun-Fang Yang</i>	
<b>561-150 Early Fast Binding Update for Fast Handover in Mobile IPV6 Networks .....</b>	277
<i>Hanh Van Nguyen</i>	
<b>561-166 IP Mobility and High-Speed Access Technologies in IPTV Systems .....</b>	281
<i>Nguyen Thi Thanh Tu</i>	
<b>561-176 A Policy-Based Conflict Detection Model for Billing Rules.....</b>	286
<i>Keda Lv</i>	
<b>561-806 Evolution of Wireless LAN Security Architecture to IEEE 802.11i (WPA2).....</b>	292
<i>Moffat Mathews</i>	
<b>561-807 Extended Policy-Based Management Framework to Provide Always Best Connected Services in Heterogeneous Mobile Environments.....</b>	298
<i>Mayank Keshariya</i>	
<b>561-082 A Scalable Barrel Shifter Topology for All Optical Networks.....</b>	304
<i>Nabendu Chaki</i>	
<b>561-107 Performance Evaluation of the Scale-Net: An Optimal, Irregular Logical Topology for All-Optical Networks .....</b>	310
<i>Ritupama Chaki</i>	
<b>561-174 Introducing Modified Degree 4 Chordal Rings with Two Chord Lengths .....</b>	316
<i>Bozydar Dubalski</i>	
<b>561-021 GPS Satellite Visibility Viewed by Vehicles in Bangkok, Thailand .....</b>	323
<i>Prasert Kenpankho</i>	
<b>561-127 The Design and Implementation of Hierarchical Evacuation Alarm System.....</b>	327
<i>Kuo-An Hwang</i>	
<b>561-171 Study of Rain Effects on 4G Communication Systems in Malaysia .....</b>	333
<i>Lee Hsien Kou</i>	
<b>561-809 A PVM Analyzer for Wireshark .....</b>	338
<i>Christian Di Biagio</i>	
<b>Author Index</b>	