

Institution of Engineering and Technology

2nd IET International Conference on Wireless, Mobile and Multimedia Networks

ICWMMN 2008

IET Conference Publications 545

October 12-15, 2008
Beijing, China

Printed from e-media with permission by:

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

ISBN: 978-1-60560-964-5

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

Copyright© (2008) by the Institution of Engineering and Technology
All rights reserved.

For permission requests, please contact the Institution of Engineering and Technology
at the address below.

Institution of Engineering and Technology
P.O. Box 96
Stevenage, Hertfordshire
U.K. SG1 2SD

Phone: 01-441-438-767-328-328
Fax: 01-441-438-767-328-375

www.theiet.org

TABLE OF CONTENTS

Performance Analysis of SCPS-TP Snack in Space Communication.....	1
<i>Zong-li Li, Xin Meng, Sheng-lei Zhang, Shu-qian Liu, Li-zheng Jiang</i>	
Hierarchical Route Optimization Scheme in Mobile Network.....	5
<i>Tianhan Gao, Zhiliang Zhu, Nan Guo</i>	
Experimentation on NEMO-based Multiple Interfaces Scheme and Performance Analysis	9
<i>Xiaohua Chen, Huachun Zhou, Yajuan Qin, Hongke Zhang</i>	
Study on Mobile IP Technology in Wireless Communication Systems	13
<i>Ning Zhang, Hong Bao</i>	
A Novel Multi-channel Scheduling Algorithm Based on Cross Layer Collaboration for Vehicular Networks	17
<i>Fuqiang Liu, Qi Li, Shangzhi Xu, Xinhong Wang</i>	
Implementation of a Secure Algorithm in WSN for a Coal Mine	21
<i>S. Molina, I. Soto, B. Ontiveros, R. Carrasco</i>	
Efficient Group Key Agreement & Recovery in Ad Hoc Networks.....	25
<i>N. Komninos, G. Mantas</i>	
Interference Aware Routing in Multi-radio Multi-channel Wireless Mesh Networks	29
<i>R. Juan, Qiu Zheng-ding</i>	
Explanation of Shannon Formula for the UNB Communication.....	33
<i>Yan-liang Jin, Hao-jie Lin, Huimin Chen, Zhu-ming Zhang</i>	
A Lightweight Bias Correction Algorithm for Wireless Sensor Networks	37
<i>Bin Zeng, ZhaoHui Luo, HaiQing Liu</i>	
Acoustic Source Localization in Noisy Wireless Sensor Networks	41
<i>FanJiang Xu, ZhiTang Li, WeiMing Li</i>	
Target Tracking Based on Cluster and Game Theory in Wireless Sensor Network.....	45
<i>Dongmei Yan, Jinkuan Wang, Li Liu, Jing Gao</i>	
The Development of Emergency Rescue Mobile Communication Network Based on Ad Hoc Technology	49
<i>Zhang Hua, Li Ye, Li Tang Feng</i>	
On Designing Optimizing Routing for Enhancing Energy Efficiency with Network Coding in Wireless Ad Hoc Networks	53
<i>Xianlong Jiao, Xiaodong Wang, Xingming Zhou</i>	
Vector Switching Scheme (VSS) for Source Routing Protocol of Manet	58
<i>Z.W. Wang, M.G. Liang, J.X. Zhang</i>	
An ID-based Key Pre-distribution Scheme for Wireless Sensor Networks	62
<i>J.Q. Liu, R. Zhang, J. Zhao</i>	
Study on the Communication Link Quality in Wireless Sensor Network.....	66
<i>Zhang Peng, Xia Gui-bin</i>	
Distributed On-demand Bandwidth-aware Routing Protocol in MANET	70
<i>D.P. Wu, M.Q. Wu, Y. Zhen, C.X. Xu</i>	
A Novel Overlapped Area Localization Method in Large-scale Wireless Sensor Networks	74
<i>Yan Bin, Zhou Xiaoja, Wang Houjun, Li Benliang</i>	
A Novel Single-path Load Balancing Mechanism Using Bloom Filter	77
<i>Y. Zhen, M.Q. Wu, D.P. Wu, B. Wang, C.X. Xu</i>	

A Mobile Scale-free Network Model for Hybrid Ad Hoc and Sensor Network.....	81
<i>Chao Tong, Jianwei Niu, Xiang Long, Xiaopeng Gao</i>	
A Novel Clustering Mechanism for Cluster-tree Networks.....	85
<i>Xianghua Xu, Daomin Yuan, Jian Wan</i>	
Components for RFID Equipped Forklift Trucks.....	90
<i>A. Jungk, M. Baum, M. von Werder, J.-F. Hofinghoff, L. Overmeyer</i>	
A Dual-frequency Ceramic Spiral Antenna with Rectangle PBG Structure Array Used for Modern RFID System	94
<i>Bin Lin, Jianhua Zhou, Baiqiang You, Weiming Xu</i>	
An Antenna with Fractal PBG Structure Designed for Modern UWB System.....	98
<i>Jianhua Zhou, Bin Lin, Baiqiang You, Weiming Xu</i>	
Application of Spectrum Pooling Based on Cognitive Radio for Modern Service Industry.....	102
<i>Fei Ma, Wen-an Zhou, Jun-de Song</i>	
The Design of Multi-path Service Over a Virtual Network.....	106
<i>Yongtao Wei, Jinkuan Wang</i>	
A Policy-based Dynamic Security Management Mechanism for MIPv6 Networks	110
<i>Tianhan Gao, Nan Guo, Zhiliang Zhu</i>	
Opportunistic Cooperation Diversity in Wireless Networks	114
<i>Yulong Zou, Baoyu Zheng</i>	
A New Network Based on Vector Address.....	118
<i>Mangui Liang, Jinxin Zhang, Shujuan Wang</i>	
Study on Campus Wireless Mobile Model Based on AOC Modeling.....	123
<i>Chun-xiao Zhao, Ning Ding, Lu Gao, Li-jun Wang</i>	
How to Implement Anycast Service in Mobile IP Network.....	127
<i>Wang Xiaonan</i>	
A New Scheme for Accounting Based on Vector Network	131
<i>Xue-fen Wang, Man-gui Liang, Chao Zhang</i>	
Research on Integrated Network Management Model Based on CORBA and Mobile Agents.....	135
<i>Wang Yu-jian, Huang Jing-hua, Bao Hong, Yuan Jia-zheng</i>	
Design of RFID Active Tag System Based on MSP430	139
<i>S.-Q. Geng, L.-G. Hou, J.-H. Wang, Zuo Lei, Wang Zhang, W.-C. Wu</i>	
Integrating Manet and the Internet Via an Adaptive TTL Gateway Discovery Scheme.....	143
<i>Tsung-Chuan Huang, Wei-Shan Lu, Hung-Yi Chi</i>	
On Increasing System Throughput for Non Real-time Users Using Hierarchical Modulation in IEEE 802.16 Network	147
<i>K.A. Noordin, Z. Ding, G. Markarian</i>	
Study on Interference Suppression for UWB Communications	151
<i>Lei Jiang, Hua Xu, Jian-Xin Guo, Yong-Sheng Wang</i>	
Satellite Imaging Traffic Modeling and Simulation	155
<i>Haitao Yang, Hongli Zhao</i>	
Adaptive Image Delivery Based on WAP	159
<i>Wang Yiding</i>	
A Merger Weight-based Synchronization Algorithm for WiMedia MAC.....	163
<i>Ting Zuo, Pingping Xu</i>	

A Fast Automatic Gain Control Scheme for IEEE 802.15.4 Receiver	167
<i>Yu Han, Zheng Wang, Liang Li, Yuping Zhao</i>	
Smooth Handoff in Infrastructure Wireless Mesh Networks	171
<i>Guo-jun Shui, Shu-qun Shen</i>	
One Type of GSM-R Fast Handover Algorithm for High-speed Railway	175
<i>Hao Wu, Yong-Hao Gu, Zhang-dui Zhong</i>	
A New Test Rule of Local Mean of a Mobile Radio Signal	179
<i>Yun Xiang Jiang, Gang Zhu</i>	
A CDMA-assisted Seamless Handover Scheme for WLAN	183
<i>Zhiwei Yan, Huachun Zhou, Hongke Zhang, Yajuan Qin, Sidong Zhang</i>	
An Energy Efficient Routing Protocol Based on Cluster Head Forecasting and Power Controlling	187
<i>Yi-ming Ding, Hao Wu, Zhang-dui Zhong</i>	
Improving Upper Bound on the Capacity of Planar Wireless Networks with Omnidirectional Antennas	191
<i>Yong Xia, Hong-Ying Liu</i>	
Opportunistic Network Coded Information Exchange Among Multi-user	195
<i>Shitang Li, Baoyu Zheng</i>	
Cyclic Shift Interleaver for Turbo Product Codes	200
<i>Haesik Kim</i>	
New Decoding Algorithms for Super-symmetric Rank Codes	204
<i>E.M. Gabidulin, N.I. Pilipchuk</i>	
A Note on Pair-interleaving Construction for LCZ and ZCZ Sequence Sets	208
<i>Fuchun Lin, Pinhui Ke, Shengyuan Zhang</i>	
Searching the Minimum Distances of LDPC Codes	211
<i>Yang Xiao, Kiseon Kim</i>	
Construction of Good Quasi-cyclic LDPC Codes Based on the Row Vectors of Generator Matrix	215
<i>Lingjun Kong, Yang Xiao</i>	
SEP of General Rectangular QAM Signal with Mrc Diversity Over Nakagami-q (HOYT) Fading Channels	219
<i>Xianfu Lei, Pingzhi Fan, Hongyang Chen</i>	
An Improved Normalized BP Based Decoding Algorithm for LDPC Codes	223
<i>Haigang Zhang, Dongfeng Yuan, Cheng-Xiang Wang</i>	
A Modified Weighted Bit-flipping Algorithm for LDPC Codes	227
<i>Haigang Zhang, Dongfeng Yuan, Cheng-Xiang Wang</i>	
Crossover Product Accumulate Codes: Exit Analysis and Performance	231
<i>Guo Kai, Chen Yan-Hui, Li Jian-Dong</i>	
A Reduced Complexity Kalman-like Algorithm for Channel Estimation and Equalization	235
<i>Yau Hee Kho, D.P. Taylor</i>	
Analysis of Group Multiuser Detection Based on Coalitional Game	239
<i>C.L. Li, Z. Yang, J. Li</i>	
Adaptive Multiuser Detection Based on Gibbs Sampler	243
<i>Ling-yun Lu, Yang Xiao, Hai-feng Du</i>	

A Robust Decision-directed Channel Estimator for OFDM Systems	247
<i>Xiaohu Bai, Xiaomin Mu, Jiankang Zhang, Shouyi Yang</i>	
Channel Estimation Based on Iterative Interpolation for Wireless Communication in OFDM System	251
<i>Tang Liangrui, Zhang Qin, Zhang Ping</i>	
Particle Swarm Optimization for MIMO Receivers	255
<i>Yang Xiao, Nan Zhang, Zhao-wei Wang, Kiseon Kim</i>	
Robustness of Complex Cooperative Communication Network	260
<i>Weihao Xie, Huimin Chen, Xiumei Yang</i>	
A Modified PIC Method Used in Cooperative Communication System Under Imperfect Synchronization	264
<i>Feng Lin, Huimin Chen, Zhuo Wu, Yixin Han</i>	
Cancelling Co-channel Interference for MIMO-OFDM Systems Based on DCT and LDPC	268
<i>Yanying Hou, Yang Xiao</i>	
A Novel Preprocessing Scheme for Multiuser Downlink Spatial Multiplexing Mimo System	272
<i>Zhibin Xie, Jinkuan Wang, Jing Gao, Yun Wang, Dongmei Yan</i>	
BER Performance Analysis and Optimum Power Allocation for a Cooperative Diversity System Based on Quadrature Signaling	276
<i>Jing Li, Jianhua Ge, Lijuan Qi, Yong Wang</i>	
A Novel Space-time LDPC Code with Time Varying Precoding	280
<i>Zhao Ying, Xiao Yang</i>	
Implementing Aggressive Pathover with Aware mSCTP Extension in FMIPv6 Networks	284
<i>Jiemin Liu, Jingxin Dou, Hongxing Zou, Yuan Gao</i>	
Wireless Scheduling Algorithm Using Dynamic Compensation Mode	288
<i>Ming Zhang, Chenglong Gong, Yuan Feng, Chao Liu</i>	
An Intelligent Scheduling Algorithm for Traffic QOS Enhancement in Wimedia UWB Networks	292
<i>Hongjiang Wang, Fei Ji, Ying Zhang, Gang Wei</i>	
Throughput Optimization for Orthogonal Random Beamforming in Multi-user MIMO-TDMA Downlink	296
<i>Liu An, Jun Shen, Luo Wu, Haige Xiang</i>	
Mobility Prediction Based Multi-hop Vehicular Wireless Ad Hoc Networks for QOS Support	300
<i>Fuqiang Liu, Kai Liu, Shangzhi Xu, Xinhong Wang</i>	
Delay-aware Opportunistic Scheduling for Real-time Service in OFDMA Systems	304
<i>Jun Shen, Na Yi, An Liu, Haige Xiang</i>	
Nonuniform-bandwidth Onboard Channelizing and Switching in Satellite Communications	308
<i>Yang Zhiming, Cao Zhigang</i>	
The Outage Probability of Multiuser Cognitive MIMO System	312
<i>Wu Yingxiao, Zhu Qi</i>	
A Prediction Approach for MAC Layer Sensing in Cognitive Radio Networks	317
<i>Zhiyuan Shi, Xueyuan Jiang, Lianfen Huang</i>	
Combined Resource Allocation for Multi-user OFDM Systems	321
<i>Chen Feng, Jian-fei Cao, Zhen-hui Tan, Xu Li</i>	

Identification and Pre-distortion for High Power Amplifiers with Memory	325
<i>Y.M. Ding, J.K. Wang</i>	
Neural-network-based Predistortion Method for High-power Amplifiers with Memory	329
<i>Jiantao Yang, Jun Gao, Shuhong Guo, Xiaotao Deng</i>	
A Modified PTS PAPR Reduction Algorithm with Low Computational Complexity	333
<i>Jing Gao, Jinkuan Wang, Zhibin Xie, Dongmei Yan</i>	
An Efficient Adaptive Bit Loading for SFBC-OFDM Over Scattering Channel	337
<i>Wei-gong Wang, Xin-yu Da</i>	
Route Allocation in the Transmission of Data in a WSN Using Coding and Zero-forcing Beamforming	341
<i>J. Silva, L. Quezada, I. Soto, B. Ontiveros, R. Carrasco</i>	
A Feedback Reduced Random Beamforming Algorithm Based on Opportunistic Eigenbeamforming System.....	344
<i>Yixin Han, Huimin Chen, Zhuo Wu, Feng Lin</i>	
A Novel Intra-frame Rate Control Algorithm for H.264/AVC	348
<i>Miaohui Wang, Bo Yan</i>	
Moving Object Segmentation and Enhancement Based Wireless Video Monitoring of Coal Mine.....	352
<i>Tian Hongxian, Yang Wei</i>	
Image Watermarking Scheme Resist to Affine Transformation and Cropping.....	356
<i>Li Jing, Huimin Xiao, Shuhong Li</i>	
Converting Real Images to SVG Based on XML.....	360
<i>Yuan Jiazheng, Huang Jinghua, Wang Yujian, Bao Hong</i>	
Performance Analysis of Different Equalization Algorithms in a Modified Iterative Scheme.....	364
<i>Shuangshuang Han, Dongfeng Yuan, Xiang Cheng</i>	
A PN Sequence-based Carrier Frequency Offset Estimation Algorithm for Generalized-OFDMA Uplink.....	368
<i>Junqi Guo, Shubo Ren, Haige Xiang</i>	
A Modified Iterative Equalization Scheme Based on Precoding.....	372
<i>Shuangshuang Han, Dongfeng Yuan, Xiang Cheng</i>	
Multipath Signal Blind Separation in Mobile Communications.....	376
<i>Fan Jing, Zhang Yan</i>	
On the Orthogonality of Signal Tones in SFH/MFSK Systems Over Multipath Fading Channels.....	380
<i>Xiaoning Wang, Pingzhi Fan, Daiyuan Peng</i>	
Multicast Method Based on New Network Technique.....	384
<i>Mangui Liang, Jun Wu, Shujuan Wang, Zhaowei Wang</i>	
Distributed User Scheduling and Power Allocation for Collaborative Multicell MIMO System	390
<i>Haitao Li</i>	
Spectrum Reuse Schemes for OFDMA Cellular Networks with Fixed Relay Stations.....	394
<i>Min Liang, Da Cheng Yang, Ya Feng Wang</i>	
Trends & Technical Challenges in Conversational Voice Services.....	398
<i>A.R. Heidari</i>	

Design and Implementation of Mobile Multimedia Messaging Service System	402
<i>Hongzhen Xu , Guosun Zeng , Shumin Zhou , Xueqin Zhu</i>	
Development of Onboard Metro Passenger Information System	406
<i>He Deqiang, Miao Jian, Lu Xiangyang</i>	
A Video-on-demand Streaming Service Architecture Based on Hybrid P2P	410
<i>Weifang Liang, Jianhua Huang, Jihai Huang</i>	
Robust Mesh-based Multicast Protocol with a Second-route Discovery Scheme in MANET	414
<i>Tsung-Chuan Huang, Chien-Te Wu, Hung-Yi Chi</i>	
Location-aided Multicast Routing Optimization with Bandwidth Restraint.....	418
<i>Jun Lu, Bin Liao</i>	
Multi-hop Multicast Listener Discovery Protocol.....	422
<i>Jianfeng Guan, Huachun Zhou, Yajuan Qin, Hongke Zhang</i>	
Sub-path Congestion Control for Concurrent Multipath Transfer.....	426
<i>Jiemin Liu, Hongxing Zou, Jingxin Dou, Yuan Gao</i>	
An Adaptive Playout Algorithm Based on Kernel Estimation.....	430
<i>Zhong-bo Li ,Tao Tao, Sheng-hui Zhao, Jing-ming Kuang</i>	
An Effective Nonlinear AQM Scheme for Cooperating Routers in Multilayer Network.....	434
<i>Hai-feng Du , Yang Xiao, Ling-yun Lu</i>	
Towards Link-disjoint Paths Under Multiple Additive QoS Constraints.....	438
<i>Ke Xiong, Zheng-ding Qiu, Hong-ke Zhang</i>	
A Novel Overlay Multicast Routing Scheme Based on Topology Community Detection.....	442
<i>Jun Lu, Qi Bing</i>	
A Measurement-based Admission Control Algorithm for Real-time Application	446
<i>Yi Na, Shen Jun, Dong Mingke, Jin Ye</i>	
Design and Implementation of Information Service System Based on Roaming Short Message	451
<i>S.J. Zhang, Y. Xiao</i>	
Modelling Digital Signature for Electronic Commerce Using Automata Cellular Model	455
<i>D. Torres, I. Soto, B. Ontiveros, R. Carrasco</i>	
A Collusion-resisted Public Key Traitor Tracing Scheme.....	459
<i>QingLong Wang, Bo Yang, Ying Cai</i>	
Research and Implementation of Network Access Control Policy Based on NDIS.....	463
<i>Huang Jing-hua, Wang Yu-jia, Yu bi-zhong, Yang Yan-song</i>	
Security Improvements on an Efficient Group Key Agreement Protocol.....	467
<i>Kaiping Xue, Mingxiu Hu, Peilin Hong, Hancheng Lu</i>	
Design of LDPC-based Error Correcting Cipher.....	470
<i>Qing Su, Yang Xiao</i>	
A Note on the Security Proof of Yet Another Forward Secure Signature from Bilinear Pairings	475
<i>Jia Yu, Fanyu Kong, Xiangguo Cheng, Guowen Li, Rong Hao, Xuliang Li</i>	
Time Hopping Encryption Techniques	478
<i>Liu Nan, Wang Huifen, Fan Jing</i>	
Security Analysis of a Flexible Forward-secure Signature Scheme.....	482
<i>Jia Yu, Fanyu Kong, Xiangguo Cheng, Guowen Li, Rong Hao, Xuliang Li</i>	

Trust Extended Object-oriented Security Model	486
<i>Liu Weiwei, Han Zhen, Liu Jiqiang, Shen Changxiang</i>	
A Cost Effective Approach on Railway Vehicle Identification and Positioning Using RFID Technology	490
<i>C.S. Chang, K.F. Tsang</i>	
Face Recognition Based on LFA Features and DLPP Algorithm	494
<i>Jiangfeng Chen, Baozong Yuan, Bo Li</i>	
Using Compact Distance Energy Model to Recover Human Pose in Markerless Motion Capture	498
<i>C.K. Wan, B.Z. Yuan, Z.J. Miao</i>	
Real Time and Dynamic Searching Path Algorithm Based on Character State Auto Machine	502
<i>Zhaoyang Qu, Shuang Guo</i>	
Auto-adaptation of Web Content: Model and Algorithm	507
<i>Rong Pan, Huiqin Wei, Shan Wang, Chenguang Luo</i>	
Construction of the Virtual Environment Based on Java3D.....	512
<i>Yanping Wu, Zhenjiang Miao</i>	
Application of Virtual Reality in Hip Joint Surgery	516
<i>Changzheng Liu, Lianjun Lv, Guiyun Ye</i>	
Innovative Wearable Biomedical Sensors for Wireless ECG Signs Monitoring	520
<i>Li Hongqiang, Yu Xiaogang, Miao Changyun</i>	
E-show: a UBI-media Framework for Online Exposition Applications	524
<i>Ren Chen</i>	
A New Chaotic Secure Communication System	528
<i>Qi Bing, Tang Liang-rui, Li Jing, Sun Yi</i>	
Detecting Errors in Chinese Spoken Dialog System Using Ngram and Dependency Parsing	532
<i>Weidong Zhou, Baozong Yuan, Zhenjiang Miao, Weibin Zhu, Weibin Liu</i>	
Entire-frame Error Concealment in H.264 Using Motion Tracking and Adaptive Block Sizes	536
<i>Jing Wu, Jing Zhang</i>	
Author Index	