2009 11th International Conference on Advanced Communication Technology

(ICACT)

Gangwon-Do, South Korea 15 – 18 February 2009

Volume 1 Pages 1-450



IEEE Catalog Number: ISBN:

CFP09561-PRT 978-8-9551-9138-7



Session 1A: Wireless Communication Technology (I)

1. A Performance Evaluation of an RC Polyphase Filter with Parasitic Elements	
Shunsaku MATSUNO, Wahyul Amien SYAFEI, Cosy MUTO, Masayuki KUROSAKI, Hiroshi OCHI	
(Kyushu Institute of Technology, Japan)	3
2. OFDM Channel Estimation based on Gaussian Radial Basis Function Interpolation	
M. Hoseinzade, K. Mohamedpour, S. M. H. Andargoli, H. Shokri. Razaghi (K.N. Toosi University of	
Technology, Iran)	9
3. Behaviors of MIMO UWB-IR Transceiver for Statistical Wireless Channels	
Xu Huang (University of Canberra, Australia)	14
4. An Error Control Scheme of Hybrid ARQ Based on Conception of Plurality Voting	
Chia-Chin Ma (Chang Gung University, Taiwan), Hsin-Kun Lai (Chin Min Institute of Technology,	
Taiwan), Erl-Huei Lu (Chang Gung University, Taiwan)	19
5. Orthogonal Pulse Design for UWB Systems with Timing Jitter	
Wilaiporn Lee (King Mongkut's University of Technology North Bangkok, Thailand), Somchai	
Jitapunkul (Chulalongkorn University, Thailand)	22
6. DP4T CMOS Transceiver Selection for MIMO Systems	
Theera Mekanand, Thanakorn Bumrungkitjaroen, Duangrat Eungdamrong (Thammasat University,	
Thailand) •••••••	28

Session 1B: Mobile Communications (I)

1. A Study on Optical Wireless Train Communication System using Mobile Object Tracking	
Technique	
Masato Hiruta, Masao Nakagawa, Shinichiro Haruyama, Shoichi Ishikawa (Keio University, Japan)	35
2. A Cognitive MAC for VANET based on the WAVE Systems	
Seung-eun Chung, Joon Yoo, Chong-kwon Kim (Seoul National University, Korea)	41
3. Supporting Scalable Multiparty Session in P2P based Mobile Instant Messaging	
Yen-Wen Lin (National Taichung University, Taiwan), Li-Su Kuo (National Chiayi University, Taiwan)	
	47

4. Design of Multi-thread based Scheme in a Flash Translation Layer
Jin-Tae Kim, Dong-Geun Shin (Sungkyunkwan University, Korea) ••••••••52
5. A New Strategy to Implement Security in an Area using Picocell Base Transceiver Station
S.H. Shah Newaz, Jong Min Lee (Information and Communications University, Korea), Sarwar Jahan,
M.R. Amin (East West University, Bangladesh), JunKyun Choi (Information and Communications
University, Korea) ••••••••••••••••••••••••••••••••••••

Session 1C: Next Generation Network Technology (I)

1. Internetworking Circuit and Connectionless Networks
Xiuduan Fang, Malathi Veeraraghavan (Unviersity of Virginia, USA) ••••••••••••••••••••••••••••••••••••
2. NGN Deployment Model for Customized Multimedia Ring Service (CMR)
Heechang Chung, Byung-Ik Choi, Sun-Moo Kang, Yeong ro Lee (National Information Society Agency,
Korea) ••••••• 69
3. Cross-Layer QoS Architecture for 4G Heterogeneous Network Services
Jiann-Liang Chen, Ming-Chiao Chen (National Taiwan University of Science and Technology, Taiwan),
Shih-Wei Liu, Jyun-Yu Jhuo (National Dong Hwa University, Taiwan) ••••••••73
4. ID/LOC Separation Network Architecture for Mobility Support in Future Internet
Nakjung Choi, Taewan You (Seoul National University, Korea), Jungsoo Park (ETRI, Korea), Taekyoung
Kwon, Yanghee Choi (Seoul National University, Korea) ••••••••••••••••••••••••••••••••••••
5. A Modified Genetic Algorithm for the Optimization of Aggregated Multicast
Hua Wang, Zuquan Ge, Chaoying Yu, Shanwen Yi (Shandong University, China) ••••••••••••••••••••••••••••••••••••
6. Cache Server and White List Filtering for the Second Life
Fumikazu Iseki, Moo Wan Kim, Takahiro Uchiyama, Kiho Moon (Tokyo University of Information
Sciences, Japan) 89

Session 1D: RFID & USN Technologies (I)

1. An Application of Wireless Sensor Network to realize Ground Truth
Moo Wan Kim, Kwang Sik Kim (Tokyo University of Information Sciences, Japan) ••••••••••••••••97
2. Multi-hop Mesh Cooperative Structure based Data Dissemination for Wireless Sensor
Networks
Min Chen (University of British Columbia, Canada), Xuedong Liang (University of Oslo, Rikshospitalet
University Hospital, Norway), Victor Leung (University of British Columbia, Canada), Ilangko
Balasingham (Rikshospitalet University Hospital, Norwegian University of Science and Technology,
Norway)102
3. Quality of Service (QoS) Classes for Ubiquitous Sensor Networks
A.Koucheryavy (ZNIIS, Russia), A.Prokopiev (JSC Ubitel, Russia) ••••••••••••••••••••••••••••••••••••

4. Inkjet Printed Paper Based Quadrate Bowtie Antennas For UHF RFID Tags

5. Global Healthcare Monitoring System using 6lowpan Networks

Session 1E: Systems & Software Engineering (I)

1. Experiences of Risk Enhanced Value Assessment in a Software Company
Pasi Ojala (Oulu University of Applied Sciences, Finland) ••••••••••••••••••••••••••••••••••••
2. Advanced Designer-Oriented System in VR Environment
HaDong Kim, Byung-Mo Han, Jong Namgung, Dong-Sik Shin (CGWave, Inc., Korea), Hyo-Gun Yoon,
Malrey Lee (Chonbuk National University, Korea), Yong-Tae Won (Mokpo National University, Korea),
Kyu-Sik Lee (KyungBuk College, Korea) ••••••••••••••••••••••••••••••••••••
3. Towards Contextual Information Based-Approach to Support Software Reuse System
Hend Ben Hadji, Ho-Jin Choi (Information and Communications University, Korea) •••••••132
4. Security Policy Modeling Using Z Notation for Common Criteria Version 3.1
Junkil Park, Jin-Young Choi (Theory and Formal Methods Laboratory, Korea) ••••••••••••••••••••••••••
5. Integrating Physical Programming to Information Security System Management
Pauline Kongsuwan, Sangmun Shin (Inje University, Korea) ••••••••••••••••••••••••••••••••••••

Session 1F: Network Management, Operation and Maintenance (I)

1. Effective High Speed Traffic Replay Based on IP Space
Dung PHAM VAN, Marat ZHANIKEEV, Yoshiaki TANAKA (Waseda University, Japan) •••••••151
2. QoS Control in Service Delivery in IMS
Muhammad Shoaib Siddiqui, Riaz Ahmed Shaikh, Choong Seon Hong (Kyung Hee University) •••••157
3. Research on Survivability in Multi-service-based Multi-domain Optical Networks
Zhao Ji-hong (Xi'an Jiangtong University, Xi'an Institute of Posts & Telecommunications, China),
Mao Hong-bao, Qu Hua (Xi'an Institute of Posts & Telecommunications, China) ••••••••••••••••••••••••••••••••••••
4. Fast Traffic Anomalies Detection using SNMP MIB Correlation Analysis
Dong Cheul Lee, Byungjoo Park, Ki Eung Kim, Jae Jin Lee (KT, Korea) ••••••••••••••••••••••••••••••••••••
5. Exploring the Correlation between P2P Applications and Network Architecture
Chang-Sheng Chen, Ta-Chung Liu, Chun-Hsien Su (National Chiao Tung University, Taiwan) •••••• 171

1. Matched Filter Implementation on FPGA for Integrand Code Using a Real-valued Shift-
orthogonal Finite-length Sequence
Takahiro Matsumoto, Shinya Matsufuji (Yamaguchi University, Japan) ••••••••••••••••••••••••••••••••
2. Gain-Bandwidth Adjusting Technique of A 36.1 GHz Single Stage Low Noise Amplifier using
0.13µm CMOS Process
S. M. Shahriar Rashid, Sheikh Nijam Ali, Apratim Roy, A. B. M. H. Rashid (Bangladesh University
of Engineering & Technology, Bangladesh) ••••••••••••••••••••••••••••••••••••
3. Adaptive Loading in HF Communications
Xudong Chen, Shuzheng Xu (Tsinghua University, China) ••••••••••••••••••••••••••••••••••••
4. Performance Study of Wireless Universal Serial Bus Transmission System
Heng-Te Li, Hao-Yu Chan, Chia-Wei Chao, Wen-Piao Lin (Chang Gung University, Taiwan) •••••••193
5. A Modified Design of Slot Ring using E-Shape
Pongchompoo R., Santitewagul V., Eungdamrong D. (Thammasat University, Thailand) ••••••••196

Session 2B: Mobile Communications (II)

1. SIP Deployment in Integrated Mobile Ad Hoc Networks: Centralized and Quasi-Decentralized
Approaches
Kirill Balov, Kyoji Kawagoe, Toshikazu Nishimura (Ritsumeikan University, Japan)203
2. Application Framework for Multi Platform Mobile Application Software Development
Yoonseok Choi, Jin-Seok YANG, Jaewon Jeong (POSTECH, Korea) ••••••••••••••••••••••••••••••••••••
3. Improved Frequency Channel Borrowing and Locking Algorithm in Cellular Mobile Systems
Do Huu Tri (Post and Telecommunication Institute, Vietnam), Vu Duy Loi (Centre of Information
Technology Office of Central Committee of Vietnam Communist Party, Vietnam), Ha Manh Dao
(Institute of Information Technology, Vietnam) ••••••••••••••••••••••••••••••••••••
4. B-PMIPv6: PMIPv6 with Bicasting for Soft Handover
Ji-In Kim, Seok-Joo Koh (Kyungpook National University, Korea), Nam-Seok Ko (ETRI, Korea) ••218
5. Sending Pictures by SMS
Mohammad Shirali-Shahreza, Sajad Shirali-Shahreza (Sharif University of Technology, Iran)222

Session 2C: Next Generation Network Technology (II)

1. A Method for Performing Connection Admission Control in DiffServ Networks
Nguyen Hong Son, Le Huu Lap (Post and Telecom Institute Technology, Vietnam) ••••••••••••••••••••••••••••••••••••
2. Performance Enhancement in Future PON and Mobile Convergence Networks

Seung-Hee Lee, Jae Gwan Kim, Min-Ho Kang (Information and Communications University, Korea) 233

3. Handover between Macrocell and Femtocell for UMTS based Networks

- 4. A Study on IEEE 802.21 MIH Frameworks in Heterogeneous Wireless Networks
 Moon Kim, Tae-wook Moon, Sung-joon Cho (Graduate School of Korea Aerospace University, Korea)
 242
- 5. A Statistical Service Composition Approach based on Hidden Hierarchy Markov Model Hao Yang, Hui Xu (GuangDong Electric Power Institute, China), Ying Zhang (Beijing University of Posts & Telecommunications, China)

Session 2D: RFID & USN Technologies (II)

1. Object Identification for Ubiquitous Networking
Gyu Myoung Lee (Institute TELECOM SudParis, France), Jun Kyun Choi (Information and
Communications University, Korea), Noel Crespi (Institute TELECOM SudParis, France)255
2. Effects of Antenna Polarization on RSSI based Location Identification
Mark Barralet, Xu Huang, Dharmendra Sharma (University of Canberra, Australia) ••••••••260
3. Dynamic Prediction Clustering Scheme for Mobile Sensor Node of Sensor Network
Environment
YOUNB-BOK CHO, YOON-SU JEONG, SANG-HO LEE (Chungbuk National University, Korea) ••••• 266
4. WSN Research Activities for Military Application
Md.Asdaque Hussain, Pervez khan, Kwak kyung Sup (Inha University, Korea) ••••••••271
5. Extension of Wireless Sensor Network by Employing RoF-based 4G Network
Monir Hossen, Byung-Jun Jang, Ki-Doo Kim, Youngil Park (Kookmin University, Korea)275

Session 2E: Systems & Software Engineering (II)

1. A Practical Case Study of Scenario Analysis for RFID System Implement	
Kuo-shien Huang, Shun-ming Tang (National Yunlin University of Science and Technology, Taiwan)28	31
2. Defining Reference Architecture for NTIS Development	
Heeseok Choi, Chulsoo Lim, Jaesoo Kim (KISTI, Korea)28	34
3. A Study on Software Component Selection Methods	
Syed Ahsan Fahmi, Ho-Jin Choi (Information and Communications University, Korea) •••••••28	38
4. Personalized Virtual Machine based on User's Schedule Event	
Kyuchang Kang, Jeunwoo Lee (ETRI, Korea), Hoon Choi (Chungnam National University, Korea) ••••••29)3
5. Building a Semantic Model of a Textual Document for Efficient Search and Retrieval	
Enkhbold Nyamsuren, Ho-Jin Choi (Information and Communications University, Korea) ••••••••29)8

Session 2F: Network Management, Operation and Maintenance (II)

1. A Validity Tester for Active Measurement Tools
Myrvin YAP, Marat ZHANIKEEV, Yoshiaki TANAKA (Waseda University, Japan)
2. An Integrated Security Mechanism for Network Coding Combining Confidentiality and
Integrity
Ji-yong Park, Mi-sun Ryu (Information and Communications University, Korea), Eui Suk Jung, Dong-
Min Seol (ETRI, Korea), Hong-shik Park (Information and Communications University, Korea) 311
3. An Adaptive Wrapper Algorithm for File Transfer Applications to Support Optimal Large
File Transfers
Alireza Ghobadi, C. Eswaran, Nithiapidary Muthuvelu, Ian K.T. Tan (Multimedia University, Malaysia),
Yong Lee Kee (Intel Technology Sdn. Bhd., Malaysia)
4. A Hyper-cube Based Modified Spanning Tree Protocol for VLANs
Moosa Ahmadi, Abbas Ali Mohammad Zamani (Islamic Azad University Najafabad Branch, Iran) ••321
5. Distributed Mixed Protection Mechanism for Dynamic Traffic in WDM Optical Networks
Chen-Shie Ho (Oriental Institute of Technology, Taiwan), Kuo-Cheng Chiang (VaNung University,
Taiwan)

Session 2G: Poster Session (I)

1. Correlation Analysis of MIMO Subchannels in LOS Environments
Jongho Kim, Young-Keun Yoon (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
2. Performance Analysis of Distributed Cooperative Spectrum Sensing for Underlay Cognitive
Radio
Myung Keun Yoon, Ki Hwan Lee, Ju Bin Song (Kyung Hee University, Korea) ••••••••••••••••••••••••••••••••••••
3. UWB Antenna with Frequency Diversity Characteristics using PIN-diode Switches
Sang Won Yoon, Le Huu Truong, Hyun Seok Lee (Dongguk University, Korea), Eunice J. Park
(Daewon Foreign Language High School, Korea), Hyung Moo Park, Jin Koo Rhee, Hyun Chang Park
(Dongguk University, Korea) ······344
4. A Study on the Efficient Promotion of USIM-related Services in Korea
Jeong-Tae Kim (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
5. A Mechanism of Resource Control in TOCF(Transport Overlay Control Function)
Architecture for IPTV Service in NGN
Yangjung Kim, Eungkyu Kim, Ilyoung Chong (Hankuk University of Foreign Studies, Korea),
Jinkyung Hwang (KT, Korea) ······350

6. Identification of RFID Tags in Dynamic Framed Slotted ALOHA
Okkyeong Bang, Sunghyun Kim, Hyuckjae Lee (Information and Communications University, Korea)
7. An Energy-aware Routing Protocol Considering Link-Layer Security in Wireless Sensor
Networks
Sung-Chul Jung, Hyoung-Kee Choi (Sungkyunkwan University, Korea)
8. General Purpose Hardware Abstraction Layer for Multiple Virtual Machines in Mobile
Devices
Sang-Min Lee, Dong-Geun Kim, Dong-Ryeol Shin (Sungkyunkwan University, Korea)
9. SAFE: Scalable Autonomous Fault tolerant Ethernet
Kiyong Kim, Yeonseung Ryu, Jong-myung Rhee (Myongji University, Korea), Dong-ho Lee (Agency
of Defence Development, Korea) ••••••••••••••••••••••••••••••••••••
10. Test and Performance Comparison of End-to-End Available Bandwidth Measurement Tools
Young-Tae Han, Eun-Mi Lee, Hong-Shik Park (Information and Communications University, Korea),
Ji-Yun Ryu, Chin-Chol Kim, Myung-Won Song (National Information and Society Agency, Korea)370
11. Efficient Tree Management for Resilient Overlay Multicast
Young-Hyun Kim, Sin-Gak Kang (ETRI, Korea), Hyoung-Sik Kim (Chungnam National University,
Korea)
12. Current Status of Radio Spectrum Management Policy in Korea and Related Issues
Ho Yeong Kim (Information and Communications University, Korea), Joo Seong Park, Osang Kweon
(KORPA, Korea) ••••••••••••••••••••••••••••••••••••
13. Performance Analysis of the VLC System with Modified HDB3 Line Coding
Yoon Hyun Kim, Jae Hyuck Choi, Jin Young Kim (Kwangwoon University, Korea) ••••••••••••••••••••••••••••••••••••
14. Implementation of Internet Protocol Multimedia Subsystem for Femtocell Network
Yong-il Oh, Jin Young Kim (Kwangwoon University, Korea) ••••••••••••••••••••••••••••••••••••
15. Mobility Management of Mobile Node in Relay-based Overlay Multicast
Chang-Kyu Lee, Sung-Hei Kim, Shin-Gak Kang (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
16. Performance of Multi-user MIMO OFDM System with Adaptive Modulation and Coding
for Wireless Communications
Kwang Yoon Kim, Yoon Hyun Kim, Jin Young Kim (Kwangwoon University, Korea)
17. Quality-of-Service Scheduler for Next Generation Network Services
Hyung-Woo Choi, Young-Min Kim, Hong-Shik Park (Information and Communications University,
Korea), Hyun-Yong Hwang, Bum-Chul Lee (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
18. Design and Implementation of IPv6 Packet Forwarding Engine for Flow based Router
Yong-Wook Ra (ETRI, Information & Communications University, Korea), Chang-Ho Choi,
Byung-Jun Ahn (ETRI, Korea) ······403
19. Directory Facilitator for LEACH in Wireless Sensor Network
Jong-Wan Yoon, Sung-Jun Na, Kee-Hyun Choi, Dong-Ryeol Shin (Sungkyunkwan University, Korea)

20. Cluster Adaptation Method to Enhance Performance of Filtering Scheme in Sensor Networks
Byung Hee Kim, Soo Young Moon, Hae Young Lee, Chung Il Sun, Tae Ho Cho (Sungkyunkwan
University, Korea) ••••••••••••••••••••••••••••••••••••
21. An Architectural Design Decision-centric Approach to Architectural Evolution
Youhee Choi (ETRI, Korea), Heeseok Choi (KISTI, Korea), MoonKyun Oh (ETRI, Korea) ••••••••417
22. Design Service for OSS based on the SOA and TMForum NGOSS
Kisang Ok, Daniel Wonkyu Hong, Byungdeok Chung (KT, Korea) ••••••••••••••••••••••••••••••••••••
23. Dynamic Maintenance Method of Timing Synchronization for Soft Handover
Hyoungwon Kwak, Poongup Lee (Sungkyunkwan University, Korea), Abhishek Roy (Samsung
Electronics, Korea), Navrati Saxena, Jitae Shin (Sungkyunkwan University, Korea) ••••••••428
24. Grid Computing Platform for Secure Multi-Job Operation
Jiho Kim, Minhyun Lee, Ohyoung Song (Chung-Ang University, Korea) ••••••••••••••••••••••••••••••••••••
25. The Resource Management Method for Providing VoIP Service with Guaranteed QoS in BcN
Sang Kwon Kim, Dong Hyeon Lee, Kyu Ouk Lee (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
26. A Dual-PTZ-camera System for Visual Tracking of a Moving Target in an Open Area
Hsien-Chou Liao, Wei-Yi Chen (Chaoyang University of Technology) ••••••••••••••••••••••••••••••••••••
27. Rateless Erasure Resilient Codes for Content Storage and Distribution in P2P Networks
Saejoon Kim, Seunghyuk Lee (Sogang University, Korea) ••••••••••••••••••••••••••••••••••••
28. A Simple Passive Protection Structure in a Ring-Type Hybrid WDM/TDM-PON
Dong-Min Seol (ETRI, Korea University of Science and Technology, Korea), Eui-Suk Jung (ETRI,
Korea), Byoung-Whi Kim (ETRI, Korea University of Science and Technology, Korea) ••••••••447

Session 3A: Wireless Communication Technology (III)

1. Performance of RSCC-QPSK-OFDM System with Phase Error and Perfect Compensation
in Rayleigh Fading Channel
Said M. Elnoubi, Shawki Shaaban (Alexandria University, Egypt), Sherif Samir A. Elbadawy (Air
Defense College, Egypt) ••••••••••••••••••••••••••••••••••••
2. Single Carrier Transmission with Frequency Domain Equalization (SC/FDE) System with a
PAPR of Unity
Tufik Buzid (Erlangen-Nuernberg University, Germany), Mario Huemer (Alpen-Adria-University
Klagenfurt, Austria) ••••••••••••••••••••••••••••••••••••
3. Design Bottlenecks of TC & TM Spread Spectrum Links in UAVs
M.R. Tarihi, M.Shafiee Neyestanak (Communication Research Center, Iran) ••••••••••••••••••••••••••••••••••••
4. Multiuser Detections for TH-UWB Systems with M-ary PPM
Szu-Lin Su, Wen-Jun Lin, Yi-Ching Pan, Yung-Chuan Lin (National Cheng Kung University, Taiwan)
468

Session 3B: Mobile Communications (III)

1. Scaled SLM for PAPR Reduction of OFDM Signal in Impulsive Noise Channel
Jea Sun Lee, Jin Young Kim (Kwangwoon University, Korea) ••••••••••••••••••••••••••••••••••••
2. Cyclic Delay Diversity with Linear Precoding Technique adopted in OFDM Systems
Bing Hui, KyungHi Chang (Inha University, Korea) ••••••••••••••••••••••••••••••••••••
3. Analysis of Uplink Capacity and Coverage in TD-SCDMA Systems
Jeong Gon Kim (Korea Polytechnic University, Korea), Sung-Moon Shin (ETRI, Korea) ••••••••••493
4. A Novel Robust Fault Tolerant Scheme for Hierarchical AAA in Mobile Networks
Li Wang, Mei Song, Yi Man, Yong Zhang, JiaJia Wang, Junde Song (Beijing University of Posts and
Telecommunications, China) ••••••••••••••••••••••••••••••••••••
5. Two Dimension Channel Estimations with Reduced Pilot Arrangements for OFDM Systems
Sangjun Bae, Yoonho Jang (Inha university, Korea), Sunkyung Shin (ETRI, Korea), Zhao Chengshi,
Kyoungsup Kwak (Inha university, Korea) ••••••••••••••••••••••••••••••••••••
6. Power Management of Multi-radio Mobile Nodes using HSDPA Interface Sensitive APs
Hyunho Park, Junghoon Jee, Changmin Park (ETRI, Korea) ••••••••••••••••••••••••••••••••••••

Session 3C: Next Generation Network Technology (III)

1. A Unified Distributed Directory based Service Delivery Architecture for Metro Ethernet
Networks
Ravi Kumar Buregoni (Infosys Technologies Ltd., India) ••••••••••••••••••••••••••••••••••••
2. The Aggregation of Multicast Tree State Information with Delay-Bandwidth Constraints
Hong-yu Hu, Hui-mei Lu, Yuan-da Cao, Si-min Rao (Beijing Institute of Technology, China)521
3. A Self-Stabilizing Distributed Algorithm for Minimum Connected Dominating Sets in Wireless
Sensor Networks with Different Transmission Ranges
H. Raei, M. Tabibzadeh, B. Ahmadipoor (University of Yazd, Iran), S. Saei (Shiraz University, Iran) 526
4. A Perfect-Hashing Scheme for Fast IP Lookup
Yun-Zhao Li (National University of Defense and Technology, Southwest Electronics and
Telecommunication Technology Research Institute, China) ••••••••••••••••••••••••••••••••••••

5.	Themes4BPEL: An Efficient Aspect-oriented Web Service Composition Design Approach	
	Ying Zhang, Hao Yang, Junliang Chen, Xiangwu Meng (Beijing University of Posts &	
	Telecommunications, China) •••••	534

Session 3D: RFID & USN Technologies (III)

1. Efficient K-coverage Grouping Scheduling in Wireless Sensor Networks
Meng-Chun Wueng, Han-Pei Lin, Shyh-In Hwang (Yuan Ze University, Taiwan) •••••••543
2. Stochastic Coverage Analysis of Wireless Sensor Network with Hybrid Sensing Model
Subodh Pudasaini, Sangman Moh, Seokjoo Shin (Chosun University, Korea)549
3. A Novel Service Architecture for Personalized Context Aware Services
Jaeyong An, Sangheon Pack, Sunshin An (Korea University, Korea), Minsu Kim, Youngki Jeon
(Samsung Electronics, Korea)
4. Calibration Mechanism for RSS based Localization Method in Wireless Sensor Networks
Cong Tran-Xuan, Van-Hiep Vu, Insoo Koo (University of Ulsan, Korea) ••••••••••••••••••••••••••••••••••••
5. Energy-efficient Node-level Compression Arbitration for Wireless Sensor Networks
Beihua Ying, Wei Liu, Yongpan Liu, Huazhong Yang, Hui Wang (Tsinghua University, China) ••••••564

Session 3E: Systems & Software Engineering (III)

1. An Approach to Concurrent Development of Device Drivers and Device Controller
Edson B. Lisboa, Luciano Silva, Thiago Lima, Igino Chaves, Edna Barros (Federal University of
Pernambuco, Brazil) ••••••••571
2. Software Component Reusability Measure in Component Grid
Seungwon Lee, Ho-Jin Choi (Information and Communications University, Korea)
3. Activity Time Collection and Analysis through Temporal Reasoning
Ahmad Ibrahim, Ho-Jin Choi (Information and Communications University, Korea) •••••••579
4. Analysis of Ontology Development Methodology based on OTK and CMMI Level 4
Sang Hun Lee, Ho-Jin Choi, Sukyoung Kim (Information and Communications University, Korea) ••••• 585
5. Z-Miner: Noise Filter In Mining Frequent Access Patterns
Zhu Xudong, Meng Xiaoxuan, Xiao Wenshu, Ke Jian (Chinese Academy of Sciences, Graduate
University of the Chinese Academy of Sciences, China), Xu Lu (Chinese Academy of Sciences, China)

Session 3F: Communication Network Topology & Planning (I)

1. Influence of Schematic Network Topology Models over Real Physical Networks
Jose M. Gutierrez, Tahir Riaz, Jens M. Pedersen, Ole B. Madsen (Aalborg University, Denmark) ••••• 599
2. An Analytic Model for Spanning Tree based Routing Methods
Changjin Suh (Soongsil University, Korea), Zhen Luo (Soongsil University, Shenyang Institute of
Aeronautical Engineering, Korea, China), Do-yeon Kim, Bheom-soon Joo (ETRI, Korea)605
3. Selection of Backup LSPs in MPLS Network based on QoS
Arash Dana (Islamic Azad University, Iran), Ahmad Khademzadeh (Iran Telecommunication Research
Center, Iran), Hesam Hoseinzadeh (Islamic Azad University, Iran) ••••••••611
4. The New Torus Network Design based On 3-Dimensional Hypercube
Woo-seo Ki, Hyeong-Ok Lee, Jae-Cheol Oh (Sunchon National University, Korea)615
5. Network Congestion Control Algorithm with Cooperation between Edge and Core Routers
Lingyun Lu, Yang Xiao (Beijing Jiaotong University, China), Seok Woo, Kiseon Kim (GIST, Korea)

Session 4A: Wireless Communication Technology (IV)

1. Applying the Time-To-Live Parameter in On Demand Route Caching in MANETs
Spanakis Emmanouil, Apostolos Traganitis (University of Crete, Greece) ••••••••629
2. An Enhanced V-blast MIMO System using Joint Source and Channel Coding
Lydia Sari, Gunawan Wibisono, Dadang Gunawan (University of Indonesia, Indonesia) •••••••635
3. A Robust and Energy Efficient Cooperative Spectrum Sensing Scheme in Cognitive Radio
Networks
Yue Wang, Chunyan Feng, Zhimin Zeng, Caili Guo (Beijing University of Posts and Telecommunications,
China) •••••••640
4. Research on Implementation of OFDM Burst Packet Transmission on Software Radio
Platform of FPGA
Liu Liu, Tao Cheng, Qi Xiaoyu, Qiu Jiahui (Beijing Jiaotong University, China) ••••••••646
5. Congestion Detection and Control Algorithms for Multipath Data Forwarding in Sensor
Networks
Md. Abdur Razzaque, Choong Seon Hong (Kyung Hee University, Korea)
6. Packet Scheduling to Support Both of Real-time and Non-real-time Services
Eunyoung Lee, Hyung-Kun Park (Korea University of Technology and Education, Korea) •••••••654

Session 4B: Mobile Communications (IV)

	nagement Service for P2P Content over MANets celo H. Vithoft, Altair O. Santin, Luiz A. de Paula Lima Jr. (Pontifical Catholic University of
	ná, Brazil) ·······
	Effects of Energy-balancing on Multipaths by Packet Allocating in Ad Hoc Networks
Che	n Ni, Chanheum Park, Dongxue Jin, Jaeill Kim, Chonggun Kim (Yeungnam University, Korea)
	• Filling Algorithm for the Throughput Improvement of FH-OFDM System
	bei Zhang, Heung-Gyoon Ryu (Chungbuk National University, Korea) ••••••••••••••••••••••••••••••••••••
-	rmance Analysis of Routing Protocols in Mobile Ad-hoc Networks under Group
-	ity Environment
	o Yeo, Yong-Won Kim, Jong Myung Rhee (Myongji University), Hyun-A Kim, Hyo-Sik Yang
	ong University) ······
	Communication over GGSN/SGSN
	ad Ali Habeeb (Accenture Services Private Ltd., India), Mohammed A Qadeer (Aligarh Muslim
	versity, India), Shamshir Ahmad (Computer Sciences Corporation, India) ••••••••6
	: Next Generation Network Technology (IV)
ssion 4C	: Next Generation Network Technology (IV)
ssion 40 1. Netw	: Next Generation Network Technology (IV)
ssion 40 <i>1. Netw</i> A. F	: Next Generation Network Technology (IV) <i>orks Interoperability</i> oucheryavy (ZNIIS, Russia)
ssion 40 1. Netw A. k 2. Resort	: Next Generation Network Technology (IV)
ssion 40 1. Netw A. K 2. Resou MPLS	: Next Generation Network Technology (IV) orks Interoperability coucheryavy (ZNIIS, Russia)
ssion 40 1. Netw A. K 2. Reso MPL Yan	: Next Generation Network Technology (IV) orks Interoperability coucheryavy (ZNIIS, Russia)
ssion 4C 1. Netw A. K 2. Reso MPL: Yan 3. Copy	: Next Generation Network Technology (IV) orks Interoperability soucheryavy (ZNIIS, Russia)
ssion 40 1. Netw A. k 2. Reso MPLS Yan 3. Copy You	: Next Generation Network Technology (IV) orks Interoperability coucheryavy (ZNIIS, Russia) coucheryavy (ZNIIS, Russia) orce Allocation and Admission Control based on Flow Congestion Probability in S Networks Jiangzhou, Liu Zengji (Xidian University, China) Number based Multicast Scheduling Algorithm in Broadband Banyan Network ngHwan Kwon, Jun Kyun Choi, Soohyung Kim (Information and Communications University,
ssion 40 1. Netw A. k 2. Resou MPL: Yan 3. Copy You ETF	: Next Generation Network Technology (IV) orks Interoperability coucheryavy (ZNIIS, Russia) coucheryavy (ZNIIS, Russia) orce Allocation and Admission Control based on Flow Congestion Probability in S Networks Jiangzhou, Liu Zengji (Xidian University, China) Number based Multicast Scheduling Algorithm in Broadband Banyan Network ngHwan Kwon, Jun Kyun Choi, Soohyung Kim (Information and Communications University,
ssion 40 1. Netw A. K 2. Reso MPL: Yan 3. Copy You ETH 4. IPv6	Sext Generation Network Technology (IV) orks Interoperability soucheryavy (ZNIIS, Russia) orce Allocation and Admission Control based on Flow Congestion Probability in Networks Jiangzhou, Liu Zengji (Xidian University, China) of Number based Multicast Scheduling Algorithm in Broadband Banyan Network ngHwan Kwon, Jun Kyun Choi, Soohyung Kim (Information and Communications University, I, Korea)
ssion 40 1. Netw A. k 2. Reso MPL: Yan 3. Copy You ETF 4. IPv6 Jun	Series Interoperability Souther yavy (ZNIIS, Russia) Coucheryavy (ZNIIS, Russia)
ssion 40 1. Netw A. K 2. Resou MPL: Yan 3. Copy You ETF 4. IPv6 Jun Aca	Section S
ssion 4C 1. Netw A. K 2. Resound MPL: Yan 3. Copy You ETH 4. IPv6 Jun Aca Aca	Sext Generation Network Technology (IV) orks Interoperability coucheryavy (ZNIIS, Russia) orce Allocation and Admission Control based on Flow Congestion Probability in Setworks Jiangzhou, Liu Zengji (Xidian University, China) Mumber based Multicast Scheduling Algorithm in Broadband Banyan Network ngHwan Kwon, Jun Kyun Choi, Soohyung Kim (Information and Communications University, I, Korea) over Broadcasting Networks: Convergence, Trial and Large-scale Application Zhang (Chinese Academy of Sciences, Inner Mongolia University, China), Zhijun Xu (Chinese

Kyu Ouk Lee, Soon Seok Lee (ETRI, Korea) •••••••707

Session 4D: RFID & USN Technologies (IV)

1. Integrated Wireless Access Point Architecture for Wireless Sensor Networks
Ying-Chen Chen, Chi-Cheng Chuang, Ray-I Chang, Jia-Shian Lin, Te-Chih Wang (National Taiwan
University, Taiwan) •••••••713
2. Efficient Mining of Association Rules from Wireless Sensor Networks
Syed Khairuzzaman Tanbeer, Chowdhury Farhan Ahmed, Byeong-Soo Jeong, Young-Koo Lee
(Kyung Hee University, Korea) ••••••719
3. A Localization Algorithm using Space Information for Indoor Wireless Sensor Networks
Hojae Lee, Sanghoon Lee (Yonsei University, Korea), Yeonsoo Kim, Hakjin Chong (KT, Korea) •••••725
4. Relative Location Estimation of Vehicles in Parking Management System
Mohammad Shaifur Rahman, Youngil Park, Ki-Doo Kim (Kookmin University, Korea) •••••••729
5. A Priority-based Pattern Matching Location Algorithm for Wireless Sensor Networks
Jia-Shian Lin, Chi-Cheng Chuang, Ray-I Chang, Ying-Chen Chen, Te-Chih Wang (National Taiwan
University, Taiwan) •••••••733

Session 4E: Telematics Technology

1. Development of a Telematics Service Framework for Open Services in the Heterogeneous
Network Environment
Deuk-Woo Lee, Hong-Koo Kang, Dong-Oh Kim, Ki-Joon Han (Konkuk University, Korea) ••••••741
2. Development of a Common Vehicle Router Platform for Multiple ITS Applications and
Communication Media
Junghyung Kim, Joonghyup Ko (Kyungbong Co.,Ltd., Korea), Sung-Ho Oh (KRIHS, Korea), Jihyeon
Yoon (Kyungbong Co.,Ltd., Korea) ••••••748
3. Efficient Discovery Technique of Distributed KML Data in Mobile Ad Hoc Network
Tadanobu Tsunoda, Kaoru Sezaki (The University of Tokyo, Japan Science and Technology Agency,
Japan) ••••••751
4. Attention based Driving Event Simulator for Telematics Environment
Daesub Yoon, Jongwoo Choi, Kyongho Kim, Hyunsuk Kim (ETRI, Korea), N. Hari Narayanan
(Auburn University, U.S.A.) ·····757
5. An Automatic Camera Calibration Method using GPS-enabled Mobile Device
Hsien-Chou Liao, Hong-Jhih Wu (Chaoyang University of Technology, Taiwan) •••••••760

Session 4F: Communication Network Topology & Planning (II)

1. Application of Code Average Method for GSM Coverage Prediction in Different Environment
Mohd Nazrul Hanif Nordin, Masru Laili Mursidi, Zabidah Saleh (Telekom Research & Development
Sdn Bhd, Malaysia) ·····767
2. A study on Architecture of CDN(Content Delivering Network) with Content Re-distribution
Function
Moo-Kyung Sung, Chi-Moon Han (Hankuk University of Foreign Studies, Korea) ••••••••772
3. Multi-perspective Guidelines for the Design of New Network Planning Tools - a Case Study
Sergio Labeaga, Jens Myrup Pedersen, José Manuel Gutiérrez López, M. Tahir Riaz, Ole Brun Madsen
(Aalborg University, Denmark) ·····778
4. Reliable Data Delivery for Relay-based Overlay Multicast
Sung-Hei Kim, Chang-Kyu Lee, Shin-Gak Kang (ETRI, Korea) ••••••••782
5. An Immune Algorithm for the Optimization of Aggregated Multicast
Hua Wang, Zuquan Ge, Fangji Zhu, Chaoying Yu (Shandong University, China) •••••••786

Session 4G: Poster Session (II)

1. Interface Selection for Power Management in UMTS/WLAN Overlaying Network
Mostafa Zaman Chowdhury, Yeong Min Jang, Choong Sub Ji, Sunwoong Choi (Kookmin University,
Korea), Hongseok Jeon, Junghoon Jee, Changmin Park (ETRI, Korea) ••••••••795
2. Self-Interference Cancellation Method based on V-BLAST in MIMO System
Eun-Ji Yoo, Chang-Bum Jo, Ji-Eun Hwang, Young-Sun Kim, Sang-Woong Bae, So-Youn Park,
Dae-Ho Woo, Youn-Shik Byun (University of Incheon, Korea) ••••••••••••••••••••••••••••••••••••
3. Data Delivery with End-to-end QoS Guarantee in Tactical Network Interconnected with
Wireless Ad-hoc Network and Heterogeneous Networks
Hye-Lim Koo, Byeong-hee Roh (Ajou University, Korea), Young-Keun Park (KUBIX, Korea),
Sang-Eon Kim, Yu-Seon Kim (KT, Korea) ••••••••••••••••••••••••••••••••••••
4. Efficient Flooding Scheme Based on Regular Polygonal Tiling in Wireless Ad Hoc Networks
In Hur, Trong Duc Le, Hyunseung Choo (Sungkyunkwan University, Korea) ••••••••810
5. Point-and-Click Provision in User-centric ROADM Management System
Eun-Young Cho, Young-Hwa Kim, Kwangjoon Kim, YouHyeon Jeong (ETRI, Korea) •••••••815
6. Low Complexity Video Enhancement of Video Phone Calls with a Limited Mobile
Terminal's Capability
Sungho Lee, Jungyoup Yang, Byeungwoo Jeon (Sungkyunkwan University, Korea) ••••••••819
7. Novel Patching Mechanism by Using Multi-homing
Seung Hyun Jeon, Jong Min Lee (Information and Communications University, Korea), Eun-Young Cho
(ETRI, Korea), Jun Kyun Choi, Soo Hyung Kim (Information and Communications University, Korea)

8. The Offloading of Socket Information for TCP/IP Offload Engine
Sunwook Kim, Chanho Park, Seongwoon Kim (ETRI, Korea), Yongwha Chung (Korea University,
Korea) •••••••826
9. Policy Provisioning System Architecture in Broadband Convergence Network
TaeHyun Kwon, Eun-Young Cho, Byungjoon Lee, InSang Choi, Seung-Hyun Yoon, Hyung-Seok Chung,
YouHyeon Jeong (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
10. A Design for Passive RFID System on a Chip
Chan-won Park, Gil-young Choi, Jong-suk Chae (ETRI, Korea), Bo-gwan Kim (Chungnam National
University, Korea) ••••••••••••••••••••••••••••••••••••
11. HyPO: A Peer-to-Peer based Hybrid Overlay Structure
Haesun Byun, Meejeong Lee (Ewha Womans University, Korea) ••••••••••••••••••••••••••••••••••••
12. The Efficient Initial Signal Detection Technique Using Multi-level Threshold Values in
MB-OFDM UWB Systems
Kwibeom Han, Seongjoo Lee (Sejong University, Korea) ••••••••••••••••••••••••••••••••••••
13. A Study on IEEE 802.15.4 based Factory Automation System in Wireless Network
Hye-Rim Lee, Il-Young Moon (Korea University of Technology and Education, Korea) •••••••851
14. A Real-time Observation Scheme for UMTS Networks
Jeong-Je Cho, Nak-Po Kim (KTF, Korea) ••••••••••••••••••••••••••••••••••••
15. Improved AODV Routing Protocol for Wireless Sensor Network based on ZigBee
Yu-Doo Kim, Il-Young Moon (Korea University of Technology and Education, Korea) •••••••859
16. LBS Convergence Agent for Interoperability between LBS Platforms
Jiho Kim, Jungyu Lee, Ohyoung Song (Chung-Ang University, Korea) •••••••863
17. Analysis of the Vehicle Information for the Economical and the Ecological Driving Pattern
Jongwoo Choi, Daesub Yoon, Kyuongho Kim, Hyunsuk Kim (ETRI, Korea)867
18. UML Design of Vehicular Communication Service
SungDae Jung, SangSun Lee (Hanyang University, Korea), KyeongSoo Han, HyunSeo Oh,
Dong Young Kwak (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
19. PTP Interworking 802.15.4 using 6LoWPAN
Keunsol Kim (University of Science and Technology, ETRI, Korea), Seung-Woo Lee, Dae geun Park,
Bhum Cheol Lee (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
20. A 2*n Matrix Hypercube Graph: A Graph With Edges of Hypercube Improved by a half
Hyun Sim, Hyeong-Ok Lee, Jae-Cheol Oh (Sunchon National University, Korea) •••••••877
21. OPeN (Overlaid Personal Network) - A Novel Approach of Sharing Personal Resources
Juyoung Park, Young Il Choi (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
22. Telnet-based Transport Control
Kang Woon Hong, Won Ryu (ETRI, Korea), Jun Kyun Choi (Information and Communications
University, Korea) ••••••••••••••••••••••••••••••••••••

2 3	B. A Study on the Third Phase Plan for Establishing BcN in KOREA
	Hyong-Soon Kim (National Information Society Agency, Korea), Jae-Nam Lim (Seoul National
	University of Technology, Korea), Myungwon Song (National Information Society Agency, Korea),
	Eunyoung Lee (Dongduk Women's University, Korea) ••••••••••••••••••••••••••••••••••••
24	A. RSS-based Cooperative Localization Algorithm using Virtual Reference Node in Wireless
	Sensor Networks
	Seung-heui Jeong, Chang-heon Oh (Korea University of Technology and Education, Korea) •••••••895
25	5. NLOS Signal Detection Algorithm for TDOA Method in Wireless Sensor Network
	Chulgyu Kang, Hyunjae Lee, Changheon Oh (Korea University of Technology and Education, Korea)
Sessi	on 5A: Wireless Communication Technology (V)
1.	Improve Efficiency of Ad Hoc Networks with MIMO Communication and Cross Layer
	MAC Design
	Ehsan Soleimani Nasab, Mehrdad Ardebilipour (K.N.Toosi University of Technology, Iran) •••••••907

- 2. Novel Protocol for Quantum Cryptography of Secure in Wireless Communications
 Xu Huang, Shirantha Wijesekera, Dharmendra Sharma (University of Canberra, Australia)913
- 3. Outage Probability of Opportunistic Decode-and-Forward Relaying with Co-Channel Interferences

4. Robust Null Extension for Two-Dimensional Array Antenna

Beamforming with Quantized Feedback to Increase Diversity of Relay Channels
 Ebru S. Toker, Özgür Oruç, Mehmet E. Çelebi (Istanbul Technical University, Turkey)927

Session 5B: Mobile Communications (V)

1. A Novel Hierarchical Joint Call Admission Control-HJCAC for Multi-service Heterogeneous Wireless Networks

2. L3 Mobility Support in Large-scale IP-based Sensor Networks (6LoWPAN)
Myung-Ki Shin, Hyoung-Jun Kim (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
3. Mobile Services: Trends and Evolution
Jahangir Dadkhah Chimeh (Iran Telecommunication Research Center, Iran) ••••••••••••••••••••••••••••••••••••
4. An Entropy-based Routing Protocol using Mobility in Mobile Ad-hoc Wireless Sensor
Networks
Beongku An, Joo Sang Lee (Hongik University, Korea), Nam-Soo Kim (Cheongju University, Korea)
5. The Proposed Improvement 3-Layer Mobility Management Scheme fir Wireless Mesh
Networks using IP Prefix Mechanism
Tran Cong Hung, Le Phuc, Nguyen Ngoc Duy, Do Ngoc Thuy Quynh, Le Quoc Cuong (Posts &

Session 5C: Mobile Internet (I)

1. A Unified Session Control Protocol for IPTV Services
Shanmugalingam Sivasothy, Gyu Myoung Lee, Noel Crespi (Institute TELECOM SudParis, France)
2. Factors Affecting the Switching Intention of IPTV Subscribers
Jaeheung Yoo, Junkyun Choi, Soohyung Kim, Jinhong Yang (Information and Communications
University, Korea) ••••••••••••••••••••••••••••••••••••
3. Low-Complexity Entirely-Overlapped Parallel Decoder Architecture for Quasi-Cyclic
LDPC Codes
Weizhi Lu, Piming Ma (Shandong University, China) ••••••••••••••••••••••••••••••••••••
4. A Seamless Layer-2 Handover Scheme for Mobile WiMAX based Wireless Mesh Networks
Min Kim (Kwangwoon University, Korea), Il-kyeun Ra (University of Colorado Denver, U.S.A,),
Ji-sang Yoo, Dong-wook Kim, Hwa-sung Kim (Kwangwoon University, Korea) ••••••••••••••••••••••••••••••••••••
5. A Low Complexity Cell Search Method for IEEE 802.16e OFDMA Systems
Yung-Chuan Lin, Szu-Lin Su, Shao-Yuan Wu (National Cheng Kung University, Taiwan) •••••••980

Session 5D: RFID & USN Technologies (V)

1. A Content-aware Fridge based on RFID in Smart Home for Home-Healthcare
Hanshen Gu, Dong Wang (Shanghai Jiaotong University, China) ••••••••••••••••••••••••••••••••••••
2. Virtual Overlay for Service Classification & Discovery in Wireless Sensor Networks
Saad Ahmed Munir, Xie Dongliang (Beijing University of Posts & Telecommunications, China),
Chen Canfeng, Jian Ma (Nokia Research Center, China) ••••••••••••••••••••••••••••••••••••

3. Accurate Modeling for Predicting Cryptography Overheads on Wireless Sensor Nodes
Wei Liu, Beihua Ying, Huazhong Yang, Hui Wang (Tsinghua University, China) •••••••997
4. Mining Association Rules for RFID Data with Concept Hierarchy
Younghee Kim, Ungmo Kim, Myungsook Jung (Sungkyunkwan University, Korea), Woojun Kang
(Korea Christian University, Korea), Youngju Noh (Chungnam Cheongyang College, Korea) •••••• 1002
5. Service Discovery in Wireless Sensor Networks: Protocols & Classifications
Saad Ahmed Munir, Xie Dongliang (Beijing University of Posts & Telecommunications, China),
Chen Canfeng, Jian Ma (Nokia Research Center, China) ••••••••••••••••••••••••••••••••••••

Session 5E: Multimedia and Internet Systems, and Services (I)

1. An Automated Method based on Second Order Moment for Defect Extraction in Photomask Images

3. The Ontology for a Multi-Sensory Media Service

Seungwon Oh, Minsoo Hahn (Information and Communications University, Korea) 1025

4. Improved MB-Layer Rate Control for H.264/AVC

Kan Chang, Aidong Men, Juan Luo (Beijing University of Posts and Telecommunications, China) ••• 1031

5. A Method to Reduce the Decoding Complexity of the Binary (89, 45, 17) Quadratic

Residue Code

Wen-Ku Su, Pei-Yu Shih, Tsung-Ching Lin, Trieu-Kien Truong (I-Shou University, Taiwan) 1035

Session 5F: Information Security Technology (I)

Design of Lock-Keeper Federated Authentication Gateway Feng Cheng, Christoph Meinel (Hasso Plattner Institute (HPI), University of Potsdam, Germany) ··· 1041 Method of Countering Unsolicited IP Applications using Lists So Young Park, Sung Hei Kim, Shin Gak Kang (ETRI, Korea) ····· 1047 Improving the Security of McEliece-Like Public Key Cryptosystem based on LDPC Codes Masumeh Koochak Shooshtari, Mahmoud Ahmadian (K. N. Toosi University of Technology, Iran),

4. Vulnerability Analysis and Patches Management using Secure Mobile Agents

Session 6A: Wireless Communication Technology (VI)

1. Transmitter Design for MISO Downlink with Peak Power Constraint
Ihn-Jung Baik, Sae-Young Chung (KAIST, Korea) ••••••••••••••••••••••••••••••••••••
2. Optimization of MAPSK
Xudong Chen, Huazhong Yang (Tsinghua University, China) ••••••••••••••••••••••••••••••••••••
3. Wireless Network Synchronization for Multichannel Multimedia Services
Yonghwan Bang, Jongpil Han, Kyusang Lee (Information and Communicaitons University, Korea),
Jongwon Yoon, Jinoo Joung (Sangmyung University, Korea), Sungbo Yang (Hyundai Motor Co., Korea),
June-Koo Kevin Rhee (Information and Communicaitons University, Korea) ••••••••••••••••••••••••••••••••••••
4. Performance Analysis Of An OFDM Wireless Communication System with Convolutional
Coding
Kazi Mostaq Ahmed (Stamford University, Bangladesh), Satya Prasad Majumder (Bangladesh University
of Engineering & Technology, Bangladesh), B. K. M. Mizanur Rahman (United International University,
Bangladesh) ••••••••••••••••••••••••••••••••••••
5. A Compact Internal Antenna for Wireless USB Dongle Application
Yeonsik Yu, Youngki Lee, Soonyong Lee, Jaehoon Choi (Hanyang University, Korea) ••••••••••••••••••••••••••••••••••••

Session 6B: Mobile Communications (VI)

1. An Approach for Seamless Integration of QoS and Mobility for Wireless Mobile Networks
Osvaldo Gonsa (Panasonic Research Center Germany, Germany), Shintaro Uno (Huawei Technologies
Japan, Japan), Moo Wan Kim (Tokyo University of Information Sciences, Japan), Kwangsik Kim
(Samsung Telecommunications Japan, Japan) ••••••••••••••••••••••••••••••••••••
2. Physical Layer Verification for 3GPP LTE (FDD)
Sung-Won Kim, Kun-Yong Kim (Agilent Technologies, Korea) ••••••••••••••••••••••••••••••••••••
3. Design of Messenger Oriented P2P Framework in Mobile Ad-hoc Networks
Qin Jiancheng, Sun Bin (Beijing University of Posts and Telecommunications, China) ••••••••••••••••••••••••••••••••••••
4. Downlink Time Switched Transmit Diversity System with ARQ Scheme
Cha-Eul Jeon, Ri-A Ma, Jun-Ho Baek, Seung-Hoon Hwang (Dongguk University, Korea) ••••••• 1106

5. The Application of Smart Antennas in TD-SCDMA

Session 6C: Mobile Internet (II)

1. Real Time Video Streaming over Heterogeneous Networks
Mohammed A Qadeer, Rehan Ahmad, Mohd Siddique Khan, Tauseef Ahmad (Aligarh Muslim
University, India) ••••••••••••••••••••••••••••••••••••
2. Adoption of IPTV under the Convergence of Broadcasting and Telecommunications
Imsook Ha, Jaeheung Yoo, Junkyun Choi (Information and Communications University, Korea),
Sanggug Jong (KT, Korea), Soohyung Kim (Information and Communications University, Korea),
Youngmin Chin (KT, Korea) ••••••••••••••••••••••••••••••••••••
3. A Simple Compensation Algorithm for VoIP Services in IEEE 802.16e System
Hongxia Zhang, Jufeng Dai (Tianjin University, China) ••••••••••••••••••••••••••••••••••••
4. Network-based Fast Handover for IMS Applications and Services
Sang Tae Kim, Seok Joo Koh (Kyungpook National University, Korea), Kyoung-Hee Lee (ETRI, Korea)
5. A Low Complexity Method of Initial Ranging for IEEE 802.16e OFDMA Systems
Yung-Chuan Lin, Szu-Lin Su, Hsin-Chih Wang (National Cheng Kung University, Taiwan) ••••••• 1137

Session 6D: RFID & USN Technologies (VI)

1. Location Aware Public/Personal Diversity of Information Services based on Embedded
RFID Platform
Ming-Shen Jian (Shu-Te University, Taiwan), Shu Hui Hsu (International Megatrend Smart Technology
Ltd., Taiwan) ••••••••••••••••••••••••••••••••••••
2. MAC Hurdles in Body Sensor Networks
Sana Ullah, Pervez Khan (Inha University, Korea), Young-Woo Choi, Hyung-Soo Lee (ETRI, Korea),
Kyung Sup Kwak (Inha University, Korea) ••••••••••••••••••••••••••••••••••••
3. An Agent-based Routing Algorithm with Low Overhead for Mobile Sinks in Wireless
Sensor Networks
Jae-Wan Kim (SOLiD Technologies, Korea), Doo-Seop Eom (Korea University, Korea) ••••••••••••••••••••••••••••••••••••
4. A Web Service based Gateway Architecture or Wireless Sensor Networks
Weidong WANG, Yue-Xian ZOU, Guangyi SHI, Yuesheng ZHU (Shenzhen Graduate School of
Peking University, China) ••••••••••••••••••••••••••••••••••••

5. A Reliable Topology for Wireless Sensor Networks

Ali Tufail (Ajou University, Korea), Syed Ali Khayam (NUST, Pakistan), Gargi Bag, Ki-Hyung Kim,

Session 6E: Multimedia and Internet Systems, and Services (II)

1. Electronic Invisible Code Displaying System for Group Work on Life Review Activity
Tomofumi Yamanari, Kunio Sakamoto (Konan University, Japan), Shusaku Nomura (Nagaoka
University of Technology, Japan), Tetsuya Hirotomi, Kuninori Shiwaku, Masahito Hirakawa
(Shimane University, Japan) ••••••••••••••••••••••••••••••••••••
2. Robust Fast Belief Propagation for Real-time Stereo Matching
Intae Na, Junghun Choi, Hong Jeong (POSTECH, Korea) ••••••••••••••••••••••••••••••••••••
3. Fast Mode Decision for P-Slices in H.264/AVC Based on Probabilistic Learning
Xinxin Zhou, Chun Yuan, Chunhua Li, Yuzhuo Zhong (Tsinghua University, China) ••••••••••••••••••••••••••••••••••••
4. A Non-Photorealistic Motion Generation System
JiHyung Lee, BonKi Koo (ETRI, Korea), Jung-Ju Choi (Ajou University, Korea), Chi Jung Hwang
(Chungnam National University, Korea) ••••••••••••••••••••••••••••••••••••
5. A Study on Wireless Transmission System for Full-Spec HDTV
Masayuki KUROSAKI, Yuya HIRATA, Masateru MATSUO, Wahyul Amien Syafei, Baiko SAI
(Kyushu Institute of Technology, Japan), Yoshimitsu KUROKI (Kurume National College of
Technology, Japan), Akio MIYAZAKI (Kyushu Sangyo University, Japan), Hiroshi Ochi (Kyushu
Institute of Technology, Japan) ••••••••••••••••••••••••••••••••••••

Session 6F: Information Security Technology (II)

1. Injecting Trust to Cryptographic Key Mar	lagement	
Gökhan Bal (Goethe-University, Germany), A	Andreas U. Schmidt, Nicolai Kuntze (Fraunhofer	
Institute for Secure Information Technology,	Germany) ····· 1	197
2. Cryptanalysis And Improvement on Remo	te User Mutual Authentication Scheme with	
Smart Card		
Razi Arshad, Nassar Ikram (National Univers	ity of Sciences and Technology, Pakistan) ••••••••• 1	202
3. P2P Attack Taxonomy and Relationship A	Analysis	
Xiaowen Yue, Xiaofeng Qiu, Yang Ji, Chunho	ong Zhang (Beijing University of Posts and	
Telecommunications, China)		207
4. An Improved RC6 Algorithm with the San	ne Structure of Encryption and Decryption	
Gil-Ho Kim, Jong-Nam Kim, Gyeong-Yeon (Cho (Pukyong National University, Korea) •••••••• 1	211

5. Adaptive Image Watermarking Scheme in Contourlet Transform using Singular Value
Decomposition
Shao-min Zhu (China Electric Power Research Institute, China), Jian-ming Liu (State Grid Information
& Telecommunication Co., Ltd., China) ••••••••••••••••••••••••••••••••••••
Session 6G: Poster Session (III)

1. CDMA Coded Power Control over Rayleigh Fading
Sangho Choe (The Catholic University of Korea, Korea) ••••••••••••••••••••••••••••••••••••
2. A New Detection Method for MIMO Systems with Differently Modulated Layers
JungHyun KIM, Seungjae Bahng, Youn-Ok PARK (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
3. Performance of UAV(Unmanned Aerial Vehicle) Communication System Adapting
WiBro with Array Antenna
Pyung-Joo Park, Sung-Min Choi, Dong-Hee Lee, Byung-Seub Lee (Korea Aerospace University, Korea) … 1233
4. A CMOS Single Chip Receiver with RF Front-End and Baseband Processor for Band-III
T-DMB/DAB Applications
Seong-do Kim (ETRI, Korea), Seung-hyeub Oh (Chungnam National University, Korea) •••••••• 1238
5. Implementation of Route Optimization Mechanism Supporting IPv4/IPv6 Traversal in
Proxy Mobile IPv6
Sangjin Jeong, Myung-Ki Shin, Hyoung-Jun Kim (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
6. Referential Software Architecture of Integrated Graphic System for Mobile Handset Devices
Kyung Hee Lee, Sangyoon Lee, Haesook Jun (ETRI, Korea), Kwan-jong Yoo (Chungnam National
University, Korea) ····· 1245
7. Design of a Collaborative Filtering System for Classifying Harmful Contents
Wonjae Lee (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
8. A Service Availability-aware Construction of Profitable Service Overlay Network
HyunYong Lee, JongWon Kim (GIST, Korea) ••••••••••••••••••••••••••••••••••••
9. Interoperability and Anonymity for ID Management Systems
Hosung Jo (Hanyang University, Korea), Hwanjin Lee, Kilsoo Chun (Korea Information Security
Agency, Korea), Heejin Park (Hanyang University, Korea) ••••••••••••••••••••••••••••••••••••
10. A Study of Management Interface for Cluster System Integrity
Jae Deok Lim, Jeong Nyeo Kim (ETRI, Korea), Choel Hoon Lee (Chungnam National University, Korea)
11. Session Transfer Mechanism Considering Capabilities of Target Access Network
Joo-Chul Lee, Young-Il Choi (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
12. A Study on Internet Telephony Service for Enhanced Emergency Services
IlJin Lee, Ok Jo Jeong, Wook Hyun, ShinGak Kang (ETRI, Korea) ••••••••••••••••••••••••••••••••••••

13. NAT Traversal for SIP-based Presence Services with Symmetric Dialog Routing
Hyun Wook, Kang Shin-Gak (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
14. A Hybrid Hyper Tag Anti-collision Algorithm in RFID System
Tae Hee Kim, Seong Joon Lee (Kyungpook National University, Korea) ••••••••••••••••••••••••••••••••••••
15. An Automatic Shot Change Detection Algorithm using Weighting Variance and
Histogram Variation
Won-Hee Kim, Kwang-Seok Moon, Jong-Nam Kim (Pukyong National University, Korea) ••••••• 1282
16. Real-time Camera Tracking for Augmented Reality
Jung-Jae Yu, Jae-Hean Kim, Hye-mi Kim (ETRI, Korea), Il Choi (Uniinfo co., ltd., Korea), Il-Kwon
Jeong (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
17. An Efficient Remote User Authentication Scheme Secure against the Off-line Password
Guessing Attack by Power Analysis
Ji-Hye Park, Ji-Seon Lee, Jik Hyun Chang (Sogang University, Korea) ••••••••••••••••••••••••••••••••••••
18. Personal Information Management using Attribute Provider
Jong-Hyuk Roh, Seung-Hun Jin (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
19. Protection of Content Streamed through the Retransmission
Jihyun Park, Kisong Yoon (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
20. Call Set-up Time Modeling for SIP-based Stateless and Stateful Calls in Next
Generation Networks
Mahmoud Pirhadi (Islamic Azad University, Iran), Seyed Mostafa Safavi Hemami (Amirkabir
University of Technology, Iran), Abbas Iravani Tabrizipoor (Telecom Infrastructure Co., Iran) •••••• 1299
21. PRAM: A Probing Range Adjusting Mechanism in Energy-Efficient and
Sensibility-Aware Probing Environment WSNs
Kuan-Rong Lee (Kun Shan University, Taiwan), Po-Cheng Huang, Yau-Hwang Kuo (NCKU
University, Taiwan), Ming-Zoo Wu (Institute for Information Industry, Taiwan) ••••••••••••••••••••••••••••••••••••
22. Extraction of Key Postures using Shape Contexts
Geum-Boon Lee, Wilfred O. Odoyo, Jeong-Nam Yeom, Beom-Joon Cho (Chosun University, Korea)
23. A Robust Bread Defect Detection and Counting System
Ilkoo Ahn (Information and Communication University, Korea), Michael Moonshin Zo (CasaTech
company, Korea), Changick Kim (Information and Communication University, Korea) ••••••••••••••••••••••••••••••••••••
24. DWT-based Image Fingerprinting Scheme Resistant against Geometrical Distortion and
Lossy Compression
Yong-Seok Seo, Young-Ho Suh (ETRI, Korea), Chi-Jung Hwang (Chungnam National University,
Korea) 1321
25. The Concept Of Narrow Sound Channel Using Binary Time Frequency Masking For
Speech Recognition Of Intelligent Service Robots
Hyukjoon Jang, Jaiyoun Song, Hong Jeong (POSTECH, Korea) ••••••••••••••••••••••••••••••••••••

26. Design of an Internal Planar Monopole Antenna for WUSB Dongle Application
Youngki Lee, Yeonsik Yu, Soonyong Lee, Jaehoon Choi (Hanyang University, Korea) 1329
27. Two-hop Relay Technique using STBC and Simple Coding Algorithm in Wireless
Fading Relay Channels
Yoonho Jang, Sangjun Bae (Inha University, Korea), Sunkyung Shin (ETRI, Korea), Kyungsup Kwak
(Inha University, Korea) ····· 1332
28. Inter-ACR Fast Handover Mechanism for IPv6 based WiBro System
Min-Sik Shim, Min Kim (Kwangwoon University, Korea), Il-kyeun Ra (University of Colorado Denver,
U.S.A.), Dong-wook Kim, Ji-sang Yoo, Hwa-sung Kim (Kwangwoon University, Korea) ••••••••••1336
29. A Location based Routing Protocol in Mobile Sensor Networks
Kihyun Kim, Jeongbae Yun, Jangkyu Yun, Byeongjik Lee, Kijun Han (Kyungpook National

University, Korea) ····· 1342

Session 7A: Wireless Communication Technology (VII)

1. Analysis of the Four-horn Monopulse for LEO Satellite Tracking using the Exact Model
Jafar Nateghi, Leila Mohammadi, G.R. Solat (Iran Telecommunication Research Center, Iran) •••••• 1349
2. Polynomial Predistortion Technique for PA Non-linearities using IDLA Scheme
Zong Qiang Li (Engineering College of Armed Police Force, China) ••••••••••••••••••••••••••••••••••••
3. A Hybrid Carrier Synchronization Scheme for PSK Burst-mode Communication Systems
Seong-Bok Park, Dhong-Woon Jang (Agency for Defense Development, Korea) ••••••••••••••••••••••••••••••••••••
4. Multi-Wideband Rectangle-triangle Antenna With a Taper Line for Feeding
Mamdouh Gouda (Misr University for Science & Technology, Egypt), Adel Abdin (Shorouk
Academy, Egypt) 1361
5. A Low Complexity Joint Parameter Estimation Scheme for Carrier Frequency Offset and
I/Q Imbalance
Leonardo A. Lanante Jr., Ryuta Imashioya, Masayuki Kurosaki, Hiroshi Ochi (Kyushu Institute of
Technology, Japan) ····· 1365

Session 7B: Mobile Communications (VII)

1. Optimal Fixed-point Design of Traffic Channel for M-WiMAX Mobile Modem ASIC	
JongHun Kim, YuPeng Wang, KyungHi Chang (Inha University, Korea), NamHoon Park (ETRI, Korea) • 1	1373
2. The Three-layered Group Key Management Architecture for MANET	
Sun Bin, Yu Bin (Beijing University of Posts and Telecommunications, China) •••••••••••••••••••••••	378
3. Understanding the User Acceptance of Multimedia Messaging Services	
Ho Kyoung Shin, Kyung Kyun Kim, Ki Won Lee (Yonsei University, Korea) ••••••••••••••••••••••••••••••	382

4. RAAM: Routing Alogorithm using Ant Agents for MANETs

5. Factors Influencing Adoption of Korean 3G Mobile Services: The Role of Relative Advantages, Facilitating Condition and Adoption Barriers

Moon-Koo Kim, Jong-Hyun Park (ETRI, Korea), Jong-Hyun Paik (TTA, Korea) 1392

Session 7C: Mobile Internet (III)

1. An Identification of Correlation between Network QoS and Video Quality Index for IPTV
Service
Jaehyung Bae, Hong-Shik Park, Young Min Chin, Han-Choon Park (Information and Communications
University, Korea) ····· 1399
2. Interconnecting Multi-Vendor Multi-Hop WLAN and Internet via Hotspot
Akihisa Matoba (Hewlett-Packard Japan, Ltd., Japan), Moo Wan Kim (Tokyo University of
Information Sciences, Japan) ••••••••••••••••••••••••••••••••••••
3. A Study on Efficiency Improvement of Doherty Amplifier using LDMOS FET for WiMax
Networks
Hyukyong Kwon, Chae up Yoo, Min-su Kim, Younggoo Yang (Sungkyunkwan University, Korea) $ \cdot \cdot 1406$
4. FFRDV: Fastest-Ferry Routing in DTN-enabled Vehicular Ad Hoc Networks
Danlei Yu, Young-Bae Ko (Ajou University, Korea) ••••••••••••••••••••••••••••••••••••
5. QoS based Provisioning Vertical Handover between IEEE 802.11 and 802.16
Min Jong Kim, Sang Woo Son, Byung Ho Rhee (Hanyang University, Korea) ••••••••••••••••••••••••••••••••••••

Session 7D: Optical Networking Technology (I)

4. Performance Analysis of an All-optical Wavelength Converter based on Cross-phase
Modulation (XPM) in DSF Fiber
Mostafa Jannatul Ferdows (United Internationl University, Bangladesh), S.P. Majumder
(Bangladesh University of Engineering & Technology, Bangladesh) ••••••••••••••••••••••••••••••••••••

5. E/O Module Integrated with Combined Tx/Rx and Mux/Demux for Optical Interconnection
 Nga T.H. Nguyen, Trong-Hieu Ngo, Tae-Woo Lee, Hyo-Hoon Park (Information and Comunication
 University, Korea)
 1436

Session 7E: Multimedia and Internet Systems, and Services (III)

1. QoS Scheduling Considering Flow for Assured Service in Diffserv Network
Tadasuke Minagawa, Tetsushi Ikegami (Meiji University, Japan) ••••••••••••••••••••••••••••••••••••
2. A Multi-Level Metadata Structure for Image Archiving
Hyowon Kim, Yongik Yoon (Sookmyung Women's University, Korea) ••••••••••••••••••••••••••••••••••••
3. Efficient Improvement for Adaboost based Face Detection System
Pufeng Wu (Xi'an Jiaotong University, China), Hongzhi Liu, Xixin Cao, Jing Liu, Zhonghai Wu
(Peking University, China) ••••••••••••••••••••••••••••••••••••
4. Content-aware and Network-adaptive Video Streaming of a Ubiquitous Middleware
EUN-SEOK RYU, HAE-SUN JUNG (Korea University, Korea), YONG-WOO LEE (University of Seoul,
Korea), HYUCK YOO, CHANG-SUNG JEONG, SUNG-WON AHN (Korea University, Korea) •• 1458
5. Decoding Golay Code by Direct Solution of the Error Locator Polynomial
Pei-Yu Shih, Wen-Ku Su, Tsung-Ching Lin, Trieu-Kien Truong (I-Shou University, Taiwan) ••••••• 1462

Session 7F: Information Security Technology (III)

1. MagicNET: Security Architecture for Creation, Classification, and Validation of Trusted Mobile Agents

2. Establishment of Cross-layer Trust Model for Ad Hoc Networks

3. A Novel Secure Distributed Disk System

Jie Lin, Yunliang Zhang, Zhiyong Tan, Yiqi Dai (Tsinghua University, China) 1476

4. Network Threat Assessment based on Attribute Recognition

5. Design and implementation of Vector Quantizer for a 600bps Vocoder Based on MELP
 Fateme Khalili, Mehrdad Ardebilipour (K.N. Toosi University of Technology, Iran), Hossein Sameti
 (Sharif University of Technology, Iran)

Session 8A: Wireless Communication Technologies (VIII)

Session 8B: Mobile Communications (VIII)

1. Modify AODV for MANET/INTERNET Connection through Multiple Mobile Gateways
YU Bin, SUN Bin (Beijing University of Posts and Telecommunications, China) ••••••••••••••••••••••••••••••••••••
2. Cluster Overlay-Dynamic Source Routing: Highly Scalable Routing Protocol
Kwang-Soo Jang, Hyo-Sik Yang (Sejong University, Korea), Jong-Myung Rhee (Myongji University,
Korea) 1524
3. Bidirectional Decision Feedback Equalization for CDMA System with Low Spreading Factor
Junhui Zhao (Beijing Jiaotong University, Macau University of Science and Technology, China),
Hua Li (Shandong University, China), Dongming Wang (Southeast University, China) ••••••••••1529
4. High Speed VLC System based on Turbo-Coded OFDM Scheme
Sung Wan Koo, Jae Sung Park, Jin Young Kim (Kwangwoon University, Korea)1534

5. Effect of Channel Estimation Error on the Performance of Interleave-Division Multiple Access Systems

Xingzhong Xiong (University of Electronic Science and Technology of China, Sichuan University of Science & Engineering, China), Jianhao Hu, Feng Yang, Xiang Ling (University of Electronic

Session 8C: Mobile Internet (IV)

1. A Power Assignment Mechanism for OFDM-based Underwater Acoustic Communication
System
Chin-Feng Lin, Zhen-Xiang Shi (National Taiwan-Ocean University, Taiwan), Shung-Hyung Chang
(National Kaohsuing Marine University, Taiwan) ••••••••••••••••••••••••••••••••••••
2. Analysis of Subscribers' Usages and Attitudes for Video IP Telephony Services over NGN
IlKwon Cho (National Information Society Agency, Korea), Koji OKAMURA (Kyushu University,
Japan), MyungWon Song, YoungRo Lee (National Information Society Agency, Korea)1549
3. The Impact of RTS/CTS Frames on TCP Performance in Mobile Ad hoc-based Wireless LAN
Neeraj Poudyal (Korea Aerospace University, Korea), Ha Cheol Lee (Yuhan University, Korea),
Byung Seub Lee (Korea Aerospace University, Korea), Youngjoon Byun, Eric Yiching Tao
(California State University, USA) ••••••••••••••••••••••••••••••••••••
4. A Routing Metric for Load Balance in Wireless Mesh Networks
Sooyeol Yang, Youngmi Baek, Junhyung Kim, Keuchul Cho, Kijun Han (Kyungpook National
University, Korea) ••••••••••••••••••••••••••••••••••••
5. Managing Alternative Parent Peers for Providing Fast Reconnection between Peers
Ilhom Karimov, Miradham Kamilov, Eunyong Park, Jungwook Song, Heemin Kim, Sunyoung Han
(Konkuk University, Korea) ····· 1566

Session 8D: Optical Networking Technology (II)

1. Security Evaluation of Optical CDMA System with Statistical Approach	
Tomohiro YOKOHAMA, Tetsuo TSUJIOKA (Osaka City University, Japan) 157	75
2. Performance Modelling and Evaluation of Optical Packet Switching Network using RT-SPA	
Tony Tsang (Hong Kong Polytechnic University, Hong Kong) ••••••••••••••••••••••••••••••••••••	30
3. A 1.2-V 10-Gb/s Highly CPD Isolated and Bandwidth Enhanced Optical Receiver in	
0.13-µm CMOS Technology	
W. S. Oh, K. Park, K. W. Min, H. S. Son, Y. S. Lee (Korea Electronics Technology Institute, Korea)	
	36

4. Optical and Higher Layer Performance Monitoring in Photonic Networks: Progress and **Challenges**

M. S. Islam (Institute of Information and Communication Technology, Bangladesh), S. P. Majumder (Bangladesh University of Engineering and Technology, Bangladesh)1591

5. A Novel Technique for Optical Header Multiplexing using Coded Frequency Division Multiplexing in Optical Packet Switching Networks

Md. Dulal Hossain, Jae Jeung Rho, Junghoon Moon (Information and Communications University,

Session 8E: Multimedia and Internet Systems, and Services (IV)

1. Low Cost Blur Image Detection and Estimation For Mobile Devices
Jaeseung Ko, Changick Kim (Information and Communications University, Korea) ••••••••••••••••••••••••••••••••••••
2. A Novel Substream Extraction for Scalable Video Coding over P2P Networks
Chunhua Li, Chun Yuan, Yuzhuo Zhong (Tsinghua University, China) ••••••••••••••••••••••••••••••••••••
3. Activity Replay System using Mixed Reality Technology for Inspection of Ways of Group
Work on Reminiscence Therapy
Yuuki Matsumoto, Kunio Sakamoto (Konan University, Japan), Shusaku Nomura (Nagaoka University
of Technology, Japan), Tetsuya Hirotomi, Kuninori Shiwaku, Masahito Hirakawa (Shimane University,
Japan) ••••••••••••••••••••••••••••••••••••
4. Unsupervised Object of Interest Discovery in Multi-view Video Sequence
Thanaphat Thummanuntawat, Wuttipong Kumwilaisak (King Mongkut's University of Technology,
Thailand), Jatuporn Chinrungrueng (National Electronics and Computer Technology, Thailand) •••• 1622
5. Modified Decoding of Binary Quadratic Residue Codes by Using Euclidean Algorithm
Pei-Yu Shih, Wen-Ku Su, Tsung-Ching Lin, Trieu-Kien Truong (I-Shou University, Taiwan) ••••••• 1628

Session 8F: Information Security Technology (IV)

1. A Table-driven Approach for IP Traceback based on Network Statistic Analysis	
Wei-Tsung Su (Aletheia University, Taiwan), Yi-Hsun Chuang, Zong-Bing Wu, Yau-Hwang Kuo	
(National Cheng Kung University, Taiwan)	1633
2. Trust-based Anonymity Framework for Wireless Mesh Networks	
Muhammad Shoaib Siddiqui, Riaz Ahmed Shaikh, Choong Seon Hong (Kyung Hee University, Korea)	
	1638
3. Digital Video Watermarking in 3-D Ridgelet Domain	
H. Khalilian, S. Ghaemmaghami, M. Omidyeganeh (Sharif University of Technology, Iran)	1643

4. A Novel Audio Scrambling Algorithm in Variable Dimension Space

Huan. Li (Xi'an Jiaotong University, Dongguan University of Technology, China), Zheng. Qin, Liping.Shao (Xi'an Jiaotong University, China), Bin. Wang (Dongguan University of Technology, China) •• 1647

5. A New Scalar Multiplication Method Suitable For Hyperelliptic Curve Cryptosystems
 Chen Xiao-e (Hainan Normal University, China), You Lin (Hangzhou Dianzi University, China) ·· 1652

Session 8G: Poster Session (IV)

1. A Design of System Integrating a Personalized Yellow Page Service and a Interactive
Video Application Service
Sung Jin Hur, Sung Joo Kang, Wan Choi (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
2. Home-to-Home Media Streaming System based on Adaptive FastReplica
Taein Hwang, Hojin Park (ETRI, Korea), Jin Wook Chung (Sungkyunkwan University, Korea) •••• 1665
3. Content-based Video Copy Detection Using Spatio-temporal Compact Feature
Joosub Kim (University of Science and Technology, Korea), Jeho Nam (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
4. A Study on Migration Scheme for a Mobile Trusted Module
Dong-Wan Kang (Soonchunhyang University, Korea), Sung-Ik Jun (ETRI, Korea), Im-Yeoung Lee
(Soonchunhyang University, Korea) ••••••••••••••••••••••••••••••••••••
5. Identity Data Security System for the Digital Identity Wallet
Daeseon Choi, Jonghyuk Roh, Seunghyun Kim, Seugnhun Jin (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
6. Improved Intermediate Performance of Rateless Codes
Saejoon Kim, Seunghyuk Lee (Sogang University, Korea) ••••••••••••••••••••••••••••••••••••
7. Performance of Double-binary Turbo Coded TH-PPM UWB Systems with Multiple
Receive Antennas
Jae Sung Park, Jin Young Kim (Kwangwoon University, Korea) ••••••••••••••••••••••••••••••••••••
8. Signalling Architecture and Protocols for the Next Generation Network
Hyeong Ho Lee (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
9. Adaptive GTS Allocation Scheme to Support QoS and Multiple Devices in 802.15.4
Yong-Geun Hong, Hyoung-Jun Kim (ETRI, Korea), Hee-Dong Park (Korea Nazarene University, Korea),
Do-Hyeon Kim (Cheju National University, Korea) ••••••••••••••••••••••••••••••••••••
10. Interactive Control Platform for IPTV Service in the IMS Environment
Jinhong Yang, Hyojin Park (Information and Communications University, Korea), Sang Gug Jong,
Sang Hong Lee (KT, Korea), Jun Kyun Choi, Soohyung Kim (Information and Communications
University, Korea) 1703
11. WDM/TDMA Hybrid-PON : Wx-PON system
Jea-Hoon Yu, Byoung-Whi Kim (ETRI, Korea), Nam Kim (Chungbuk National University, Korea)

12. The Method of Auto Exposure Control for Low-end Digital Camera	
SangHyun Park (Sungkyunkwan University, Korea), GyuWon Kim (Samsung Electro-mechanics co., ltd.,	
Korea), JaeWook Jeon (Sungkyunkwan University, Korea) $\cdots 1$	712
13. A Case Study of Unknown Attack Detection against Zero-day Worm in the HoneyNet	
Environment	
Ikkyun Kim, Daewon Kim, Byunggoo Kim, Yangseo Choi, Seongyong Yoon, Jintae Oh, Jongsoo Jang	
(ETRI, Korea) ••••••••••••••••••••••••••••••••••••	715
14. Mobile DRM System based on a Three-step User Authentication Process	
Jin-Oh Jeon, Su-Hwan Park, Min-Sup Kang (Anyang University, Korea) •••••••••••••••••••••••••••••••••	721
15. Implementation of H.264 Transcoding & Selective Encryption of Bit Stream	
Seong-Yeon Lee, Kwang-Seok Moon, Jong-Nam Kim (Pukyong National University, Korea) $\cdots 1$	725
16. Inter-Domain Routing based on Link State Information for End-to-End QoS Guarantee	
Tae-iL Kim, Hae-Won Jung (ETRI, Korea), Min Young Chung (Sungkyunkwan University, Korea),	
Seong-IL Jin (Chungnam National University, Korea) ••••••••••••••••••••••••••••••••••••	729
17. Digital and Modular Design Scheme based on education theory in RPG Learning Game	
Shu Hui Hsu (International Megatrend Smart Technology Ltd., Taiwan), Ming-Shen Jian (Shu-Te	
University, Taiwan) ••••••••••••••••••••••••••••••••••••	733
18. A Case Study of Context-aware Personalized Services on IMPACT Platform: AdsonMap	
Services	
Kisoon Sung, Aekyung Moon, Yongil Choi (ETRI, Korea) ••••••••••••••••••••••••••••••••••••	738
19. Quasi-Orthogonal Space-Time Block Codes based on Single Symbol Decoding for Four	
Transmit Antennas	
Jae-Sun Jeong, Su-Bin Park, Chang-Bum Jo, Eun-Ji Yoo, Youn-Shik Byun (University of Incheon,	
Korea)1	742
20. Effective Signal Detection using Cooperative Spectrum Sensing in Cognitive Radio Systems	
Myung Kie Baek, Jin Young Kim (Kwangwoon University, Korea) $\cdots 1$	746
21. An Interconnection Method between Bluetooth Network and P2P Network	
Byeong-Thaek Oh, Sang-Bong Lee, Ho-Jin Park (ETRI, South Park) $\cdots 1$	751
22. Reactive and Reliable Neighbor Discovery Protocols in Wireless Networks	
Woosuk Cha, Pyeong-Soo Mah (ETRI, Korea) ••••••••••••••••••••••••••••••••••••	755
23. Local Customer Internetworking in Passive Optical Networks	
JaeGwan Kim, YongJun Seo, YongGyu Lee, YongHyub Won, MinHo Kang (Information and	
Communications University, Korea) ••••••••••••••••••••••••••••••••••••	759
24. Design of Effective Anti-Malware System for Mobile Industrial Devices based on	
Windows CE	
Sung-Keun Lee, Wook-Jeon Jae (Sungkyunkwan University, Korea) $\cdots 1$	762

25	. Automatically Learning Robot Domain Ontology from Collective Knowledge for Home
	Service Robots
	Dongyeop Kang, Eugene Seo, Sookyung Kim, Ho-Jin Choi (Information and Communications
	University, Korea) ····· 1766
26	. Fast Handover Scheme using Temporary CoA in Mobile WiMAX Systems
	Jeong Sup Lee, Sam Yeul Choi, Young Ik Eom (Sungkyunkwan University, Korea) ••••••••••••••••••1772
27	. Symmetry Structured SPN Block Cipher Algorithm
	Gil-Ho Kim, Jong-Nam Kim, Gyeong-Yeon Cho (Pukyong National University, Korea) •••••••••••1777
28	. Video Segmentation Algorithm using Threshold and Weighting based on Moving
	Sliding Window
	Won-Hee Kim (PuKyong National University, Korea), Tae-II Jeong (TongMyong University, Korea),
	Jong-Nam Kim (PuKyong National University, Korea) ••••••••••••••••••••••••••••••••••••
<i>29</i>	. A Comparison of Network Neutrality Debates between US and South Korea
	Byungcho Kim (Hankuk University of Foreign Studies, Korea)

Session 9A: Wireless Communication Technology (IX)

1. Performance of Wireless Optical Communication Systems using DPSK Modulation
Song Gao, Anhong Dang, Hong Guo (Peking University, China) ••••••••••••••••••••••••••••••••••••
2. On the Closed-form Ergodic Capacity of MIMO Rayleigh Channels
S. M. Humayun Kabir, Van-Su Pham, Giwan Yoon (Information and Communications University,
Korea)
3. Combined Mechanism using both ARQ and Scheduling for Efficient Transmission in
OFDMA System
Youngsang Cho, Jitae Shin (Sungkyunkwan University, Korea) ••••••••••••••••••••••••••••••••••••
4. On the Use of QC-LDPC Code for Data Transfer using Short and Medium Block Length
Mohammad Rakibul Islam, Jinsang Kim (Kyung Hee University, Korea) ••••••••••••••••••••••••••••••••••••
5. Optimizing Spectrum Sensing Parameters for Local and Cooperative Cognitive Radios
Ayman A. El-Saleh (Universiti Kebangsaan Malaysia, Multimedia University, Malaysia), Mahamod
Ismail, Mohd Alauddin Mohd Ali (Universiti Kebangsaan Malaysia, Malaysia) ••••••••••••••••••••••••••••••••••••

Session 9B: Digital Home Technology

1. An Integration	Platform for Developi	ng Context-aware	e Applications base	ed on Context
Reasoning and	Service Automation Te	echniques		

2. An Implementation of Bluetooth Service Application on the Peer-to-Peer based Virtual
Home Platform
Moon-Ok Choi, Shin-Yuk Kang, Il-Woo Lee, Ho-Jin Park (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
3. ISS: The Interactive Smart Home Simulator
Tam Van Nguyen, Deokjai Choi (Chonnam National University, Korea) ••••••••••••••••••••••••••••••••••••
4. Message Management in Home Networking based on XML
Zhongming Wang (Jianghan University, China) ••••••••••••••••••••••••••••••••••••
5. Heterogeneous Service Location Service Architecture based on OSGi Technology
Min-Xiou Chen (National Dong Hwa University, Taiwan), Tze-Chin Tzeng (ChungHua University,
Taiwan) ••••••••••••••••••••••••••••••••••••

Session 9C: Mobile Internet (V)

1. Enhancing Adaptive Control in VoIP by Characterizing Congestive Packet Loss
Boonchai Ngamwongwattana, Anuwat Sombun (National Electronics and Computer Technology
Center, Thailand) ••••••••••••••••••••••••••••••••••••
2. A Study on Network Media-aware Scheduling for Robust P2P Streaming
Yong-Hyuk Moon, Jae-Hoon Nah (ETRI, Korea), Chan-Hyun Youn (Information and Communications
University, Korea) ····· 1852
3. Embedded WiMAX-based Vehicular Router for Telematics Computing
Jiann-Liang Chen (National Taiwan University of Science and Technology, Taiwan), Yao-Chung Chang,
Yu-Shan Lin (National Taitung University, Taiwan), Hsien-Wen Du (National Dong Hwa University,
Taiwan) ••••••••••••••••••••••••••••••••••••
4. Service Differentiation with the Adjustment of Remaining Backoff Time in IEEE 802.11
Wireless LAN
Ki-tae Hong, Byeong-hee Roh (Ajou University, Korea) ••••••••••••••••••••••••••••••••••••
5. Mobility Management: A Proactive QoS-Aware Proxy MIP with improved Handover
Latency for End-to-End QoS provisioning in a Proxy MIP domain
Brownson Obaridoa Obele, Minho Kang (Information and Communications University, Korea) •••• 1867

Session 9D: Optical Networking Technology (III)

1. /	A New Hybrid Optical Network Design Consisting of Lightpath and Burst Switching	
	Yeshuang Wang, Sheng Wang, Shizhong Xu, Xiufeng Wu (University of Electronic Science and	
	Technology of China, China) •••••	1873

2. Performance Limitations of WDM Optical Transmission System Due to Cross-phase Modulation in Presence of Chromatic Dispersion

M. A. Khayer Azad, M. S. Islam (Bangladesh University of Engineering and Technology, Bangladesh)
1877

3. *Bidirectional Optical Transceiver with Automatically Directional Controlling Function* Trong-Hieu Ngo, Nga T.H. Nguyen, Tae-Woo Lee, Hyo-Hoon Park (Information and Communications

4. Performance Analysis of Successive Interference Cancellation with Modified Quadratic Congruence and Hadamard Codes for Optical CDMA

5. Technological Aspects of the Triple Play Service on Fixed Access Networks
A. Nikitin (NW Telecom, Russia), V. Pyattaev (LONIIS, Russia), B. W. Kim (ETRI, Korea) 1890

Session 9E: Multimedia and Internet Systems, and Services (V)

1. Intra-Frame Error Concealment using Pixel Alignment and Directional Interpolation
Adisorn Sirikham (Rajamangala University of Technology Krungthep, Thailand) ••••••••••••••••••••••••••••••••••••
2. Facial Expression Classification using Eigen-components of Principal expressions
Wilfred Onyango Odoyo, Geum-Boon Lee, Jung-Jin Park, Beom-Joon Cho (Chosun University,
Korea) 1903
3. Clustering Metadata Servers for Extremely Scalable and Reliable Services
Keun-Tae Park, Myung-Hoon Cha, Young-soo Min, Young-Kyun Kim, Han Namgoong (ETRI,
Korea) ••••••••••••••••••••••••••••••••••••
4. On the Minimum Weights of Binary Extended Quadratic Residue Codes
Wen-Ku Su, Pei-Yu Shih, Tsung-Ching Lin, Trieu-Kien Truong (I-Shou University, Taiwan) ••••••• 1912
5. Automatic Record Generating System for Support of Group Work on Reminiscence Therapy
Tomonori Otsuka, Kunio Sakamoto (Konan University, Japan), Shusaku Nomura (Nagaoka University
of Technology, Japan), Tetsuya Hirotomi, Kuninori Shiwaku, Masahito Hirakawa (Shimane University,
Japan) ••••••••••••••••••••••••••••••••••••

Session 9F: Information Security Technology (V)

 Researches on Secure Proximity Distance Defending Attack of Finger Table based on Chord Jie Li, Xiaofeng Qiu, Yang Ji, Chunhong Zhang (Beijing University of Posts and Telecommunications, China)

2. Improvement to a Semi-fragile Watermarking Scheme against a Proposed Counterfeit	ng
Attack	
Hossein Kourkchi, Shahrokh Ghaemmaghami (Sharif University of Technology, Iran)	1928
3. A Wavelet-based Blind JPEG Image Steganalysis using Co-occurrence Matrix	
Han Zong, Fenlin Liu, Xiangyang Luo (Information Science and Technology Institute, China)	1933
4. The Design of an RFID Security Protocol for Saving in DB Transaction Costs	
Kwang-Jin Paek, Pyeong Soo Mah, Chang Wook Lee (ETRI, Korea), Ui-Sung Song (Busan	
National University of Education, Korea)	1937
5. Implementation and Optimization of Wavelet Modulation in Additive Gaussian Chann	els
R. Niazadeh, S. Nassirpour, M.B. Shamsollahi (Sharif University of Technology, Iran)	1940
Session 10A: Wireless Communication Technology (X)	
1. Towards Robustness in Multiband/Multiuser IR-UWB: Overcoming Unknown NBI vid	I
FEC and Subband Scheduling	
Hessam Moussavinik, Sang-Seon Byun (Norwegian University of Science and Technology, Norwa	ıy),
Ilangko Balasingham (Norwegian University of Science and Technology, Rikshospitalet University	sity
Hospital, Norway) •••••	1947

2. Analysis of the Conical Tracking Technique in LEO Satellite Stations Jafar Nateghi, Leila Mohammadi, G.R. Solat (Iran Telecommunication Research Center, Iran) •••••• 1950 3. Performance Analysis of UWB Systems with Non-Binary Turbo Code in Multi-User Environments

	Environments	
	Eun Cheol Kim, Jin Young Kim (Kwangwoon University, Korea)	1954
4.	Quantization Based Fast Equalization In Decision Directed Mode	
	Abhishek D Joshi, Nam Ik Cho (Seoul National University, Korea)	1959
5.	Wireless Mesh Network OAM Architecture	
	Malaz Kserawi, Sangsu Jung, June-Koo Kevin Rhee (Information and Communications University,	
	Korea) •••••	1963

Session 10B: IT Service Technology (I)

1. Reliable Multicast Protocol Adopting Hierarchical Tree	based Repair Mechanism
Lakshmi Prasad Saikia (National Institute of Technology-Silcha	ır, India), Kattamanchi Hemachandran
(Assam University-Silchar, India)	
2. Extraction of Lip Movement Image Signals from Sucess	ive Image Frames
Eung-Kyeu Kim (Hanbat National University, Korea), Soo-Jo	ng Lee (ETRI, Korea) 1974

3. New Algorithm for 2D Barcode Detection

4. Spot Detection of Complex Regions by Accumulated Gradient in Two Dimensional Electrophoresis Images

5. A Study of the Adoption of Self-service Technologies by Consumers in Convenience Stores
 Dong-Her Shih (National Yunlin University of Science & Technology, Taiwan), I-Ching Chen
 (National Yunlin University of Science & Technology, ChungChou Institute of Technology, Taiwan),
 Shueh-Cheng Hu (Providence University, Taiwan)

Session 10C: E-Commerce and M-Commerce (I)

1. Student's Mind-map of using an E-Learning System: an IQA Interview Approach	
Su-Sui Lin (National Yunlin University of Science and Technology, Hsiuping Institute of Technology,	
Taiwan), Kwoting Fang (National Yunlin University of Science and Technology, Taiwan) •••••••• 1993	
2. Examining the Usage of Feedback Vibration in Nintendo DS Handheld Game Console	
Mohammad Shirali-Shahreza, Sajad Shirali-Shahreza (Sharif University of Technology, Iran) ••••• 1997	
3. A QoS-oriented Management Framework for Reconfigurable Mobile Mashup Services	
Huiyang Xu, Meina Song, Xiaoxiang Luo (Beijing University of Posts and Telecommunications,	
China) 2001	
4. How Different in Cultural Acceptance of Tutoring Robots Serving Augmented Reality?	
Jeonghye Han (Cheongju National University of Education, Korea), Eunja Hyun, MiRyang Kim	
(SungKyunKwan University, Korea), Hyekyung Cho (Hansung University, Korea), Takayuki Kanda	

(ATR Intelligent Robotics and Communication Labs, Japan), Tatsuya Nomura (Ryukoku University,

5. A Generic Model for NFC-based Mobile Commerce

Hsu-Chen Cheng (Chinese Culture University, Taiwan), Jen-Wel Chen (National Taiwan University, Taiwan), Tain-Yow Chi (Chinese Culture University, Taiwan), Pin-Hung Chen (National Taiwan University, Taiwan)
2009

Session 10D: Digital Broadcasting Technology (I)

1. A Frequency Offset Estimation Scheme for a T-DMB Software Baseband Receiver

Byungjik Keum, Moohong Lee, Jeong Han Jeong, Kyungsu Ko, Suhyun Cha, Young Serk Shim, Hwang Soo Lee (KAIST, Korea) ····· 2017

2. Development of Personalized DMB Services and System
Hyun-Cheol Kim, Han-Kyu Lee, Jin-Woo Hong (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
3. An Intra Prediction Skip Scheme based on SATD and Motion Vector Magnitude Features
in H.264/MPEG-4 Part 10 AVC
Yunsik Jung, Unkyung Pahk, Taeyoung Na, Munchurl Kim (Information and Communications
University, Korea) ····· 2027
4. Performance Improving Schemes for mmWave WPAN MAC Protocol
S. Mehta, K. S. Kwak (Inha University, Korea) ••••••••••••••••••••••••••••••••••••
5. Essential of Digital Dividend Review
Kwon, He Sun (Korea Radio Promotion Agency, Korea) ••••••••••••••••••••••••••••••••••••

Session 10E: Multimedia and Internet Systems, and Services (VI)

1. Secure Overlay Multicast Infrastructure for P2P-based IPTV Service
Hyeokchan Kwon (ETRI, Korea), Sangchoon Kim (Kangwon National University, Korea),
Jaehoon Nah (ETRI, Korea) ····· 2041
2. An Automatic Image Browsing Technique for Small Display Users
Muhammad Abul Hasan, Changick Kim (Information and Communications University, Korea) ··· 2044
3. A Bidirectional Haptic Communication Framework and an Authoring Tool for an
Instant Messenger
Youngjae Kim (Information and Communications University, Korea), Heesook Shin (ETRI, Korea),
Minsoo Hahn (Information and Communications University, Korea) ••••••••••••••••••••••••••••••••••••
4. Video Activity Analysis based on 3D Wavelet Statistical Properties
M. Omidyeganeh, S. Ghaemmaghami, H. Khalilain (Sharif University of Technology, Iran) 2054
5. Content-based Image Identification System with Hierarchical Scheme
Jaekyong Jeong (Sungkyunkwan University, Korea), Hyeongyong Jeon, Chijung Hwang
(Chungnam National University, Korea), Byeungwoo Jeon (Sungkyunkwan University, Korea) •••• 2059

Session 10F: Distributed Computing Technologies (I)

1. A Super-Metascheduler-based Approach for Integrating Multiple Heterogeneous Grids	
Hyung-Jun Choi, Eunsung Kim, Yoonki Lee, Heon Y. Yeom (Seoul National University, Korea),	
Dukyun Nam, Soonwook Hwang (KISTI, Korea)	2065
2. Achieving Higher Dependability by Integrating Replication with DNS Dispatching in the	
Web-server Cluster Systems	
Mohd Isa Awang, Zarina Mohamad, Ahmad Nazari Mohd Rose, Aznida Hayati Zakaria,	
Wan Suryani Wan Awang (Universiti Darul Iman Malaysia, Malaysia)	2071

3. Virtual Machine Migration in Self-managing Virtualized Server Environments	
Jong-Geun Park, Jin-Mee Kim (ETRI, Korea), Hoon Choi (Chungnam National University, Korea),	
Young-Choon Woo (ETRI, Korea)	2077
4. On Tackling Free-Riders in P2P Networks	
Brownson O. Obele, Augustine I. Ukaegbu, Minho Kang (Information and Communications University,	
Korea) ·····	2084
5. A Grid Portal for Monitoring of the Urban Environment using the MSU	
Phil Doo Hong (Seoul Grid Center, Meritz Financing Group, Korea), Yong Woo Lee (Seoul Grid	
Center, Korea) ·····	2090

1. Agent based Low Loss Low Delay Handover Scheme for SIP Communication – The Case

Session 11A: Wireless Communication Technology (XI)

for UDP Traffic
Vu Truong Thanh, Yoshiyori Urano (Waseda University, Japan)
2. Ranging Code Collision Probability in OFDMA based BWA Network
Anup Thapa, Subodh Pudasaini, Seokjoo Shin (Chosun University, Korea) ••••••••••••••••••••••••••••••••••••
3. A Fast Geometric Decoding Algorithm for MIMO Systems
Z. Y. Shao, S. W. Cheung, T. I. Yuk (The University of Hong Kong, Hong Kong) ••••••••••• 2108
4. The Impact of Antenna Array on Outage Performance of Cooperative Dual Hop Relay
Network
Ahasanun Nessa, M Sanaullah Chowdhury, Kyung Sup Kwak (Inha university, Korea) 2112
5. An Overview of Medium Access Control Protocols with Multi-antennas for Wireless
Ad-hoc Networks
Zhi-Qiang Yao (South China University of Technology, Xiang Tan University, China), Meng-Gang Sheng
(Xiang Tan University, China), Jun-Xun Yin (South China University of Technology, China) •••••• 2117
Session 11B: IT Service Technology (II)
1. Korean POI Word Segmentation and Tagging for Speech Interface In-vehicle Navigation
System
Euisok Chung, JiHyun Wang, Yun-Keun Lee (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
2. Syntactic and Semantic English-Korean Machine Translation using Ontology
Eugene Seo, Il-Sun Song, Su-Kyung Kim, Ho-Jin Choi (Information and Communications University,
Korea) 2129
3. A Call Processing Scheme for Number Portability of Wibro-VoIP by using NPSS
Young Sic Jeong, Chang Min Park (ETRI, Korea) ••••••••••••••••••••••••••••••••••••

4. Banknote and Coin Speaker Device for Blind People

Adisorn Sirikham, Werapon Chiracharit, Kosin Chamnongthai (King Mongkut's University of	f
Technology Thonburi, Thailand)	2137
5. Cluster Head Selection for Homogeneous Wireless Sensor Networks	

Andrey Koucheryavy (ZNIIS, Russia), Ahmed Salim (Telecommunications University, Russia) ... 2141

Session 11C: E-Commerce and M-Commerce (II)

1. A Model of Emotional Interactions based on Affective Cognitive Algorithm
Dongmei Yu, Jian' an Fang, Yuping Zhou, Peiying Zhao (Donghua University, China)
2. Acceptance Factors of Social Shopping
You Rie Kang, Cheol Park (Korea University, Korea)
3. Issues of Interoperability in E-Governance System and its impact in the Developing
Countries: A Nepalese Case Study
Manish Pokharel, Jong Sou Park (Korea Aerospace University, Korea) ••••••••••••••••••••••••••••••••••••
4. Development and Application of an Efficient Ubiquitous Teaching and Learning Model
Kil Hong Joo, Sang Hong Kim (Gyeongin National University of Education, Korea) ••••••••••••••••••••••••••••••••••••
5. E-Government Challenges in Least Developed Countries (LDCs): A Case of Cambodia

Session 11D: Digital Broadcasting Technology (II)

1. Metadata Archiving Function for Personalized DMB System
HeeKyung Lee, Han-Kyu Lee, Jin Woo Hong (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
2. Reducing Bandwidth Allocation Delay in a DVB-RCS Network using Bayesian Neural
Network
Golsa Moayeripour, Amirhossein Aghakhani, Meisam Nesary Moghadam, Hassan Taheri
(Amirkabir University of Technology, Iran) ••••••••••••••••••••••••••••••••••••
3. Implementation of Real Time DMB Encryption on Mobile Environment for Contents
Protection
Yong-Jae Jeong, Kwang-Seok Moon, Jong-Nam Kim (Pukyong National University, Korea) •••••• 2191
4. A Ka Band Multi-satellites Wimax System
Chin-Feng Lin, Shin-Hua Chen, Jin-De Zhu (National Taiwan-Ocean University, Taiwan)
5. A Fully Integrated CMOS Low-IF Mobile-TV Tuner for Band-III T-DMB/DAB
Applications
Seong-do Kim (ETRI, Korea), Seung-hyeob Oh (Chungnam National University, Korea)

Session 11E: Web Technology

1. WPCC: A Novel Web Proxy Cache Cluster
Zhaolei Duan, Zhimin Gu, Xiaoguang Ding (Beijing Institute of Technology, China) ••••••• 2205
2. Hierarchical Planning through Operator and World Abstraction using Ontology for
Home Service Robots
Dongyeop Kang, Ho-Jin Choi (Information and Communications University, Korea) ••••••• 2209
3. Efficient Mining of Utility-based Web Path Traversal Patterns
Chowdhury Farhan Ahmed, Syed Khairuzzaman Tanbeer, Byeong-Soo Jeong, Young-Koo Lee
(Kyung Hee University, Korea) ••••••••••••••••••••••••••••••••••••
4. An Adaptable Question-answer System using Match of Multi-sphere Knowledge
Su-Kyoung Kim (Information and Communication University, Korea), Ki-Hong Ahn (Hanbat
National University, Korea), Ho-Jin Choi (Information and Communication University, Korea) … 2219
5. Adaptive focused Crawler based on Tunneling and Link Analysis
Xiaoming Zhang, Zhoujun Li, Chaojian Hu (Beihang University, China) ••••••••••••••••••••••••••••••••••••

Session 11F: Distributed Computing Technologies (II)

1. Standard-based Virtual Infrastructure Resource Management for Distributed and
Heterogeneous Servers
Young-Woo Jung, Jin-Mee Kim, Seung-Jo Bae, Kwang-Won Koh, Young-Chun Woo (ETRI, Korea),
Sang-Wook Kim (Kyungpook National University, Korea) ••••••••••••••••••••••••••••••••••••
2. Research on District Partitioning in P2P Network
Cuibo Yu, Xuerong Gou, Yang Ji (Beijing University of Posts and Telecommunications, China) ••• 2238
3. Design of a Hierarchical Global Scale Cluster System
Okgee Min, Hakyoung Kim (ETRI, Korea), Taeck-Geun Kwon (Chungnam National University, Korea) •• 2241
4. Distributed Activity Recognition using Key Sensors
A. M. Jehad Sarkar, Kamrul Hasan, Young-Koo Lee, Sungyoung Lee, Salauddin Muhammad Salim
Zabir (Kyung Hee University, Korea) ····· 2245
5. Quality-Context based SOA Registry Classification for Quality of Services
Youngkon Lee (Korea Polytechnic University, Korea) ••••••••••••••••••••••••••••••••••••

Session 11G: Poster Session (V)

1. Test Method by Each Part for Wireless Transmitter and Receiver System
Seung-Chul Shin, Gwang-Yeol You, Tae-Soon Choi, Si-Hoe Kim (Agilent Technologies, Korea) •• 2261
2. Two-Step Recommendation based Personalization for Future Services
Aekyung Moon, Hyunghwan Kim, Kisoon Sung, Young-il Choi (ETRI, Korea) ••••••••••••••••••••••••••••••••••••

3. Consideration of Supporting the Multimedia Emergency Services in VoIP
Okjo Jeong, Il-Jin Lee, Shin-Gak Kang (ETRI, Korea) ••••••••••••••••••••••••••••••••••••
4. Online Shopping Behavior Model : A Literature Review and Proposed Model
Soo Yeon Chung, Cheol Park (Korea University, Korea)
5. A Study on Development of a Framework for Provisioning G4C Services through IPTV
Jaeheung Yoo, Jinhong Yang, Junkyun Choi, Soohyung Kim (Information and Communications
University, Korea) ····· 2283
6. Scene Change Detection Algorithm on Specific Movie
Myoung-Beom Chung, Il-Ju Ko (Soongsil University, Korea), Dae-Sik Jang (Kunsan University,
Korea) 2286
7. Management of Remote Facilities through a Ubiquitous Grid Middleware
Huck Han, Heonyoung Yeom (Seoul National University, Korea), Haesun Jung (Korea University,
Korea), Yongwoo Lee (University of Seoul, Korea), Changsung Jeong (Korea University, Korea),
Shingyu Kim, Young-jin Yu (Seoul National University, Korea) ••••••••••••••••••••••••••••••••••••
8. Direction of Arrival Estimation using Weighted Subspace Fitting with Unknown Number
of Signal Sources
Cheol-Sun Park, Jun-Ho Choi, Jong-Won Yang, Sun-Phil Nah (Agency for Defense Development,
Korea)
9. A Simple and Accurate Approximation for the Sum Rate of Zero Forcing Dirty Paper
Precoding with Greedy User Selection
Seunghun Jang, Jeong-Wook Seo, Dong Ku Kim (Yonsei University, Korea) ······ 2299
10. Evergreen: A Fault-tolerant Application Streaming Technique
Won-Young Kim (ETRI, Korea), Ji-hoon Choi (UniInfo, Korea), Jeong-Min Shim (TestMidas, Korea),
Wan Choi (ETRI, Korea) ····· 2302
11. Multiple Object Tracking for Fall Detection in Real-Time Surveillance System
Young-Sook Lee, HoonJae Lee (Dongseo University, Korea) ····· 2308
12. Artifact-Resistant Design of a Wrist-type Heart Rate Monitoring Device
Chan-kyu Park, Jo-chan Sohn, Jae-hong Kim (ETRI, Korea), Ho-jin Choi (Information and
Communications University, Korea) ····· 2313
13. Basic Sequence Search by Hashing Algorithm in DNA Sequence Databases
Sing-Hui Toh, Hoon-Jae Lee, Kyeong-Hoon Do (Dongseo University, Korea)
14. Adaptive Neuro-Fuzzy Interference Cancellation for Ubiquitous Wearable ECG Sensor Node
Alka Gautam, Hoon Jae Lee (Dongseo University, Korea), Wan-Young Chung (Pukyoung National
University, Korea)
15. Middleware for Ubiquotous Healthcare Information System
Mangal Sain, HoonJae Lee (Dongseo University, Korea), Wan-Young Chung (Pukyong National
University, Korea)

16. Performance Analysis of Space Time Block Coded PPM-TH UWB Systems in Indoor	
Wireless Channels	
Eun Cheol Kim, Jin Young Kim (Kwangwoon University, Korea) ••••••••••••••••••••••••••••••••••••	9
17. Realization of Grid Mobile Middleware System based on Improved Intelligent Scheduling	
Algorithm	
Seok Young Hong, Dong Ryeol Shin (Sungkyunkwan University, Korea)	3
18. P2P Based Private Broadcasting DRM System	
Jungsoo Lee (ETRI, Korea) ····· 233	7
19. Network Protocol between a Virtual Server and Multiple I/O devices in Virtualization	
System	
Joonyoung Jung, Jeunwoo Lee (ETRI, Korea), Daeyoung Kim (Chungnam National University,	
Korea)2340)
20. Evaluation of Interleaved Source Coding over Memoryless Binary Erasure Channel	
Jin Young Lee (ETRI, Korea), Hayder Radha (Michigan State University, USA), Jeong Ju Yoo (ETRI,	
Korea) 234	6

Author Index