THE 10th INTERNATIONAL CONFERENCE on ADVANCED COMMUNICATION TECHNOLOGY

Innovations toward Future Networks and Services

Phoenix Park, Korea
Feb. 17–20, 2008

FINAL PROGRAM
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Message from the ICACT2008 General and Organizing Chairs!

On behalf of the ICACT2008 Organization and Operation Committee, I extend our warm welcome to the professionals in the field of communications from all over the world present at this grand meeting, namely International Conference on Advanced Communication Technology 2008. The ICACT2008 is a series of international academic event in the communications field, which all the experts from home and abroad gather to present their work, and share new ideas and visions for achieving the future telecommunication age. I hope that you will enjoy both the excellent technical content and recreational parts of the meeting.

The communication network is in a transition toward the era of ubiquitous networks and services received increasing attention over the last two or three years. No one can deny that technology has already permeated diverse aspects of human life. Mobile phones and the Internet -- the biggest success stories our industry has ever seen -- are only the beginning. The Ubiquitous Networks and Services will make it possible to connect anytime, anywhere, by anything and anyone. In a ubiquitous network, everyone and everything can be connected, and new innovations are expected which will completely change the current dimension of IT technology. ICACT2008 will provide the present and future of the ubiquitous networks and services. It will also give the basic characteristics, applications, issues and standardization of the ubiquitous networks and services.

In closing, I would like to express my sincere appreciation for the committee members and the referees for their contributions who have been helping us to prepare the event. I also sincerely thank all the authors for the papers on their precious technical achievements. I have no doubt of successful ICACT2008, and you will enjoy both the high quality of technical talks during the sessions and the beautiful landscapes of Phoenix Park.

Have a pleasant stay in Phoenix Park.

IEEE ICACT2008
Mr. Sungok Lee, General Chairman
Dr. Thomas ByeongNam Yoon, Organizing Chairman
Message from the Technical Program Committee Chair

I would like to welcome to ICACT2008! It is a great pleasure to host this 10th ICACT conference in Korea which is one of the countries recently drawing much attention in the world arena of Broadband Internet. ICACT is an IEEE-sponsored annual conference providing an open forum for researchers, engineers, policy makers, network planners, and service providers in telecommunications. Extensive exchange of information will be provided on newly emerging systems, standards, regulations, services, and variety of applications in the area of telecommunications. For this 10th anniversary of the conference, ICACT2008, several tutorials and invited speeches have been prepared, and some other special events will be also presented.

Korea has richly benefited from deploying the high-speed Internet and Cellular networks providing various IT services all over the country. Approximately 91%, i.e. 14.7 millions, of Korean households use the high-speed Internet services, and 89%, i.e. 43 millions, of Korean people use the cellular mobile phones now. Recently, Korean Wireless Broadband(WiBro) and Digital Multimedia Broadcasting(DMB) technologies have been adopted as the recommendations in the International Telecommunications Union(ITU). ITU announced that Korea topped the list of countries in the Digital Opportunities Index(DOI) for 3 consecutive years.

The theme of ICACT2008 is “Innovations toward Future Networks and Services.” ICACT 2008 consists of a plenary session with two keynote speeches by remarkable world experts, a tutorial session with 3 interesting subjects, and 66 technical sessions including 8 invited speeches and 4 poster sessions. The TPC carefully selected a limited number of 437 papers from 27 countries to be presented in the technical sessions. We hope these technical sessions will help you obtain better insights into the latest trends and directions for the competitive communications and Internet markets. I am sure that ICACT2008 will provide an abundance of intelligent debate and information exchange, and a look at what is new in the field and technology.

Thank you everyone who has contributed to the technical program - the authors, the reviewers, and the technical program committee members for their terrific work in collecting and editing the papers. On behalf of the Technical Program Committee, I wish you a productive and enjoyable conference.

Dr. Hyeong-Ho Lee
ICACT2008 Technical Program Committee Chairman
ICACT will provide an open forum for researchers, engineers, policy makers, network planners, and service providers in telecommunications. Extensive change of information will be provided on newly emerging systems, standards, services and variety of applications in the area of telecommunications.
## SESSION OVERVIEW

### Day 1: February 17 (Sunday)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tr>
<td>15:00</td>
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<tr>
<td>16:00</td>
<td><strong>Tutorial A</strong></td>
</tr>
<tr>
<td>16:00</td>
<td>3G Access Network Evolution towards IMT_Advanced system</td>
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<tr>
<td>18:00</td>
<td><strong>Tutorial B</strong></td>
</tr>
<tr>
<td>18:00</td>
<td>IPTV Standardization and Technical Issues</td>
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<tr>
<td>15:00</td>
<td><strong>Tutorial C</strong></td>
</tr>
<tr>
<td>15:00</td>
<td>L2/L3 Mobility Support for All IP Networks</td>
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### Day 2: February 18 (Monday)

<table>
<thead>
<tr>
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<td>08:00</td>
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<tr>
<td>09:00</td>
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<td>Wireless Communication Technology (I)</td>
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<td>10:40</td>
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<td>Wireless Communication Technology (II)</td>
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### Session Overviews

#### Tutorial A
- 3G Access Network Evolution towards IMT_Advanced system

#### Tutorial B
- IPTV Standardization and Technical Issues

#### Tutorial C
- L2/L3 Mobility Support for All IP Networks
## SESSION OVERVIEW

### Day 3: February 19 (Tuesday)

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**SESSION OVERVIEW**
**Day 4 : February 20 (Wednesday)**

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<th>Time</th>
<th>Room</th>
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<th>Ruby I</th>
<th>Ruby II</th>
<th>Topaz I</th>
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<td>Wireless Communication Technology (X)</td>
<td>Digital Home Technology (I)</td>
<td>E-Commerce and M-Commerce (I)</td>
<td>Optical Networking Technology (I)</td>
<td>Web Technology (I)</td>
<td>Distributed Computing Technologies (I)</td>
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<tr>
<td>12:00</td>
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<td>Session 11A</td>
<td>Session 11B</td>
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<tr>
<td>12:00</td>
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<td>Wireless Communication Technology (XI)</td>
<td>Digital Home Technology (II)</td>
<td>E-Commerce and M-Commerce (II)</td>
<td>Optical Networking Technology (II)</td>
<td>Web Technology (II)</td>
<td>Distributed Computing Technologies (II)</td>
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Plenary Session 16:40 ~ 18:00 Feb. 18 (Mon.) Phoenix Ballroom  
Chair: Dr. Hyeong-Ho Lee (ICACT2008 TPC Chair)

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<thead>
<tr>
<th>Keynote Speech 1: R&amp;D for the Next Generation Networks &amp; FTTH in NTT</th>
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<tbody>
<tr>
<td>Speaker: Mr. Hiromichi Shinohara</td>
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<tr>
<td>(Associate Senior Vice President of NTT, Japan)</td>
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</tbody>
</table>

NTT is now constructing the next generation network (NGN) while promoting FTTH for broadband access. NTT has two objectives in constructing the NGN, one is to reduce both OPEX and CAPEX and the other one is to increase profit by promoting broadband & ubiquitous service and by expanding telecom market. In Japan, FTTH market is growing very rapidly. The number of FTTH users surpassed 10 million in September 2007. The number of FTTH users in NTT has already outstripped the one of ADSL. This presentation introduces R&D activities for NGN and FTTH in NTT. Firstly, it will explain the circumstances surrounding NTT and give an overview of the Japanese FTTH market. Key technologies for realizing the NGN will be addressed. It will describe FTTH services that NTT is currently offering, typical applications on FTTH. Lessons learned from actual FTTH deployment and key technologies that enabled massive FTTH rollout will be also discussed. Technologies required for entering full-scale FTTH era will be also discussed.

<table>
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<tr>
<th>Keynote Speech 2: IT Mega-Trend and KT Vision</th>
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<tbody>
<tr>
<td>Speaker: Mr. Sanghong Lee</td>
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<td>(Senior Vice President of KT, Korea)</td>
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</tbody>
</table>

Whatever industries always have the choice of 'Challenges' and 'Chances'. All the management has been forced to choose the business direction, and were wrong decision made without catching the mega-trend, the one hundred year old company could disappear. The change of IT trend is as fast as any other industry parts, therefore the survival and sustainable growth of IT company is not easy. In this speech, the main trends in IT industry will be presented and the status of IT business including WiBro, FTTH, IPTV in KT, and future vision of KT will be also explained.
Currently, the big events such that the candidate frequency spectrum for IMT-Advanced was announced, and 3GPP, 3GPP2, and mobile WiMAX groups have almost completed their draft standards for the evolved wireless telecommunication systems, lead us to have great interest in IMT-Advanced technology. In this talk, we introduce technical requirements, network functional architecture, and key issues of IMT-Advanced systems. Additionally, we discuss network architecture and core technologies including call control scheme, mobility management, MBMS, and Femto Cell technologies of 3GPP LTE (Long-Term Evolution) systems, a strong candidate of IMT-Advanced systems.

This tutorial explains the standardization activities of IPTV Focus Group under the ITU-T. First of all, it introduces the IPTV overview and market demand. It includes some technical details for IPTV services: service requirements, architecture, QoS/QoE, security, control protocol, STB and middleware. It reviews the main results of the IPTV Focus Group activities. Also, the outstanding technical issues for evolution of future IPTV services will be raised.

Future mobile networks are expected to adopt All IP technologies and we need to develop new mobility management schemes that replace conventional HLR/VLR based mobility management technologies. Mobility management in the Internet has been the active research and standardization topic during last 10 years. An examplanary protocol is MIP. However, MIP and many variations of MIP such as HMIP and FMIP were designed for portability and cannot support seamless mobility. In this tutorial, we will discuss many protocols that have been proposed for mobility support in the Internet. We will emphasize several recent protocols such as Proxy MIP, L2 support schemes and network-aided mobility management schemes.
Invited Speech 1: IP-USN as a next generation Infrastructure

Session : 1C  
Speaker : Dr. Sunmoo Kang  
(National Information Society Agency, Korea)

In ubiquitous society, sensor network related business will be broadly applicable in every day life. We define this kind of trends as a u-life includes u-health, u-defence, u-safety, u-something and all of these, the most important and integrated meaning will be probably covered by u-City. IP-USN infrastructure will be an essential common infrastructure in this u-something, which is now becoming hot issues in many international standard bodies. Korea has several core technologies in IP-USN infrastructure, that is, a tiny OS, NanoQ plus developed in ETRI, Multiple wireless access technology developed by Casuh, and 6LoWPAN technology, developed by many domestic companies. We introduce IP-USN infrastructure and it's concepts and business model.

Invited Speech 2: IPv6 Pilot Project Experience in Korea

Session : 2C  
Speaker : Hyongsoon Kim  
(National Information Society Agency, Korea)

National Information Society Agency (NIA) successfully finished IPv6 Pilot projects from 2004 to 2007. For this project, we set up IPv6 service providing network with IPv6 portal, 6KANet and 6NGIX. Each system had essential functionality to hold IPv6 early adopters and provide IPv6 services, and connectivity to commercially available IPv6 service providers in the world. This paper includes brief summarizations of various pilot projects NIA performed during the time.

Invited Speech 3: MIH and IP Mobility Technologies for Multiple Access Network Service

Session : 3B  
Speaker : Junghoon Jee  
(Electronics and Telecommunications Research Institute, Korea)

This talk discusses how the IEEE 802.21’s Media Independent Handover services can be utilized for the IP mobility management protocols to support the seamless handovers among heterogeneous networks. The multi-mode terminal consideration, the extensions of the mobility management protocols for the multi-mode terminals and the way to integrate the mobility management protocols with the Media Independent Handover procedures are also shown.
#### Invited Speech 4: Korea Advanced Research Network (KOREN) for Future Internet Testbed

**Session:** 3C  
**Speaker:** Sangkyun Kim  
(National Information Society Agency, Korea)

Future Internet is an emerging future technology to overcome defects in current Internet towards ubiquitous society, convergence and fusion networks. KOREN is non-commercial R&E network for supporting network functions to various Universities, Research institutions and public sectors. We expand the function of KOREN for future advanced technology, such as ubiquitous sensor networks, mobile wireless networks, and long term Future Internet technology research. There are many research activities actively on going using KOREN with international cooperative parties as a federative testbed projects.

#### Invited Speech 5: Algorithm Development for Intelligence Vehicle

**Session:** 3E  
**Speaker:** Prof. Yousik Hong  
(Sang-Ji University, Korea)

Future vehicle must be both driver-friendly and able to adapt to changing road conditions. What is needed is a system that adapts to both the driver and environment for maximum convenience and safety. In order to solve these problems, this paper proposes an algorithm for development of smart vehicles. In this paper, it ran simulations to compare the performance of a normal car width that of an algorithm-equipped vehicle in a potential accident. Through the computer simulation, it proved the algorithm-equipped vehicle automatically adjusted the mirrors and seat for maximum comfort and driver awareness of the environment.

#### Invited Speech 6: Mobile Web 2.0 Technologies

**Session:** 4B  
**Speaker:** Dr. Seungyun Lee  
(Electronics and Telecommunications Research Institute, Korea)

Recently, Web 2.0 Trend, one of the Pragmatic Web Application Trends, derives the 2nd golden age of World Wide Web to give a great influence on the Web industry. The Web 2.0 trend is not only to influence the Wired Internet industry but also the Mobile industry. So, we reviewed a concept of the Mobile Web 2.0 will be defined, and the result of investigation on core technologies and research trends on the Mobile Web 2.0 will be presented, and finally, the required technologies to get the international competitive powers on the age of Mobile Web 2.0 will be reviewed.
Ubiquitous Sensor Networks (USN) are an emerging business area and now used in many civilian application areas, including environmental and habitat monitoring, healthcare applications, home automation, and traffic control, leading to an advanced e-Life society. It brings many study areas in access network management, middleware, and application services, to provide heterogeneity, mobility, self-configured robust communication signals, security in signaling, operation and management, middle-level primitives related to network and service management. A great number of research efforts on wireless sensor networks were designed for specific application purposes. But the necessity to build a general-purpose of standard technology has risen as the use of sensor networks has spread into the broad area of pervasive networking. This paper will describe the necessary standardization area for USN and explain the technical requirements for the standard work.

For seamless streaming of multimedia contents that ensures Quality of Service (QoS) over heterogeneous networks, it is very important to adapt multimedia according to usage environments such as network characteristics, terminal capabilities, and user preferences. Recently, Scalable Video Coding (SVC) that supports scalabilities in spatial/temporal/quality domain and real-time bitstream adaptation has been developed within joint video team (JVT) between the ITU-T video coding experts group (VCEG) and the ISO/IEC moving picture experts group (MPEG) as an extension of H.264/AVC. In this paper, we propose a flexible and low-complexity adaptation scheme of SVC using MPEG-21 Digital Item Adaptation (DIA) that can provide optimal adaptation in heterogeneous networks. The proposed scheme is as follows: First, usage environments such as network conditions, terminal capabilities, and user preferences are described by using Usage Environment (UED) tool defined in the MPEG-21 DIA and the relations among feasible adaptation operation, resource constraint, and utility are described by using the AdaptationQoS tool. Second, an Adaptation Decision Taking Engine (ADTE) decides the optimal spatial/temporal/quality adaptation operation with the information from the UED tool and AdatationQoS tool. Then, according to the decision by the ADTE, a SVC dynamic extractor drops or crops Network Abstraction Layer (NAL) units by examining only NAL header (4 bytes). In a framework for adaptation, delivery, and consumption of SVC, experiments of the proposed scheme were simulated with the constraint that network condition, terminal capability, and user preference are time-varying. In addition, experiments for dynamic adaptation of SVC were performed when the session is moved from one device to another device. The experimental results show robustness and efficiency in dynamic adaptation of SVC.
### Day 2: February 18 (Monday)

#### Session 1  09:00 ~ 10:20

**Session 1A: Wireless Communication Technology (I)**  
Room Emerald  
Chair: Mohamed Moustafa Abd-El Aziz (Ain Shams University, Egypt)

1. Channel Prediction by Doppler Frequency Estimation with Simplified AR Modeling, Yun-Ho Lee (Georgia Institute of Technology, U.S.A.)
2. Reliable Data Dissemination with Diversity Multi-Hop Protocol for Wireless Sensors Network, Salman Khan, Eui-Nam Huh (Kyung Hee University, Korea), Imran Rao (The University of Melbourne, Australia)
3. Antenna Scaling of Multi-Antenna Gaussian Broadcast Channels, Hyung-Tae Kim, Sung Hoon Lim, Sang-Woon Jeon, Sae-Young Chung (KAIST, Korea)
5. Generalized Normalized Gradient Descent Algorithm Based on Estimated a Posteriori Error, Minsung Hur, Jin Yong Choi, Jong-Seob Baek, JongSoo Seo (Yonsei University, Korea)

**Session 1B: Mobile Communications (I)**  
Room Ruby I  
Chair: Seong-Soon Joo (ETRI, Korea)

1. Analysis of Handoff Algorithm for Multihop Cellular Networks, Dongkyu Kim, Hano Wang, Jemin Lee, Daesik Hong (Yonsei University, Korea)
2. Performance Analysis of a DS-CDMA wireless mobile communication system with STBC, Debashis Chandra Saha, Satya P. Majumder (Bangladesh University of Engineering & Technology, Bangladesh)
3. A Mobility Management Protocol for Multi-hop Relay Networks, Hyeonchae Yang, Hyunjeong Lee, Meejeong Lee (Ewha Womans University, Korea)
4. Dynamic Prediction of Data Validity for Mobile Databases, Niu Jianwei, Zhang Xiaodan, He Rui (Beihang University, China), Ma Jian, Chen Canfeng (Nokia Research Center, China)
5. A Proposal for Reducing Handover Latency and Improving Route Optimization in Proxy Mobile IPv6, Brownson Obairdoa Obele, June-Koo Rhee, Minho Kang (ICU, Korea)
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<td>1. (Invited Speech) IP-USN as a Next Generation Infrastructure, Sunmoo Kang (National Information Society Agency, Korea)</td>
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<td>2. Link-based Service Customization for NGN, Vu Truong Thanh, Yoshiyori Urano (Waseda University, Japan)</td>
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<td>3. A Study for Improving Handover Feasibility on Multi-Media Service in Convergence Networks, Myoung Ju Yu, Jong Min Lee, Dong Geun Yoon, Young Hun Yoo, Seong Gon Choi (Chungbuk National University, Korea)</td>
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<td>4. UCEN: User Centric Enterprise Network, Rui Tu, Jinshu Su, Zhaowei Meng, Feng Zhao (National University of Defense Technology, China)</td>
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<td>1. A Mobile Agent Based LEACH in Wireless Sensor Networks, Jeong Hee-Jin, Nam Choon-Sung, Jeong Yi-Seok, Shin Dong-Ryeol (Sungkyunkwan University, Korea)</td>
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<td>2. u-Manufacturing Model &amp; Application System using RFID/USN, Mobile and Internet Technology, Suk Keun Cha (ACS Co., Ltd., Korea), Joon Yeob Song, Dong Hoon Kim (Korea Institute of Machinery &amp; Materials, Korea), Jun Jae Yoo (Korea Electronics Technology Institute, Korea)</td>
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<td>3. Quantifying Information Leakage in RFID Systems, Xu Huang (University of Canberra, Australia)</td>
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<td>4. Adaptive Channel Hopping Algorithm for Reader Anti-collision in RFID Systems, Chiyoung Ok (Ajou University, Korea), ChengHao Quan, HeeSook Mo, KilYoung Choi (ETRI, Korea), Chaewoo Lee (Ajou University, Korea)</td>
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<td>5. Architecture Model of Real-time Monitoring Service Based on Wireless Sensor Networks, Do-Hyeun Kim (Cheju National University, Korea), Beongku An (Hongik University, Jochiwon, Korea), Nam-Soo Kim (Cheongju University, Korea)</td>
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1. Domain Specific Code Generation For Linux Device Driver, Jung Choon Park (University of Science and Technology, Korea), Yong Hoon Choi, Taeho Kim (ETRI, Korea)

2. APROV: Another Program Verifier for Embedded Linux Device Drivers, Oukseh Lee, Seung-Cheol Jung, Hyo-Cheon Ahn (Hanyang University, Korea), Taeho Kim (ETRI, Korea)

3. Users’ Midmap in Software Design – Compare with IS Use Intention and Success Model, Chwen-Yea Lin (Tatung Institute of Commerce and Technology, Taiwan), Kwoting Fanga (National Yunlin University of Science and Technology, Taiwan)

4. Performance Evaluation of Gigabit Ethernet Interfaces, Giljae Lee, Yoonjoo Kwon, Kwangjong Cho, Woojin Seok, Jaiseung Kwak (Korea Institute of Science and Technology Information, Korea)

5. Architecture Patterns for Mobile Games Product Lines, Hojin Cho, Jin-Seok Yang (POSTECH, Korea)

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

1. A Study on Backup Route Setup Scheme for Ad Hoc Networks, Se-Won Jung, Jin-Chul Choi, Chae-Woo Lee (Ajou University, Korea)

2. A Novel Bandwidth Estimation Model for e-Government Communication Network, Eun-Jung Lee, Young-Tae Han, Hong-Shik Park (ICU, Korea), Yong-Suk Lee (National Computing and Information resources Administration, Korea)

3. Secure Group Communication in Mobile Wireless Sensor Networks, Nahar Sultana, Eui-Nam Huh (Kyung Hee University, Korea)

4. Experimental QoS test of Medical Data over Wired and Wireless Networks, Jae-Min Lee, Jong-Hyouk Lee, Tai-Myoung Chung (Sungkyunkwan University, Korea)

5. A Study on Telecommunication Power Operations Management, Byeong-Yun Chang, Seongjun Ko, Daniel Wonkyu Hong, Byungdeok Chung (KT Corporation, Korea)

Coffee Break   10:20 ~ 10:40
### Session 2   10:40 ~ 12:00

#### Session 2A: Wireless Communication Technology (II)  Room Emerald

Chair: Wanming Luo (Computer Network Information Center, CAS, China)

1. Performance Analysis of a Novel Cooperative Transmission Scheme in Wireless Networks, Ho Van Khuong (McGill University, Canada), Pham Hong Lien (Ton Duc Thang University, Vietnam), Hyung Yun Kong (University of Ulsan, Korea)

2. Performance Analysis of an Angle Differential-QAM Scheme for Resolving Phase Ambiguity, Jeng-Kuang Hwang, Yu-Lun Chiu (Yuan-Ze University, Taiwan)


4. A Direct IQ-Regeneration Technique for Five-Port Digital Receiver, Sang-Yub Lee (Samsung Electromechanics, Korea), Hak-Sun Kim (Hanbat National University, Korea)

5. An Enhanced Service Differentiation Mechanism for QoS Provisioning in IEEE 802.11e Wireless Networks, Wanming Luo, Baoping Yan, Xiaoxong Li, Wei Mao (Chinese Academy of Sciences, China)

#### Session 2B: Mobile Communications (II)  Room Ruby I

Chair: Seung-Hoon Hwang (Dongguk University, Korea)


2. Multiple Interface/Prefix Selection for Virtual Mobile Networks, Chulhyun Park, Nakjung Choi (Seoul National University, Korea), Eunkyoung Paik (KT, Korea), Taekyoung Kwon, Yanghee Choi (Seoul National University, Korea)

3. Probabilistic Delay Routing for Delay Tolerant Networks, Lei Yin (Beijing Institute of Technology, China), Hui-mei Lu, Yuan-da Cao (Beijing Institute of Technology, China)

4. Compatibility Analysis between Wideband Code Division Multiple Access (WCDMA) Service and Global Mobile Personal Communication by Satellite (GMPCS), Yong-il Oh (Kwangwoon University, Korea), Chung Sang Lyu, Seong Teak Oh (Radio Research Laboratory, Korea), Jin Young Kim (Kwangwoon University, Korea)

5. An Efficient Downlink Automatic Gain Control Algorithm before Synchronization in WiBro AT (Access Terminal), Yong Su Lee, Youngil Kim (ETRI, Korea), Whan Woo Kim (Chungnam National University, Korea)
### Session 2C: Next Generation Network Technology (II)  
**Chair:** Younghee Lee (Information and Communications University, Korea)

2. An NSIS based Resource Reservation Protocol for Hose Model VPN Service, Haesun Byun, Meejeong Lee (Ewha Womans University, Korea)
3. Routing Solutions for Future Dynamic Networks, Auristela Silva, Tarciana Silva, Reinaldo Gomes, Luciana Oliveira, Igor Cananéa, Djamel Sadok (Federal University of Pernambuco, Brazil), Martin Johansson (Ericsson Research, Sweden)

### Session 2D: RFID & USN Technologies (II)  
**Chair:** Hong min Lee (Kyonggi University, Korea)

1. RFID Tag Anti-Collision Protocol: Query Tree with Reversed IDs, Jung-Sik Cho, Jea-Dong Shin, Sung Kwon Kim (Chung-Ang University, Korea)
2. Simulation Study of Cluster Based Data Dissemination for Wireless Sensor Networks with Mobile Sinks, Canfeng Chen, Jian Ma, Jyri Salomaa (Nokia Research Center, Beijing SRC, China)
3. Configuration of Randomly Deployed WSN with the Estimation of Node Density, Seong-Soon Joo, Sang-Joon Park, Cheol-Sig Pyo, Jong-Suk Chae (ETRI, Korea)
4. System on Chip for Sensor Network Security: A Proposed Architecture, Kalpana Sharma, Vikash Varun, Rohit Kumar (Sikkim Manipal University, India)
5. A Design of e-ID Authentication Protocol in Gen2 Environment, Yong-Sik Choi, Soo Han, Seung Ho Shin (University of Incheon, Korea)
### Session 2E: Systems & Software Engineering (II)  
**Room Topaz II**  
**Chair:** Byoung Whi Kim (ETRI, Korea)

1. Applying Dataflow Analysis to Detecting Software Vulnerability, Hyunha Kim, Tae-Hyoun Choi, Seung-Cheol Jung, Hyoung-Cheol Kim, Oukseh Lee, Kyung-Goo Doh (Hanyang University, Korea)
2. Practical S/W Component Quality Evaluation Model, Yoonjung Choi, Sungwook Lee, Houp Song, Jingoo Park, SunHee Kim (Samsung Electronics Co. LTD., Korea)
3. Homogeneous Markov Chain for Modeling Emotional Interactions, Dong-mei Yu, Yang Tang, Jian’an Fang, Yu-ping Zhou, Mei-yu Sun (Donghua University, China)
4. Internet Protocol Engine in TCP/IP Offloading Engine, Dae Won Kim, Won Ok Kwon, Kyoung Park, Seong Woon Kim (ETRI, Korea)
5. Train Auto Control System based on OSGi, Yi-Seok Jeong, Choon-Sung Nam, Hee-Jin Jeong, Dong-Ryeol Shin (Sungkyunkwan University, Korea)

### Session 2F: Network Management, Operation and Maintenance (II)  
**Room Topaz III**  
**Chair:** Vladislav Pyattaev (FSUE LONIIS, Russia)

1. u-MoDEM : ubiquitous Mobile Device Environment Manager based on OMA-DM, Hun-Jung Lim, Seon-Ho Park, Dong-young Lee, Tai-Myoung Chung (Sungkyunkwan University, Korea)
2. Study of Re-Provisioning Mechanism for Dynamic Traffic in WDM Optical Networks, Chen-Shie Ho (Oriental Institute of Technology, Taiwan), Chang Woei (VaNung University, Taiwan)
3. The Active Queue Scheduling Method for the QoS of the WiBro Service, Hyun Jong Kim, Jong Chan Kim (Chungbuk National University, Korea), Seong Gon Choi, Jae Pil Song, Hyeon Suk Lee (KT, Korea)
4. A Study on a Resource Allocation Algorithm for On-demand Data Center Services, Motomitsu Adachi, Takuro Hiraoka, Naohisa Komatsu (Waseda University, Japan)
5. An Efficient Mechanism for Network Management in Wireless Mesh Network, Muhammad Shoaiib Siddiqui, Syed Obaid Amin, Choong Seon Hong (Kyung Hee University, Korea)
Session 2G: Poster Session (I) Room Diamond I

1. A Map Matching Algorithm for Intersections based on Floating Car Data, Wenjie Liao, Weifeng Lv, Tongyu Zhu, DongDong Wu (Beihang University, China)

2. A Cellular-Based Routing Algorithm for Ad-Hoc Wireless Networks, Keyvan RahimiZadeh, Mehdi Dehghan, Seyed Ali Hosseinezhad (Amirkabir University of Technology, Iran), Abbas Dehghani (Isfahan University, Iran)


4. Design and Implementation of Smartphone Edition based on Embedded Linux, Do-Hyung Kim, Min-Hong Yun, Sun-Ja Kim (ETRI, Korea), Cheol-Hoon Lee (Chungnam National University, Korea)

5. A New Handover Scheme for Seamless Mobility in Heterogeneous Networks, Jong Min Lee, Han Gyol Kim, Younghun Yoo, Seong Gon Choi (Chungbuk National University, Korea), Joo-Sang Park, Yong-Jun Lee (ETRI, Korea)

6. Robust Speaker Verification Based on Multi Stage Vector Quantization of MFCC Parameters on Narrow Bandwidth Channels, M. Mehdi Homayounpour, Iman Rezaian (Amirkabir University of Technology, Iran)

7. Considerations of Multi Network in Cognitive Network, Yong-Geun Hong, Jung-Soo Park (ETRI, Korea)

8. A PCRN Discovery Mechanism for Pre-Resource Reservation, Sunyoung Kim, Heasun Byun, Meejeong Lee (Ewha Womans University, Korea)

9. Experience of USN MAC based on 424MHz Band IEEE 802.15.4, Kyeseon Lee, Nae-Su Kim (ETRI, Korea), Dae-Young Kim (CNU, Korea)

10. Improved ITU-P.563 Non-Intrusive Speech Quality Assessment Method For Covering VOIP Conditions, Mohammad Abareghi, M. Mehdi Homayounpour, Mehdi Dehghan, Anahita Davoodi (Amirkabir University of Technology, Iran)

11. Iterative Decoding for Low-Density Parity-Check Lattices, Young-Seob Choi, Ihn-Jung Baik, Sae-Young Chung (KAIST, Korea)


14. A Modified Iterative Water-filling Algorithm with Per-iteration Power Normalization in Multiuser MMSE-Precoded MIMO Systems, Min Lee, Seong Keun Oh (Ajou University, Korea)

15. Performance Degradation of a MIMO-OFDM Receiver due to Inter-carrier and Co-antenna Interference, SeungWon Kang, KyooHyun Kim, KyungHi Chang (Inha University, Korea)

16. Methodology for Verifying the Load Limit Point and Bottle-neck of a Game Server using the Large Scale Virtual Clients, Ju Young Kim, Jin Ryong Kim, Chang Joon Park (ETRI, Korea)
### Session 2G: Poster Session (I)

#### Room Diamond I

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<td>A Proposal of the National Disaster Emergency Satellite Communications Networking, Kyung Soo Choi, Seong Pal Lee (ETRI, Korea)</td>
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<td>Method and Implementation for Consistency Verification of DEVS Model against User Requirement, Do Hyung Kim (Agency for Defense Development, Korea)</td>
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<td>Distinctive Traffic Characteristics of Pure and Game P2P Applications, YoungTae Han, HongShik Park (ICU, Korea)</td>
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<td>Soft QoS-based CAC Scheme for WCDMA Femtocell Networks, Sang Bum Kang, Young Min Seo, Young Ki Lee, Mostafa Zaman Chowdhury, Won Sik Ko, Mohd Noor Irlam, Sun Woong Choi, Yeong Min Jang (Kookmin University, Korea)</td>
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<td>Analysis of Technical Conditions for Sharing Frequency Spectrum, Taekjin Hwang (ETRI, Korea)</td>
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<td>A New Efficient 16-QAM Mapping Approach for Iterative Receiver using Turbo Codes over SISO Channel, Sangbong Oh, Akmal Fayziyev, Jongsun Cha, Jeongseok Ha (ICU, Korea), Seong Rag Kim (ETRI, Korea)</td>
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<td>Performance Analysis of an Overlap-Based CSS System, Taeung Yoon, Sangho Ahn (Sungkyunkwan University, Korea), Sun Yong Kim (Konkuk University, Korea), Seokho Yoon (Sungkyunkwan University, Korea)</td>
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<td>Collaborative Spectrum Sensing using Energy Detector in Multiple Antenna System, Jong-Hwan Lee, Jun-Ho Baek, Seung-Hoon Hwang (Dongguk University, Korea)</td>
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<td>The Comparison of T/RX Switch Performance for UWB Communication, Seung-Sik Lee, Bong-Hyuk Park, Seung-hyun Jang, Sang-sung Choi (ETRI, Korea)</td>
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**Lunch**  12:00 ~ 13:20
**Session 3B: Mobile Communications (III)**

**Room Ruby I**

**Chair: Seung-Hoon Hwang (Dongguk University, Korea)**

1. (Invited Speech) MIH and IP Mobility Technologies for Multiple Access Network Service, Junghoon Jee (Electronics and Telecommunications Research Institute, Korea)
2. Improving Inter-Sector Handover User Throughput by Using Partial Reuse and Softer Handover in 3GPP LTE Downlink, Che-Sheng Chiu (Chungwa Telecom Laboratories, Taiwan), Chia-Chi Huang (National Chiao Tung University, Taiwan)
3. A Network-based Handover Scheme for Hierarchical Mobile IPv6 over IEEE 802.16e, Dong-Guen Kim, Ho-Jin Shin, Dong-Ryeol Shin (Sungkyunkwan University, Korea)
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<td>1. (Invited Speech) Korea Advanced Research Network (KOREN) for Future Internet Testbed, Sangkyun Kim (National Information Society Agency, Korea)</td>
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<td>3. Network-Processor-Based IPv4/IPv6 Translator: Implementation and Fault Tolarence, Wanming Luo, Baoping Yan, Xiaodong Li, Wei Mao (Chinese Academy of Sciences, Beijing, China)</td>
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<td>2. Sensor Data Management System in Sensor Network for Low Power, YoungBag Moon, YeonJun Choi, SeungKi Hong, InHwan Lee (ETRI, Korea)</td>
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<td>4. A Miniaturized Mote for Wireless Sensor Networks, Kyung Jun Choi, Jong-In Song (Gwangju Institute of Science and Technology, Korea)</td>
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<td>5. Real-Time Unmanned Robot Tracking with Extended Kalman Filter in the Vibration Smooth Cricket Location System, Jae Bong Yoo, Chan Young Park (Hallym University, Korea)</td>
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### Session 3E: Telematics Technology (I)

**Chair:** Dae-Ki Kang (Dongseo University, Korea)

1. **(Invited Speech) Algorithm Development for Intelligence Vehicle**, Yousik Hong (Sang-Ji University, Korea)
2. **Code Tracking Bias Compensation Scheme for the Galileo E1 OS signal**, Seung Hwan Yoo, Seungsoo Yoo, Sun Yong Kim (Konkuk University, Korea), Sangho Ahn, Seokho Yoon (Sungkyunkwan University, Korea)
3. **Design and Implementation of a Location-Based Service Platform**, Junhui Zhao, CaiMu Zheng, Di Zhou (Macau University of Science and Technology, China)
4. **A Novel Cubic-Phase Linear Chirp for DS-UWB Ranging**, Young-il Shin, Joon-goo Park (Kyungpook National University, Korea)

### Session 3F: Communication Network Topology and Planning (I)

**Chair:** Yingji Zhong (Inha University, Korea)

1. **PIM Multicast Spam Countering Method Using Blacklist in Rendezvous Point**, Sung Hei Kim, So Young Park, Shin Gak Kang (ETRI, Korea)
2. **On Backbone Structure For a Future Multipurpose Network**, José Manuel Gutiérrez López (Aalborg University, Denmark), Rubén Cuevas Rumín (Universidad Carlos III de Madrid, Spain), M. Tahir Riaz, Jens Myrup Pedersen, Ole Brun Madsen (Aalborg University, Denmark)
3. **A Test-bed for Topological Routing in 4-regular Grid Structures**, Tahir M. Riaz, Jens M. Pedersen, Jose G. Lopez, Rasmus H. Nielsen, Ole B. Madsen (Aalborg University, Denmark)
4. **Data Dispose Algorithm for Scheduling in Multi Channels**, Jian Pan Li (Nanhua University, Taiwan), Tung-ying Lee (National University of Tainan, Taiwan)
5. **Layer-2 Routing Analytic Model by Linear Programming**, Changjin Suh, Shin-woong Jung (Soongsil University, Korea)

**Coffee Break 14:40 ~ 15:00**
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<td>2. Improved Reliability of Spectrum Sensing using Energy Detector in Cognitive Radio System, Jun-Ho Baek, Hyeong-Joo Oh, Seung-Hoon Hwang (Dongguk University, Korea)</td>
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<td>3. Design of 600Mbps 4x2 MIMO-OFDM Wireless LAN System and Its FPGA Implementation, Akihiro Teramoto, Kunitoshi Nishijo, Tadashi Maemura, Yuhei Nagao, Masayuki Kurosaki, Hiroshi Ochi (Kyushu Institute of Technology, Japan)</td>
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<td>4. Design of UWB Diversity Antenna for PDA Applications, Seokjin Hong, Jaewon Lee, Jaehoon Choi (Hanyang University, Korea)</td>
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<td>3. The Variable Step-Size Algorithm for Decision Feedback Equalizer Turbo Code DS/CDMA System Using SOVA Algorithm, Thanu Udomsripaiboon, Kanokwat Sieangjen, Thanu Kungwanchai, Nattapon Sanpote (Narasuan University, Thailand), Chawalit Benjangkaprasert (King Mongkut’s Institute of Technology Ladkrabang, Thailand)</td>
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<td>4. A Novel Cluster Routing Protocol with Power Balance in Ad Hoc Networks, Jian Pan, Li, Yueh Shun Li (Nanhua University, Taiwan), Tung Ying Lee (National University of Tainan, Taiwan)</td>
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### Session 4C: Next Generation Network Technology (IV)
#### Room Ruby II
**Chair:** Heechang Chung (NIA, Korea)

1. Alternative Attempts can Increase Transmission Opportunities in 802.11-Based Wireless Mesh Networks, Junhee Lee, Kyunghan Lee, Jinsung Lee, Sachin L. S., Anseok Lee, Song Chong (KAIST, Korea)

2. Design of User Bandwidth Management in Transport Layer of NGN, EuiJun Kim, Sungchol Cho, Boyoung Rhee, Sunyoung Han (Konkuk University, Korea)

3. SIP over an Identifier/Locator Splitted Next Generation Internet Architecture, Christian Esteve Rothenberg, Walter Wong, Fábio L. Verdi, Mauricio F. Magalhães (State University of Campinas, Brazil)

4. A Study on the Future Internet Requirement and Strategy in Korea, Jaeho Lee, Sun-moo Kang, Yeong-Ro Lee (NIA, Korea), Jaiyong Lee (Yonsei University, Korea)

5. An Efficient Multicasting Architecture for Context-Aware Messaging Services in the Future Internet, Hojin Lee, Bokgyun Jeon, Soyoung Park, Taekyoung Kwon, Yanghee Choi (Seoul National University, Korea)

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**Chair:** Al-Sakib Khan Pathan (Kyung Hee University, Korea)

1. Localized Detection of Faults in Wireless Sensor Networks, Myeong-Hyeon Lee, Yoon-Hwa Choi (Hongik University, Korea)

2. Suggesting Infection causes Monitoring System based on Wireless Sensor Network for Hospital Infection Control, Garam Park (Institute for Information Technology Advancement, Korea), Jaeheung Yoo (ICU, Korea)

3. Sensor Network to collect Data in Field to match Satellite Data, Moo Wan Kim, Fumikazu Iseki (Tokyo University of Information Sciences, Japan), Kwang Sik Kim (Scommtech Japan Corp, Japan)

4. CHEF: Cluster Head Election mechanism using Fuzzy logic in Wireless Sensor Networks, Jong-Myoung Kim, Seon-Ho Park, Young-Ju Han, Tai-Myoung Chung (Sungkyunkwan University, Korea)

5. RFID Applications Strategy and Deployment in Bike Renting System, Kuo-shien Huang, Shun-ming Tang (National Yunlin University of Science and Technology, Taiwan)
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Chair: Dae-Ki Kang (Dongseo University, Korea)

1. An Approach for Data Collection and Traffic Signal Control in the Futuristic City, Gangdo Seo (Korea Water Resources Corporation, Korea), Ahmet Yazici (Eskisehir Osmangazi University, Turkey), Umit Ozguner (Ohio State University, U.S.A.), Jinho Cho (Kyungpook National University, Korea)
2. A New Tracking Method using Image Sensor and Photo Diode for Visible Light Road-to-Vehicle Communication, Tsubasa Saito, Shinichiro Haruyama, Masao Nakagawa (Keio University, Japan)
3. Future Automotive Insurance System based on Telematics Technology, Daesub Yoon, Jongwoo Choi, Hyunsuk Kim, Juwan Kim (ETRI, Korea)
4. Location-awareness Communications System for Improving Medical Service Quality, Po-Yen Lin, Chih-Ning Huang, Chia-Tai Chan (National Yang-Ming University, Taiwan), Yuan-Rung Yang (Chunghwa Telecom Co.Ltd, Taiwan)
5. A Novel Code Tracking Scheme using Correlation Outputs in Advanced Offset Region for GALILEO L1 Open Service, Euihyoung Lee, Seungsoo Yoo, Sun Yong Kim (Konkuk University, Korea), Youngyoon Lee, Seokho Yoon (Sungkyunkwan University, Korea), Seok-Pil Lee (Korea Electronics Technology Institute, Korea)

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Chair: Dongkyun Kim (KISTI, Korea)

1. Slot Reservation Demand Assignment Multiple Access Control Protocol for Signalling of Telephony Traffic via Geo Satellite, Sahar Kouroshnejad, Saadan Zokaei (KNT University of Technology, Iran), Hassan Yeganeh (Iran Telecommunication Research Center, Iran), Mohammad SayadHaghighi (KNT University of Technology, Iran)
2. A Study of Cost and Network Efficiency in BICC Signaling Protocol, Jeong-Je Cho, Nak-Po Kim (KTF, Korea)
3. A Comparison of Network Planning Strategies, Jens Myrup Pedersen, Tahir M. Riaz (Aalborg University, Denmark), Bozydar Dubalski (University of Technology and Life Sciences, Poland), Ole Brun Madsen (Aalborg University, Denmark)
4. Design of IPv6 Tactical Network based on Commercial Technologies: Architecture, Routing, and Mobility Management, Bong Chan Kim, Jae Soong Lee, Youngchul Bang, Jae Kwang Lee, Hwang Soo Lee (KAIST, Korea), Jong Soo Ma (ICU, Korea)
5. KT's deployment with Fiber To The Home, Hanchoon Park (KT, Korea), Hyung-Myong Kim (KAIST, Korea)
1. Noncoherent M-ary Orthogonal FSK Alamouti Space-Time Coding with Antenna Selection, Il Jin Youn (Samsung Electronics Co., Ltd., Korea)

2. pFlours: A New Packet and Flow Gathering Tool, Byung-Jin Han, Jong-Hyouk Lee (Sungkyunkwan University, Korea), Seon-Gyoung Sohn, Jong-Ho Ryu (ETRI, Korea), Tai-Myoung Chung (Sungkyunkwan University, Korea)

3. CARP: A Cooperative-Aided Routing Protocol in Mobile Ad-hoc Wireless Sensor Networks, Beongku An, Joo Sang Lee (Hongik University, Korea), Nam-Soo Kim (Cheongju University, Korea), Do-Hyeun Kim (Cheju National University, Korea)

4. WSNMP: A Network Management Protocol for Wireless Sensor Networks, Muhammad Mahbub Alam, Md. Mamun-Or-Rashid, Choong Seon Hong (Kyung Hee University, Korea)

5. A Study of the Subscribers’ Drifts and Attitudes regarding the Provision of Converged Services, Iik Kwon Cho (Kyushu University, National Information Society Agency, Korea), Koji Okamura (Kyushu University, Japan), Sang Yong Ha, YoungRo Lee, HyunMok Oh (National Information Society Agency, Korea)

6. New Challenges on Future Network and Standardization, Myung-Ki Shin, Yong-Woon Kim (ETRI, Korea)


8. A New Address Scheme for Service Discovery supporting Active Mobile Sensor Objects, Dongpil Kwak, Joongsoo Lee, Seoungku Kim, Younghee Lee (ICU, Korea)

9. Negative Permeability Metamaterial Structure Based Electrically Small Loop Antenna, Yong-jin Kim, Joong-kwan Kim, Jung-han Kim, Ho-yong Kim, Hong-min Lee (Kyonggi University, Korea)

10. A Study on the QoS Metric for measuring BeN Wireless Service Quality, Sun-Young Shin, Jin-Chul Kim, Sang-Yong Ha, Yeong-Ro Lee (NIA, Korea)

11. Inter-cell Interference Coordination for Uplink Non-real-time Data in CDMA Systems, Hyung-sub Kim, Jae Su Song, Yeon Seung Shin (ETRI, Korea)

12. A Comparative Study of Channel Estimation for Mobile WiMAX System in High Mobility, Dong Heon Lee, Suk Chan Kim, Dong Chan Park (Pusan National University, Korea), Young-il Kim (ETRI, Korea)

13. Weighted-Cooperative Spectrum Sensing Scheme using Clustering in Cognitive Radio Systems, Jookwan Lee, Youngmin Kim, Sunghwan Sohn, Jaemyoung Kim (Inha University, Korea)

14. Reduced Complexity of RD Detector Based on Semi-definite Relaxation for MIMO Systems, Su Bin Park, Ryun Woo Kim, Youn Shik Byun (University of Incheon, Korea)

15. ZigBee Device Access Control and Reliable Data Transmission in ZigBee Based Health Monitoring System, JY Jung, JW Lee (ETRI, Korea)

16. Performance Analysis for Amplify-and-forward Opportunistic Relaying with Quality Based Channel State Reporting, Jung-Bin Kim, Dongwoo Kim (Hanyang University, Korea)
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<td>A Study on Moderating Effect of Personal Innovativeness in Mobile-RFID Services, Nae-Yang Jeong, Yongsang Yoo, Jung-Eun Ku (ETRI, Korea)</td>
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<td>Smart Driving Simulator using Intelligence, You Sik Hong (SangJi Univ., Korea), Hyeong Ho Lee (ETRI, Korea)</td>
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**Coffee Break** 16:20 ~ 16:40

**Plenary Session** 16:40 ~ 18:00  **Phoenix Ballroom**

Chair: Hyeong-Ho Lee (ICACT2008 TPC Chair)

1. R&D for the Next Generation Networks & FTTH in NTT, Mr. Hiromichi Shinohara (NTT, Japan)
2. IT Mega-trend and KT Vision, Mr. Sanghong Lee (KT, Korea)

**Opening Ceremony and Banquet** 18:30 ~ 20:30  **Phoenix Ballroom**

Welcome Address: Prof. Sungok Lee (ICACT2008 General Chair)
Day 3: February 19 (Tuesday)

**Session 5**  **09:00 ~ 10:20**  
Session 5A: Wireless Communication Technology (V)  
Chair: Muhammad Irfan (Sir Syed University of Engg & Tech, Pakistan)

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Session 5B: Mobile Communications (V)  
Chair: Sangjin Jeong (ETRI, Korea)

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**Chair:** Jae-young Ahn (ETRI, Korea)

1. Paging Algorithm For Cost-Effective Location Management In Multiple Access Network Environment,  
   Ae Hyang Park (ICU, Korea), Juyoung Park, Shin-Gak Kang (ETRI, Korea), Jun Kyun Choi (ICU, Korea)

2. A Hybrid Overlay Multicast Scheme based on Host Group Model for Subnet-Dense Receivers, Dongk-Kyun Kim, Huhn-Kuk Lim, Kwang-Jong Cho, Gi-Seong Yu (KISTI, Korea)

3. Univer6 – A Universal Network Architecture for IPv6, Xiangbin Cheng, Jun Bi, Xing Li (Tsinghua University, China)

4. Link Quality-Aware Packet Forwarding Architecture for Wireless Mesh Network, Hung Quoc Vo, Choong Seon Hong (Kyung Hee University, Korea)

5. An Efficient Ant-based Routing Algorithm for MANETs, Miae Woo, Ngo Huu Dung, Woo Jong Roh (Sejong University, Korea)

### Session 5D: RFID & USN Technologies (V)  
**Room Topaz I**

**Chair:** Al-Sakib Khan Pathan (Kyung Hee University, Korea)

1. A QoS Adaptive Congestion Control in Wireless Sensor Network, Md. Obaidur Rahman, Muhammad Mostafa Monowar, Choong Seon Hong (Kyung Hee University, Korea)

2. Design of Interoperability for Real-Time Integration of RFID and BPM, Hyungjin Ahn, Kwanghoon Kim (Kyonggi University, Korea)

3. Cluster Based Data Query Analysis and Optimization for Wireless Sensor Networks, Zhanyang Zhang, Olga Berger (City University of New York, U.S.A.)

4. Fuzzy Logic Based Key Disseminating in Ubiquitous Sensor Networks, Hae Young Lee, Tae Ho Cho (Sungkyunkwan University, Korea)

5. A Development of the Nano OS Kernel based on System State-Monitor for Ubiquitous Sensor Network, Dong Myung Lee (Tongmyong University, Korea), Kwangyong Lee (ETRI, Korea)
### Session 5E: Multimedia and Internet Systems and Services (I)
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*Chair: Hyongsoon Kim (NIA, Korea)*

1. **A Novel Semantic–Based Image Retrieval Method**, Abolfazl Lakdashti (Islamic Azad University, Rouzbahan Institute of Higher Education, Iran), M. Shahram Moin, Kambiz Badie (IT Faculty, Iran Telecommunication Research Center, Iran)

2. **An Adaptive And Parameterized Job Grouping Algorithm For Scheduling Grid Jobs**, Nithiapidary Muthuvelu, Ian Chai, Chikkanan Eswaran (Multimedia University, Malaysia)

3. **An Efficient Membership Management Scheme for Gossip-Based Overlay Multicast**, Yong Sun, Xiangming Wen (Beijing University of Posts and Telecommunications, China)


5. **An Empirical Study on Impacts of Service Quality and Switching Cost on Customer Loyalty of VoIP Services**, Jaehyeung Yoo, Soohyung Kim (ICU, Korea), Jaehwan Hong (ETRI, Korea)

6. **Comparison of Video Streaming Quality Measurement Methodologies**, Kwangjin Choi, Jun kyun Choi (ICU, Korea), Jae Hwan Hong, Gyeong Ju Min, Jongkuk Lee (ETRI, Korea)

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*Chair: Chin-Feng Lin (National Taiwan Ocean University, Taiwan)*

1. **A Security Architecture for e-Health Services**, Rossilawati Sulaiman, Dharmendra Sharma, Wanli Ma, Dat Tran (University of Canberra, Australia)

2. **An Approach to Mitigating Sybil Attack in Wireless Networks using ZigBee**, Gunhee Lee, Jaesung Lim, Dong-kyoo Kim (Ajou University, Korea), SungHyun Yang (Kwangwoon University, Korea), MyungHyun Yoon (Korea Electronics Technology Institute, Korea)

3. **Deterministic Link Signature based IP Traceback Algorithm under IPv6**, Yi Shi, Yong Qi, BinXia Yang (Xi’an Jiaotong University, China)

4. **e-RPNL : Labeling Scheme for Efficient Secure Access Control**, Dong-Chan An, Jin-Young Kim, Seog Park (Sogang University, Korea)

5. **A Novel Algebraic Approach to Power Analysis Attack-Resistant Countermeasure for Koblitz Curve Cryptosystems in Mobile Devices**, Behzad Kasiri, Hadi Sahriar Shahhoseini, Hadi Meshgi (Iran University of Science and Technology, Iran)

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**Coffee Break 10:20 ~ 10:40**
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**Chair:** Cheol-Sun Park (Agency for Defense Development, Korea)

1. A PTS-OFDM Phase-Superimposed over Pilot Symbols, Tae-Young Han, Nam Kim, Jung-Hun Choi (Chungbuk National University, Korea), Jae-Hwan Lee (Institute for Information Technology Advancement, Korea)

2. Adaptive Channel Estimation using Cyclic Prefix for Single Carrier Wireless System with FDE, Wahyul Amien Syafei, Kunitoshi Nishijo, Yuhei Nagao, Masayuki Kurosaki (Kyushu Institute of Technology, Japan), Hiroshi Ochi (Radrix.co.ltd., Japan)

3. Performance Analysis of UWB Radar for Vehicle in Multi-user Environments, Sang-Dong Kim, Jong-Hun Lee (Daegu Gyeongbuk Institute of Science & Technology, Korea)


5. New Correlation Functions for CBOC Satellite Signal Synchronization, Sanghun Kim (Sungkyunkwan University, Korea), Seungsoo Yoo, Seung Hwan Yoo, Sun Yong Kim (Konkuk University, Korea), Seokho Yoon (Sungkyunkwan University, Korea)

### Session 6B: Mobile Communications (VI)

**Chair:** Muhammad Irfan (Sir Syed University of Engg & Tech, Pakistan)

1. Fast Handover for Proxy Mobile IPv6 based on 802.11 Networks, Joo-Chul Lee, Jung-Soo Park (ETRI, Korea)

2. A Robust Cross-Layer Design of Clustering-Based Routing Protocol for MANET, Arash Dana, AmirMansour Yadegari, Marzieh Hajhosseini, Tina Mirfakhraie (Iran Telecommunication Research Center, Iran)

3. FPGA Implementation of 3Mbps Single Carrier Mobile Wireless System with 1MHz Bandwidth, Kunitoshi Nishijo, Wahyul Amien Syafei, Masayuki Kurosaki (Kyushu Institute of Technology, Japan), Hiroshi Ochi (Radrix.co.ltd, Japan), Satoru Ishii (Futaba Corporation, Japan)

4. An Execution Model of MAC on System Kernel for WiBro Access Terminal, Seung-Que Lee, Nam-Hoon Park (ETRI, Korea)

5. Enhanced MCS for Direct Relaying in Transparent RS of IEEE 802.16j, Suchang Chae, Young-il Kim (ETRI, Korea)
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**Chair:** Samuele Pasqualini (University Politecnica delle Marche, Italy)

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2. A Memory-Efficient CAVLC Decoding Scheme for H.264/AVC, Yanling Chen, Xixin Cao, Xiaoming Peng, Chungan Peng, Dunshan Yu, Xing Zhang (Peking University, China)
3. Call/Messaging Open API for Telecommunication Services, Soonchul Jung, Mi-Kyoung Kang, Dae-Woo Choi (KT, Korea)
4. Enhanced Parallel Thread Scheduling for Java Based Applications on Multi-Core Architecture, Kam-Mun Chong, Kam-Mun Chong, Chikkannan Eswaran, Somnuk Phon-Amnuaisuk (Multimedia University, Malaysia)
5. Implementation of the Converting Module from FIPA SL to XML, Yoe-Jin Yoon, Dong-Uk Kim, Sung-Jun Na, Dong-Ryeol Shin (Sungkyunkwan University, Korea)

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**Chair:** Taha Al-Arif (Faculty of Computer Science and Information System, Egypt)

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2. A User Friendly Internet Identity Management System, Daeseon Choi, Seunghun Jin (ETRI, Korea), Hyunsoo Yoon (KAIST, Korea)
3. Misbehavior Detection in Wireless Mesh Networks, Md. Abdul Hamid, Md. Shariful Islam, Choong Seon Hong (Kyung Hee University, Korea)
4. Effective Value of Decision Tree with KDD 99 Intrusion Detection Datasets for Intrusion Detection System, Joong-Hee Lee, Jong-Hyouk Lee (Sungkyunkwan University, Korea), Seon-Gyoun g Sohn, Jong-Ho Ryu (ETRI, Korea), Tai-Myoung Chung (Sungkyunkwan University, Korea)
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<td>19. A Study on Methods of MCID(Multimedia Caller IDentification) Supplementary Service based on SIP, IlJin Lee, Wook Hyun, ShinGak Kang (ETRI, Korea)</td>
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<td>20. Using Vulnerability Analysis to Model Attack Scenario for Collaborative Intrusion Detection, Xuejiao Liu, Debao Xiao (HuaZhong Normal University, China)</td>
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<td>21. An Efficient Global Request Dispatching Scheme for Multimedia Streaming Services, Chang Soo Kim, Won Jae Lee, Yu Hyun Bak, Hag Young Kim (ETRI, Korea)</td>
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<td>NGN Capabilities to support Convergence Terminals for a Multiple Network and Service Provider</td>
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<td>22. Environment (CTMP), Heechang Chung, Byung-Ik Choi, Sun-Moo Kang, Yeong ro Lee (National Information Society Agency, Korea)</td>
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<td>24. A Joint Processing Method of Angle Diversity Receiving and Temporal Equalization, Zhihua Cao, Weizheng Pang (Harbin Engineering University, China)</td>
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<td>25. LPF Requirement for Full-Digital Coherent IR-UWB Systems, Mi-Kyung Oh, Min-Su Kil, Ju-Ho Park, Jae-Young Kim (ETRI, Korea)</td>
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<td>27. Practical Security Testing using File Fuzzing, Hyoungchun Kim, Younghan Choi, Dohoon Lee (ETRI, Korea), Donghoon Lee (Korea University, Korea)</td>
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<td>28. Personalized Identity Agent for User-Centric IdM, Seung-Hyun Kim (ETRI, Korea), Han-Gyu Ko (ICU, Korea), Daeseon Choi, Soo Hyung Kim, Seunghun Jin (ETRI, Korea)</td>
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<td>29. Improvement of Link Efficiency by Compressing SIP Signaling Messages with SigComp, Hyun Wook, Shin-Gak Kang (ETRI, Korea)</td>
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<td>30. Soft Handvoer Mechanism for IPTV Service over Wireless Networks, Ae Hyang Park (ICU, Korea), Juyoung Park, Shin-Gak Kang (ETRI, Korea), Jun Kyun Choi (ICU, Korea)</td>
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<td>31. Sensor Network Node Management and Implementation, YoungBag Moon, JongYoung Lee, SangJoon Park (ETRI, Korea)</td>
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<td>32. Design of a Low-profile Antenna for DTV Application, Yeonsik Yu, Jaehoon Choi (Hanyang University, Korea)</td>
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<td>33. Power Saving Algorithm using Data Lifetime in Wireless Sensor Network, Sanghyun Lee, Myungsik Yoo (Soongsil University, Korea)</td>
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**Lunch** 12:00 ~ 13:20
### Session 7A: Wireless Communication Technology (VII)

**Room Emerald**

**Chair:** Woo-Yong Choi (Dong-A University, Korea)

1. Clustering Algorithm for Hidden Node Problem In Infrastructure Mode IEEE 802.11 Wireless LANs, Woo-Yong Choi (Dong-A University, Korea)
2. A 400Mb/s Radix-4 MAP Decoder with Fast Recursion Architecture, Cheng Zhang, Xuejing Wang, Fan Ye, Junyan Ren (Fudan University, China)
3. Performance Comparison of Some Codes in Code Division Multiplexing based MIMO Channel Sounder Architecture, Minjae Kim, Sunghyun Kim, Hyuckjae Lee (ICU, Korea), Hyunbeom Lee, Heung-Ryeol You (KT, Korea)
4. Performance Enhancement of Timing Acquisition and Detection in UWB-IR Matched Filter Receiver, Jin Sic Kim, Suk Chan Kim, Sung Su Hwang (Pusan National University, Korea), Bongsoon Kang (Dong-A University, Korea), Ju-Sung Park (Pusan National University, Korea)
5. A Study on MAC Protocol for 600 Mbps 4x2 MIMO-OFDM Wireless LAN System, Tomohiko Oka, Yuhei Nagao, Masayuki Kurosaki, Hiroshi Ochi (Kyushu Institute of Technology, Japan)

### Session 7B: Mobile Communications (VII)

**Room Ruby I**

**Chair:** Dong Myung Lee (Tongmyong University, Korea)

1. A Flow Redirection Decision Mechanism using Data Mining on NEMO Environments, Yukyong Jung, Mihui Kim, Kijoon Chae (Ewha Womans University, Korea), Jooyoung Yoon, Jongsam Jin (KT Infra Laboratory, Korea)
2. DDSS: A Communication Middleware based on the DDS for Mobile and Pervasive Systems, Ki-Jeong Kwon (Agency for Defense Development, Korea), Choong-Bum Park, Hoon Choi (Chungnam National University, Korea)
3. A New Scheme for on-Demand Group Mobility Clustering in Mobile Ad hoc Networks, Arash Dana, AmirMansour Yadegari, Ahmad Salahi, Soroush Faramehr, Hamid Khosravi (Iran Telecommunication Research Center, Iran)
4. Improving TCP Performance Using PDU Reordering in WiBro Multi FA Access Terminal, Nak Woon Sung, Kyungsoo Kim (ETRI, Korea)
5. Mobile Agent Communication Mechanism using Sub-Server, Yi-Seok Jeong, Choon-Sung Nam, Hee-Jin Jeong, Dong-Ryeol Shin (Sungkyunkwan University, Korea)
### Session 7C: Mobile Internet (I)
**Room Ruby II**
Chair: Jin Seek Choi (Hanyang University, Korea)

1. **Unbalanced Multiple Description Coding by adding Enhancement Layer for AMR-WB Speech Codec in VoIP**, Deck-Jong Lee, Gyu-Hyeok Jeong, In-Sung Lee (Chungbuk National University, Korea)
3. **Route Optimization for NEMO Based on AODV**, Seong-Yee Phang, HoonJae Lee, Hyotaek Lim (Dongseo University, Korea)
4. **Diffserv Conditionalized Handover for HMIPv6**, Sophon Mongkolluksamee, Vasaka Visoottiviseth (Mahidol University, Thailand)

### Session 7D: RFID & USN Technologies (VII)
**Room Topaz I**
Chair: June-Koo Rhee (Information and Communications University, Korea)

1. **(Invited Speech) USN Standard and Technology**, Eunsook Kim (ETRI, Korea)
2. **Load and Energy Balanced Geographic Routing for Sensor Networks**, Md. Abdur Razzaque, Choong Seon Hong (Kyung Hee University, Korea)
4. **Realizing Greater Business Value of Contemporary RFID Systems**, Son Le, Xu Huang, Dharmendra Sharma (University of Canberra, Australia)
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<td>2. Adaptive Threshold For Intra Frame Prediction In H.263 To H.264 Smart-Transcoder, Samuele Pasqualini, Paola Pierleoni, Folco Fioretti, Alessandro Andreoli (Università Politecnica delle Marche, Italy)</td>
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<td>3. A Personality Specialized Artificial Emotion for a Scrolling Shooter game, Jun-Seok Ham, Myung-Bum Jung, Bo-Kyung Seong, Jun-Hyoung Park, Min-ho Park, Il-Ju Ko (Soongsil University, Korea)</td>
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<td>4. Efficiency Improvement for Unconstrained Face Recognition by Weightening Probability Values of Modular PCA and Wavelet PCA, Wayo Puyati, Aranya Walairacht (King Mongkut’s Institute of Technology Ladkrabang, Thailand)</td>
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<td>5. The Research of Evolved Networks for IMS Services Interworking, Jinho Hwang, Nakpo Kim (KTF, Korea)</td>
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<td>2. An On-line DDoS Attack Traceback and Mitigation System Based on Network Performance Monitoring, Wei-Tsung Su (National Cheng Kung University, Taiwan), Tzu-Chieh Lin (Acer Incorporation, Taiwan), Chun-Yi Wu, Jang-Pong Hsu (Advanced Multimedia Internet Technology Incorporation, Taiwan), Yau-Hwang Kuo (National Cheng Kung University, Taiwan)</td>
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<td>3. An Empirical Study for Security of Windows DLL Files Using Automated API Fuzz Testing, YoungHan Choi, HyoungChun Kim, DoHoon Lee (ETRI, Korea)</td>
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<td>4. A Design of an Access Control Model for Multilevel-Security Documents, Mohammad Alhammouri (The George Washington University, U.S.A.), Sead Muftic (Royal Institute of Technology, Sweden)</td>
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Coffee Break 14:40 ~ 15:00
### Session 8A: Wireless Communication Technology (VIII)  
**Room Emerald**  
Chair: Woo-Yong Choi (Dong-A University, Korea)

1. An Efficient Subband Method for Wideband Adaptive Beamforming, Longyang Huang (Beijing University of Posts and Telecommunications, China), Bin Shen (Inha University, Korea), Mengxing Li, Zemin Liu (Beijing University of Posts and Telecommunications, China)

2. A Novel Full-Diversity Full-Rate Transmit Beamforming Systems Combined with V-BLAST over Correlated Fading Channels, Jung-Eun Kim, Hyoungsuk Jeon, Wooram Shin, Hyuckjae Lee (ICU, Korea)

3. Performance of Adaptive Modulation with Multipath Diversity Technique, Hadi K. Mohammed, Rjeev Tripathi, Krishna Kant (Motilal Nehru National Institute of Technology, India)

4. Outage Performance of Cooperative DF Relaying in Rayleigh Fading with Multiple Receive Antennas at Destination, Qinghai Yang, Yingji Zhong, Kyung Sup Kwak, Ho Hwan Park (Inha University, Korea)

5. Rain Effects on SDH-based Networks Using Protection Switching, Nahal Maleki, Ramin Khosravi, Mohammad Kazem Shokouhi (Iran Telecommunication Research Centre, Iran)

### Session 8B: Mobile Communications (VIII)  
**Room Ruby I**  
Chair: Francis C.M. Lau (Hong Kong Polytechnic University, Hong Kong)

1. A Cross-Layer Transmission on Video Telephony over WCDMA Network, Yo-Han Kim, Jitae Shin (Sungkyunkwan University, Korea), ChangGuk Choi (Mcbetworks co. Ltd., Korea)

2. A Systematic Optimized Comparison Algorithm for LDPC Decoder, Jui-Hui Hung, Jui-Hung Hung, Sau-Gee Chen (National Chiao Tung University, Taiwan)

3. Advanced Handoff Mechanism for Delay Sensitive Applications in IEEE 802.11 Wireless LAN, Yazan M. Allawi, Min-Gon Kim, Minho Kang (ICU, Korea)

4. A Scheduling Algorithm Based on Channel State for VoIP Services in IEEE Std 802.16e System, Hongxia Zhang, Hong Chen, Xiaomei Fu, Jufeng Dai (Tianjin University, China)

5. Space-Time Block Coding and Beamforming for MC-CDMA Transmission, Raungrong Suleesathira, Voravat Limpakuntorn (King Mongkut’s University of Technology Thonburi, Thailand)
### Session 8C: Mobile Internet (II)  
**Chair:** Tokumi Yokohira (Okyama University, Japan)

1. **A Mechanism for Resource Control and Functional Architecture of Overlay Multicast for IPTV Service in NGN,** Yangjung Kim, Sunghan Song, Dongkyu Lee, Ilyoung Chong (Hankuk University of Foreign Studies, Korea)
2. **TCP Performance Analysis and Improvement in FMIPv6,** Yi-zhi Wang (Beijing Jiaotong University, China), Xing-feng Li (Chinese Academy of Sciences, China)
3. **Flexible Channel Allocation Algorithm for Web-based IPTV Service,** Hongnyun Kim, Junkyun Choi (ICU, Korea), Sanghyun Choi (NIA, Korea)
4. **End-to-end QoS-aware Handover in Fast Handovers for Mobile IPv6 with DiffServ using IEEE802.11e/IEEE802.11k,** Vasaka Visoottiviseth (Mahidol University, Thailand), Siwaruk Siwamogsatham (National Electronics and Computer Technology Center, Thailand)
5. **IPv4-related Route Optimization for DSMIPv6,** Chang Yeol Yum, Hyong Soon Kim, Sunmoo Kang (NIA, Korea), JooSeok Song (Yonsei University, Korea)

### Session 8D: Digital Broadcasting Technology (I)  
**Chair:** Yuji Ishikawa (NTT DATA CORPORATION, Japan)

2. **Mathematical Prediction of Sun-Synchronous Polar LEO Satellite Visions for Earth Stations,** Arezoo Modiri, Leila Mohammady (Iran Telecommunication Research Center, Iran)
3. **Personalized Display Techniques for Next Generation DTV,** Youngwoo Kim (ICU, Korea), Jaeho Lee, Jaeseung Ko, Changick Kim, Yong Ju Jung (Samsung Advanced Institute Technology, Korea)
4. **A Simple Alamouti Space-Time Transmission Scheme for Asynchronous Cooperative Communications over Frequency-Selective Channels,** Kai Yan, Sheng Ding, YunZhou Qiu, YingGuan Wang, HaiTao Liu (Chinese Academy of Sciences, China)
**Session 8E: Multimedia and Internet Systems and Services (IV)  Room Topaz II**

Chair: Kyu Ouk Lee (ETRI, Korea)

1. **MPEG4 Realtime Encoder for Multi-channel DVR Systems**, Kyung Hyun Jang, Ki Tae Park, Young Shik Moon (Hanyang University, Korea)

2. **A Hierarchical Scheme of Flexible Macroblock Ordering for ROI based H.264/AVC Video Coding**, Rong Luo, Bin Chen (Tsinghua University, China)

3. **Real Time Video Copy Detection under the Environments of Video Degradation and Editing**, Muhammad Usman, Changick Kim (ICU, Korea)

4. **A Study of Electronic Comic Services for Personalized and Enriched consumption with MPEG-7 Metadata**, DaeKyu Jung (Korea University of Science and Technology, ETRI, Korea), Hui Yong Kim, Han-Kyu Lee (ETRI, Korea)

5. **Color Image Watermarking Based on DS-CDMA Using Hadamard Kernel**, Myung-Ho Lee, Oh-Jin Kwon (Sejong University, Korea)

**Session 8F: Information Security Technology (IV)  Room Topaz III**

Chair: Kwangsun Ko (Sungkyunkwan University, Korea)

1. **A New Moduli Set \{3^n−1,3^n+1,3^n+2,3^n−2\} in Residue Number System**, Mehdi Hosseinzadeh, Somayyeh Jafarali Jassbi (Islamic Azad University Science and Research branch, Iran), Keivan Navi (Shahid Beheshti University, Iran)


3. **The Security Limitations of SSO in OpenID**, Hyun-Kyung Oh (Korea University of Science and Technology, Korea), Seung-Hun Jin (ETRI, Korea)

4. **Towards A Secure Distribute Storage System**, Min Zhang, Desheng Zhang, Hequn Xian, Chi Chen, Dengguo Feng (Chinese Academy of Sciences, China)

5. **Crytpanalysis of Yang-Wang-Chang’s Password Authentication Scheme with Smart Cards**, Al-Sakib Khan Pathan, Choong Seon Hong (Kyung Hee University, Korea)
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<td>4. A Novel Key Exchange Protocol Based on RSA-OAEP, Jie Liu, Jianhua Li (Shanghai Jiao Tong University, China)</td>
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<td>5. Labeling System for Countering SIP spam, So Young Park, Shin Gak Kang (ETRI, Korea)</td>
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<td>7. Management Agent for OSGi-based Healthcare Application Using Portable Information Terminal, Kyuchang Kang, Jeunwoo Lee (ETRI, Korea), Hoon Choi (Chungnam National University, Korea)</td>
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<td>8. Study on Access Charge Method between Fixed and Internet Phone, Jung-Eun Ku, Sang-Woo Lee (ETRI, Korea)</td>
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<td>12. All-Optical Header Processing using Direct Modulation of a Fabry-Perot Laser Diode for All-Optical Packet Switching, Ji Young Lee, Jeong Sik Cho, Yong Hyub Won (ICU, Korea)</td>
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<td>13. Dynamic Connection Control Scheme Considering Network Topology in an Optical Network, Hyeonsik Yoon, Kwangjoon Kim (ETRI, Korea)</td>
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<td>15. Energy-Efficient Chain Topology in Ubiquitous Sensor Network, Jisoo Shin, Changjin Suh (Soongsil University, Korea)</td>
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<td>17. Request Based Telematics Contents Providing System using DMB, Jongwoo Choi, Daesub Yoon, Hyunsuk Kim, Juwan Kim (ETRI, Korea)</td>
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<td>19. Wavelength Re-use Scheme with Reflective SOA for WDM-PON Link, Jea-Hoon Yu, Byoung-Whi Kim (ETRI, Korea), Nam Kim (CBNU, Korea)</td>
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<td>20. Multipath Congestion Control for Heterogeneous Traffic in Wireless Sensor Network, Muhammad Mostafa Monowar, Md. Obaidur Rahman, Choong Seon Hong (Kyung Hee University, Korea)</td>
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<td>21. Extensible USN Metadata Management System, Chul-Su Kim (ETRI, Korea), Yong-Jun Lee, Jun-Seok Hwang (Korea Computer Service, Korea)</td>
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<td>22. A New UWB Synchronization Scheme Using Multipath Components Jointly, Dahae Chong, Sanghun Kim (Sungkyunkwan University, Korea), Euihyoung Lee, Sun Yong Kim (Konkuk University, Korea), Seokho Yoon (Sungkyunkwan University, Korea)</td>
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<td>23. VLSI Design of DFE Equalizer for ATSC DTxR System, Sung-Hoon Kim, Young-hoon Lee, Sung-Ik Park, Heung-Mook Kim, Jong-Soo Lim (ETRI, Korea), Yong-Seok Kim (DARBS corp, Korea), Ki-Doo Kim (Kookmin University, Korea)</td>
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<td>24. Average Sum-Rate Bound of Multiuser MIMO Beamforming with Direction-Indicating Matrices and Channel Magnitude Feedback, Eun-Hee Shin, Dongwoo Kim (Hanyang University, Korea)</td>
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<td>26. An Asynchronous Peer-to-Peer Service Extension Using the General E-mail Service, Moon-Ok Choi, Il-Woo Lee, Ho-Jin Park (ETRI, Korea)</td>
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<td>29. Web Technology and Standardization for Web 2.0 based IPTV Service, Sunghan Kim, S.Y. Lee (ETRI, Korea)</td>
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<td>30. Web-based Software Management System, Sungjoo Kang, Moon Young Chung, Kyong I Ku, Won Young Kim, Wan Choi (ETRI, Korea)</td>
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<td>31. Web Service QoS in Multi-Domain, Seung-Hyun Lee, Dong-Ryeol Shin (Sungkyunkwan University, Korea)</td>
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<td>32. Evaluation and Optimization of ActiveRecord to implement the Personalized Software Service Platform, Kyong-I Ku, Sung-Joo Kang, Moonyoung Chung, Won-Young Kim, Wan Choi (ETRI, Korea)</td>
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<td>4. Parameter-Optimized Extended MMSE-DFE based Detection for V-BLAST, Van-Su Pham, Minh-Tuan Le, Linh Mai, Giwan Yoon (ICU, Korea)</td>
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<td>2. A Scalable Quality Service Scheme of JPEG2000 for DRM System, Kyu-Ho Song, Hee-Don Yoon, Ho-Gab Kang, Jeong-Sig Kim, Keun-Young Lee (SungKyunKwan University, Korea)</td>
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<td>3. A Design of Open Service Access Gateway for Converged Web Service, Jinhong Yang (HERIT Coporation, Korea), Hyojin Park (ICU, Korea)</td>
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**Chair:** Changmin Park (ETRI, Korea)

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<td>Validation of VoIP System for University Network, Ryosuke Yamamoto, Fumikazu Iseki, Moo Wan Kim (Tokyo University of Information Sciences, Japan)</td>
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**Chair:** Jong Hyup Lee (Inje University, Korea)

| 1. | A Wavelet based Filtered Multi-Tone, Roman M. Vitenberg (Wavetone Technologies Ltd, Israel) |
| 2. | New Soft-decision Decoding Techniques for Adaptive Decision-Feedback Differential Detection, Young-Ki Kim, Won-Suk Choi, Soon-Chan Kwon, Jong-Soo Seo (Yonsei University, Korea) |
| 3. | HTML Document Broadcast Method for Disaster Information Systems, Yuji Ishikawa (NTT DATA Corporation, Japan), Yukio Kosugi (Tokyo Institute of Technology, Japan) |
| 4. | Simulation of a Digital Predistorter for an LDMOS Class AB Amplifier Modelised by Abuelma'Atti Model, Carole Raynal (TDF, France), Jean-Pierre Cances (University of Limoges, France) |
| 5. | 2D/3D Mixed Service in T-DMB System Using Depth Image Based Rendering, KwangHee Jung, Young Kyung Park, Joong Kyu Kim (Sungkyunkwan University, Korea), Hyun Lee, KugJin Yun, NamHo Hur, JinWoong Kim (ETRI, Korea) |
### Session 9E: Multimedia and Internet Systems and Services (V) Room Topaz II

**Chair:** Seung Yun Lee (ETRI, Korea)

1. Adaptive Rate Control in Frame-layer for Real-time H.264/AVC, Myoung-Jin Kim, Kyoung-Hwan Kim, Min-Cheol Hong (Soongsil University, Korea)

2. Retransmission Control in TCP with a Performance Enhancing Proxy, Yuichi Nishida (Okayama Univ, Japan), Wang Hui (Henan Univ. of Science and Technology, Japan), Hiroaki Matsumoto, Tokumi Yokohira, Yukinobu Fukushima (Okayama Univ, Japan)

3. The Relational Properties among Results of Background Subtraction, Changgeol Kim, Jungik Cho, Yillbyung Lee (Yonsei University, Korea)

4. The Searching Scalability of Peer-to-Peer System, Ahmad Tajuddin Samsudin (Telekom Research & Development, Malaysia), Nanna Suryana Herman (Technical University of Malaysia Melaka, Malaysia), Herwig Unger (Fernuniversität Hagen, Germany), Mat Kamil Awang (Telekom Research & Development, Malaysia)

5. Fast Coding Mode Decision for Scalable Video Coding, Sunhee Lim, Jungyoup Yang, Byeungwoo Jeon (Sungkyunkwan University, Korea)

### Session 9F: Information Security Technology (V) Room Topaz III

**Chair:** Chin-Feng Lin (National Taiwan Ocean University, Taiwan)

1. A Chaos-based Visual Encryption Mechanism in Integrated ECG/EEG Medical Signals, Chin-Feng Lin, Cheng-Hsing Chun (National Taiwan Ocean University, Taiwan)

2. Protection Profile for Security Enhancement of Embedded Operating System for Mobile Terminals, Younseo Jeong (ETRI, Korea), Yeowung Yun (KOSYAS, Korea), Boheung Jung, Kiyoung Kim (ETRI, Korea)

3. Text Steganography by Changing Words Spelling, Mohammad Shirali-Shahreza (Sharif University of Technology, Iran)

4. Just-on-Time Data Leakage Protection for Mobile Devices, Bo-heung Chung, Young-ho Kim, Ki-young Kim (ETRI, Korea)

5. Cryptanalysis of Improved One-round Lin-Li’s Tripartite Key Agreement Protocol, Meng-Hui Lim, Sanggon Lee, Hoonjae Lee (Dongseo University, Korea)
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<td>3. Performance Analysis of System Architecture using Wireless Relay Station and Virtual MIMO in WiBro Uplink, Deog-Su Han (Samsung Electronics, Korea), Young-Min Seung (Korea Aerospace University, Korea), Ji-Hoon Lee (Samsung Thales, Korea), Sung-Joon Cho (Korea Aerospace University, Korea)</td>
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<td>5. Isochronous data transfer by enhanced CTS on Wireless 1394 Network, Seong-Hee Park, Seong-Hee Lee, Il-Soon Jang, Sang-Sung Choi (ETRI, Korea)</td>
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# TECHNICAL SESSIONS

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

**Chair:** Jin Seek Choi (Hanyang University, Korea)

1. SCO Control Net for the Process-Driven SCORM Content Model, Hyun-ah Kim, Kwang-hoon Kim, Su-ki Paik (Kyonggi University, Korea)

2. A Conceptual Subspace Clustering Algorithm in e-Learning, Huaiguo Fu, Micheál Ó Foghlú (Waterford Institute of Technology, Ireland)

3. Design and Implementation of Control & Communication Unit for Remote Injection System for u-Hospital, Suyoung Lim, Jungil Heo, Jinsoo Ahn, Wooshik Kim (Sejong University, Korea)

4. Associations between E-remedial Instruction and Learning Outcome on E-learning, Su-Sui Lin (Hsiuping Institute of Technology, Taiwan), Kwo-Ting Fang (National Yunlin University of Science and Technology, Taiwan), Chien-Chung Tu (Transworld Institute of Technology, Taiwan)

5. Extrinsic versus Intrinsic Motivations on Electronic Auction, Chwen-Yea Lin (Tatung Institute of Commerce and Technology, Taiwan), Chien-Chung Tu (Transworld Institute of Technology, Taiwan), Kwoting Fang (National Yunlin University of Science and Technology, Taiwan)

## Session 10D: Optical Networking Technology (I)

**Chair:** Jong Hyup Lee (Inje University, Korea)

1. Survivability Schemes in Optical Cross Add and Drop Multiplexer, Mohammad Syuhaimi Ab-Rahman (Universiti Kebangsaan Malaysia, Malaysia)

2. Segment Protection Algorithm with Load Balancing for Multicasting WDM Mesh Networks, Xingwei Wang (Northeastern University, China), Lei Guo (University of Electronic Science and Technology of China, China), Lan Pang, Juan Du, Feiming Jin (Northeastern University, China)

3. Experimental Study on Economic Long-haul Transmission Link Using standard SMF and All EDFAs, Bo-Hun Choi (Gwangju University, Korea), Chang-Bong Kim (Kongju National University, Korea), Jesoo Ko (ETRI, Korea)

4. Analysis of Successive Interference Cancellation Scheme using OOC code in Optical CDMA Systems, Tawfig Eltaif (Universiti Kebangsaan Malaysia, Malaysia), Hossam M. H. Shalaby (Alexandria University Alexandria, Egypt), Sahbudin Shaari (Universiti Kebangsaan Malaysia, Malaysia), Mohammad M. N. Hamarsheh (Multimedia University, Malaysia)

5. HiperionCAD: a CAD Tool for Design and Optimization of Optical Telecommunication, Marcio Fontana, Fabiano F. Costa, Ugo B. Sangjorgi, Paulo A. D. Bichara, D. Guimaraes, Antonio C. de C. Lima (Federal University of Bahia, Brazil)
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<td>3. Selection of Training Period Based on Two-Window, Zhijie Ban (Inner Mongolia University, China), Zhimin Gu, Yu Jin (Institute of Technology, Beijing, China)</td>
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Chair: Jin Seek Choi (Hanyang University, Korea)

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### Session 11D: Optical Networking Technology (II)
Chair: Muhammad Irfan (Sir Syed University of Engg & Tech, Pakistan)

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<td>1</td>
<td>A New Waveband Switching Routing Algorithm in WDM Optical Networks</td>
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**Chair:** Haw Su-Cheng (F.I.T, Multimedia University, Malaysia)  

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**Pre-registration period is from Nov. 30, 2007 to Dec. 31, 2007.**

(But the pre-registration of general participants, who are not main authors or speakers of ICACT2008, is allowed by Jan. 2, 2008.)

- In case of payment with credit card or wire-transfer, the remitter must be identified exactly by the name of author or attendee.

- Otherwise, you should additionally inform the remitter's name and wire-transfer confirmation document by email to operation@icact.org.

- You should request the notarized invitation letter at the same process of pre-registration by Dec. 31, 2007 in advance.

- Because it may take a long time to receive by postal mail, we should prepare the notarized documents previously.

- Please take notice that US $50, which is additional fee for notarization and relevant postal service, will be charged.

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Member * : Active IEEE member (Must show a valid IEEE ID)
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Students fee applies to students who are enrolled in Undergraduate, Master, and Graduate programs.
Post-Doctorates and beyond must register as “General Participants”
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Accommodation Fees

- Participants who completed registration and approval will be able to make reservations at a special conference rate.
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    (Standard number of person: 2, normal room rate: 240,000~280,000 Korea Won)
  - **Condominium (66 square meters)**: 90,000 Korea Won/ about 90 USD
    (Standard number of person: 4, normal room rate: 240,000 Korea Won)
  - **Condominium (99 square meters)**: 110,000 Korea Won/ about 110 USD
    (Standard number of person: 5, normal room rate: 360,000 Korea Won)

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  (Exchange Rate: About 1,000 Korea Won to the US dollar)

- **To foreign participants, special conference rates are applicable for Feb. 17-21. 2008**
  (To native participants, reduced room rates are applicable for Feb. 17-20. 2008)

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Route 1

**Incheon Airport ↔ Seoul (Korea City Air Terminal, Samseong-dong)**

← ( transfer ) → Seoul (Glass Tower, Samseong-dong) ↔ Phoenix Park

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<td><strong>First Bus</strong></td>
</tr>
<tr>
<td>Incheon</td>
</tr>
<tr>
<td>05:20</td>
</tr>
</tbody>
</table>

**Departure Bus Stop:** 4A, 10B  
**Travel Time:** 66 ~ 80 minutes  
**Departure Time Interval:** Every 10 ~ 15 min.  
**One-way Fare:** 14,000 won  
(Round-trip fare: 24,000 won)

<table>
<thead>
<tr>
<th>Gimpo Airport ↔ Seoul (Korea City Air Terminal, Samseong-dong)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Bus</strong></td>
</tr>
<tr>
<td>Gimpo</td>
</tr>
<tr>
<td>07:35</td>
</tr>
</tbody>
</table>

**Travel Time:** 45 ~ 55 minutes  
**Departure Time Interval:** Every 10 ~ 20 min.  
**One-way Fare:** 6,500 won

(TRANSFER) It takes about 10 minutes on foot between Korea City Air Terminal and Glass Tower.

- EXIT of KCAT Arrival Platform(2F)
- City Air Terminal Information Desk
- Escalator(2F→B1) at Information Desk

When you get off the bus and pass the auto-door exit, you will find a KCAT Information Desk where you can get some information. You can come down to B1 floor connected to the COEX MALL by using the escalator just at the left side of the KCAT Information desk.

When you come down from 2nd Floor to B1 floor of KCAT (Korea City Air Terminal), you can move to the Phoenix Park Information Center (B1 floor) in Glass Tower Building through the underground path of COEX MALL and SAMSEONG SUBWAY STATION.

If you want to visit the Phoenix Park Information Center, it is convenient to enter the Glass Tower Building (B1 floor) directly through the underground gate between EXIT 3 and EXIT 4.

Otherwise, if you’d like to come to the Bus Stop for Phoenix Park directly, you can pass the EXIT 3 (escalator) or EXIT 4 (stair) and go to the Bus Stop for Phoenix Park.
Map between **City Air Terminal** and **Glass Tower Bus Stop** for Phoenix Park around Samseong Subway Station.
## Transportation (by Bus)

### Seoul (Glass Tower, Samseong-dong) → Phoenix Park

<table>
<thead>
<tr>
<th>Departure Place</th>
<th>Departure Time</th>
<th>Remark</th>
</tr>
</thead>
</table>
| Glass Tower (Samseong Subway Station: Exit 3) | **(SUN ~ FRI)** 06:20, 09:10, 10:00, 13:00, 16:00  
** (SAT)** 06:20, 09:10, 10:00, 13:00, 14:00, 16:00 | One-way Fare:  
Adult: 14,000 won  
Children: 13,000 won  
Round-trip Fare:  
Adult: 26,000 won  
Children: 24,000 won |

- ● Phoenix Park Hotel (ICACT 2007 Conference Site)
- ● Shuttle Bus Terminal at Phoenix Park

### Phoenix Park → Seoul (Glass Tower, Samsung-dong)

<table>
<thead>
<tr>
<th>Departure Place</th>
<th>Departure Time</th>
<th>Remark</th>
</tr>
</thead>
</table>
| Phoenix Park (Ski House Parking Lot) | **(FRI ~ WED)** 04:30, 09:30, 13:00, 15:00, 17:00, 19:00, 21:30  
**(THU)** 09:30, 13:00, 15:00, 17:00, 19:00, 21:30 | Travel Time: 3 hours |
**Route 2**

**Incheon Airport ↔ (Munmak) ↔ Wonju (Cross-Country Bus Termial)**

← (transfer) → **Wonju** (Bus Stop) ↔ **Phoenix Park**

- Around the outdoor Ticket Counter
- Crosswalk to the Bus Stop for Wonju
- The sign for Cross-country Bus Stop
- Bus Station bound for several provinces
- Bus Stop for Wonju

<table>
<thead>
<tr>
<th>Incheon</th>
<th>Munmak</th>
<th>Wonju</th>
<th>Wonju</th>
<th>Munmak</th>
<th>Incheon</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:10</td>
<td>11:35</td>
<td>11:50</td>
<td>06:00</td>
<td>06:15</td>
<td>08:40</td>
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<td>10:10</td>
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<td>21:10</td>
<td>23:35</td>
<td>23:50</td>
<td>18:00</td>
<td>18:15</td>
<td>20:40</td>
</tr>
</tbody>
</table>

**Remark**

- Departure Bus Stop : **9C**
- Travel Time : 2hr 45min
- (It may take more time by traffic jam according to the bad weather conditions etc.)
- Departure Time Interval : Every 1 hour
- One-way fare : 12,700won
- TRANSPORTATIONS (by Bus) -

- Bus from Incheon arrived at Wonju Terminal

- Front-side of Wonju Cross-country Bus Terminal

- Map between Wonju Cross-country Bus Terminal and Bus Stop for Phoenix Park around underpass
(TRANSFER) It takes about 3 minutes on foot between **Wonju Cross-country Bus Terminal** and **Bus Stop for Phoenix Park**.

<table>
<thead>
<tr>
<th>Period</th>
<th>Wonju → Phoenix Park</th>
<th>Phoenix Park → Wonju</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>~ FEB.17</td>
<td>07:58</td>
<td>09:10</td>
<td><strong>Travel Time : 45 minutes</strong>&lt;br&gt;<strong>Free Shuttle : no charge</strong></td>
</tr>
<tr>
<td>~ FEB.17</td>
<td>08:28</td>
<td>09:40</td>
<td>Frequently, departure time of the free shuttle bus for Phoenix Park might be earlier or later than 10 minutes because of the several unavoidable reasons.</td>
</tr>
<tr>
<td></td>
<td>11:28</td>
<td>12:40</td>
<td>Thus, you must be at the bus stop at least 15 minutes earlier than the departure time as shown on the left side of this table.</td>
</tr>
<tr>
<td></td>
<td>11:58</td>
<td>13:20</td>
<td>This bus stop is not dedicated to the free shuttle bus for Phoenix Park, but it is shared by many kinds of other buses.</td>
</tr>
<tr>
<td></td>
<td>15:48</td>
<td>17:00</td>
<td>In order to get on the bus exactly, it might be useful to show the following Korean Sentence.</td>
</tr>
<tr>
<td></td>
<td>17:38</td>
<td>22:30</td>
<td><strong>휘닉스파크(Phoenix Park)로 가는 무료셔틀버스를 태워주세요.</strong>&lt;br&gt;(Please help me to take the free shuttle bus for Phoenix Park.)</td>
</tr>
<tr>
<td>FEB.18</td>
<td>07:58</td>
<td>09:10</td>
<td></td>
</tr>
<tr>
<td>~</td>
<td>11:28</td>
<td>12:40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17:38</td>
<td>22:30</td>
<td></td>
</tr>
</tbody>
</table>
Route 3
Incheon Airport ↔ (Munmak) ↔ Wonju (transfer at Cross-Country Bus Terminal)
 ↔ Jangpyeong (transfer at Bus Stop for Phoenix park) ↔ Phoenix park

- Bus Ticket Counter for Jangpyeong (No. 9)
- Cross-country Bus for Jangpyeong (Below No. 4)

(1st transfer)

<table>
<thead>
<tr>
<th>Wonju (Bus Terminal)</th>
<th>Jangpyeong (Bus Terminal)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wonju</strong></td>
<td><strong>Jangpyeong</strong></td>
<td><strong>Wonju</strong></td>
</tr>
<tr>
<td>07:00</td>
<td>07:40</td>
<td>07:45</td>
</tr>
<tr>
<td>07:50</td>
<td>07:50</td>
<td>08:00</td>
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<td>08:00</td>
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<tr>
<td>18:55</td>
<td>20:30</td>
<td>18:15</td>
</tr>
</tbody>
</table>

**Travel Time**: 45 minutes

**One-way fare**: 3,600 won

Because Jangpyeong is not the final bus stop, you’d better request the bus driver to let you get off at Jangpyeong Bus Terminal.

In this case, you can ask for help by showing the following Korean sentence.

장평(장주) 버스정류장에 내려주세요.
(Please let me get off at Jangpyeong Bus Terminal.)
## TRANSPORTATION (by Bus)

- Jangpyeong Bus Terminal Building
- Jangpyeong Bus Transfer Terminal
- Free Shuttle Bus for Phoenix Park

### Free Shuttle for Phoenix Park
(2nd transfer) Free Shuttle for Phoenix Park departs at the telephone booth of Jangpyeong Bus Terminal. (You can find the bus stop easily and it takes less than a minute on foot.)

### Jangpyeong (Bus Terminal) ↔ Phoenix Park

<table>
<thead>
<tr>
<th>Terminal Period</th>
<th>Jangpyeong → Phoenix Park</th>
<th>Phoenix Park → Jangpyeong</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jangpyeong (Bus Terminal)</strong></td>
<td><strong>~ Feb.17</strong></td>
<td><strong>~ Feb.17</strong></td>
<td><strong>~ Feb.18</strong></td>
</tr>
<tr>
<td><strong>MON ~ THU</strong></td>
<td>09:00 17:00</td>
<td>09:00 17:00</td>
<td>08:30 16:30 08:30</td>
</tr>
<tr>
<td></td>
<td>10:00 18:00</td>
<td>11:00</td>
<td>09:30 17:30 10:30</td>
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<tr>
<td></td>
<td>11:00 19:00</td>
<td>13:00</td>
<td>10:30 18:30 12:30</td>
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<td>12:00 20:00</td>
<td>15:00</td>
<td>11:30 19:30 14:30</td>
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<td>13:00 21:00</td>
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<td>20:00</td>
<td>13:30 22:30 18:30</td>
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<td>14:30</td>
<td>20:30</td>
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<tr>
<td></td>
<td>16:00</td>
<td>15:30</td>
<td>22:30</td>
</tr>
<tr>
<td><strong>FRI ~ SUN</strong></td>
<td>09:00 13:00 17:00 21:00</td>
<td>08:30 12:30 16:30 20:30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10:00 14:00 18:00</td>
<td>09:30 13:30 17:30 22:30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11:00 15:00 19:00</td>
<td>10:30 14:30 18:30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12:00 16:00 20:00</td>
<td>11:30 15:30 19:30</td>
<td></td>
</tr>
</tbody>
</table>

- Travel Time: 20 minutes
- Free Shuttle: no charge

For other transportation-relevant information, please look at the URL as follows

- [http://www.phoenixpark.co.kr/english/default.html](http://www.phoenixpark.co.kr/english/default.html)
1. VOLTAGE

In Korea, 220 Volt and 60 Herz outlets with Type C or Type F are most commonly used now.

![Image of electrical outlets]

2. WEATHER

Korea has four distinct seasons - spring, summer, fall and winter. Skiing season starts from late November and lasts to early March. Especially the inland area of Gangwon province is most snowy, windy and coldest in winter season. Therefore you must prepare and wear the winter clothes for the cold weather. For your correct weather information, please refer to the following URL of Korea Weather Forecasting Authority.

http://web.kma.go.kr/eng/wea/wea_02_01.jsp?code1=11D10301

3. 1330 KOREA TRAVEL PHONE

For English assistance or travel Information, just dial 1330, and a bilingual operator will offer you detailed tourism information.

http://english.tour2korea.com/01TripPlanner/TouristInfo/1330.asp?kosm=m1_7&konum=2

4. Other Useful Information about Korea

Please refer to the following URL of Incheon International Airport, Korea Tourism Organization etc.

http://www.airport.or.kr/eng/airport/ (Incheon International/domestic Airport)

http://gimpo.airport.co.kr/eng/index.jsp (Gimpo International/domestic Airport)

http://www.tour2korea.com/ (Korea Tourism Organization)

http://eng.gwd.go.kr/main.html (Information about Gangwon-Do)

http://en.yes-pc.net/ (Information about PyeongChang area)
Supported by

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http://www.icact.org/