

# **UbiCNS 2005 Program**

**The first Korea/Japan Joint Workshop on Ubiquitous  
Computing & Networking Systems 2005**

**Date : June 9-10**

**Location : Jeju, Korea**

## 1st Day (June 9)

|                  | <b>Thursday(06/09/05)</b>   |  | <b>Friday(06/10/05)</b>   |  |
|------------------|---|--|---|--|
| 08:00 ~<br>09:00 | <b>Registration</b>   |  | <b>Registration</b>   |  |
| 09:00 ~<br>10:20 | Paper Session 1<br><b>Community<br/>Computing<br/>Technology 1</b>  | <b>Poster<br/>preparation</b>                                      | Paper Session 5<br><b>Community<br/>Computing<br/>Technology 2</b>  | Poster Session 4<br><b>Context<br/>Awareness</b> |
| 10:20 ~<br>10:40 | <b>Coffee break</b>   | Poster Session 1<br><b>Community<br/>Computing<br/>Technology</b>  | <b>Coffee break</b>   |  |
| 10:40 ~<br>12:00 | Paper Session 2<br><b>uT Networks 1</b>                             |  |   | Paper Session 6<br><b>uT Networks 2</b>          |
| 12:00 ~<br>13:00 | <b>Lunch</b>  |  | <b>Lunch</b>  |  |
| 13:00 ~<br>14:20 | Paper Session 3<br><b>Community<br/>Computing<br/>Application 1</b> | Poster Session 2<br><b>Community<br/>Computing<br/>Networks 1</b>  | Paper Session 7<br><b>Community<br/>Computing<br/>Application 2</b> | Poster Session 6<br><b>uT Technology</b>         |
| 14:20 ~<br>14:40 | <b>Coffee break</b>   |  | <b>Coffee break</b>   |  |
| 14:40 ~<br>16:00 | Paper Session 4<br><b>Context<br/>Awareness</b>                     | Poster Session 3<br><b>Community<br/>Computing<br/>Application</b> | Paper Session 8<br><b>uT Technology 1</b>                           | Poster<br><b>Arrangement</b>                     |
| 16:00 ~<br>16:20 | <b>Coffee break</b>   |  | <b>Coffee break</b>   |  |
| 16:20 ~<br>17:00 | <b>Invitation Lecture</b>   |  | Paper Session 9<br><b>uT Technology 2</b>                           |  |
| 17:00 ~<br>18:00 | <b>Opening Ceremony</b>   |  |   |  |
| 18:00 ~          | <b>Banquet &amp; Concert</b>  |  |   |  |

**08:00 ~ 09:00 Registration**

**09:00 ~ 10:20 Paper Session 1 (Community Computing Technology 1)**

- NAMA-US: A Multi-Agent Community Computing Approach to Ad hoc Need Identification and Group Formation of Nomadic Community  
*Ohbyung Kwon, Keunho Choi (Kyunghee University)*
- Device Collaboration for Ubiquitous Computing: Scenarios and Challenges  
*C Narayanaswami, MT Raghunath, MC Rosu (IBM T.J. Watson Research Center)*  
*HK Jang, SE Jin, SY Kim, MC Lee, S Lee, YS Paik (IBM Ubiquitous Computing Lab)*
- Autonomous Configuration of Smart Nodes in Ubiquitous Environment  
*Kil Jeon, Seong-Ju Chang and Min-Soo Hahn (Information and Communication University)*
- Backup and Restore Method for Ubiquitous Devices  
*Masahiro Motobayashi (Hitachi, Ltd.)*

**10:20 ~ 10:40 Coffee break**

**10:40 ~ 12:00 Paper Session 2 (uT Networks 1)**

- A Synchronization Technique for OFDM Systems with Smart Antenna  
*Kyu In Lee, Dong Han Kim (Chung-Ang University), Jae Young Ahn (ETRI), and Yong Soo Cho (Chung-Ang University)*
- Adaptive Transmission Techniques for Ubiquitous Personal Area Networks with Multiple Antennas  
*Myung-Sun Baek, So-Young Yeo, Mi-Jeong Kim, Young-Hwan You, and Hyoung-Kyu Song (Sejong University)*
- Efficient Packet Forwarding Strategies Via Pricing In Wireless Ad Hoc Network  
*Mingmei Li (The Graduate University For Advanced Studies), Eiji Kamioka, and Shigeki Yamada (National Institute of Informatics)*
- An unbalanced and distributed clustering algorithm – UBDC  
*EunHyoung Chu, Tsunenori Mine, Makoto Anamiya (Kyushu University)*

**10:20 ~ 12:00 Poster Session 1 (Community Computing Technology)**

- 1) SSR (Smart Sleep Recognizer) : Making Decision Based on Probability of User's Intension  
*Dong-Wook Lee, Soung-Hun You, We-Duke Cho, and Jai-Hoon Kim (Ajou University)*
- 2) Implementation of PLC Home Network System based on Embedded Linux  
*Kyung-Hwan Cha, Yu-Seok Hyun, Jong-Jin Yoon (Dongseo University)*

- 3) An Inter-working Processing System for heterogeneous hierarchical wireless sensor  
*Sea-Young Ahn (Korea University), Kang-Ho Woon, Seong-Dong Kim (Korea Electronics Technology Institute), We-Duke Cho (Center of Excellence in Ubiquitous Computing & Network-CUCN), and Sun-Shin An (Korea University)*
- 4) A Zone Networking Architecture based on Zone Masters for Mobile Ad-Hoc Wireless Networks  
*Namhi Kang, Ilkyun Park and Younghan Kim (Soongsil University)*
- 5) Ontology-based High Level Event Subscription Method for RFID Middleware  
*Jong-Yun Jung, Ki-Yeol Ryu, Jung-Tae Lee (Ajou University)*
- 6) A Middleware Architecture for Community Computing with Intelligent Agents  
*Seungwok Han and Hee Yong Youn (Sungkyunkwan University)*
- 7) Autonomic Distributed Adaptive Middleware (ADAM)  
*Kwang-Hoon Choi, Jai-Hoon Kim (Ajou University), and Young-Bae Ko, Hee Yong Youn (Sungkyunkwan University), We-Duke Cho (Center of Excellence in Ubiquitous Computing & Network-CUCN)*
- 8) Group Reconfiguration for Community Computing  
*Jae-Hee Yoon, Jai-Hoon Kim (Ajou University)*
- 9) GreenWalker : connecting biotope field information with three layer image data format using GPS of F505i  
*YoungJoo LEE, Ruo Ando (Keio University)*
- 10) Modeling and Simulation of Many-to-Many Overlay Multicast on Ubiquitous Server Networks  
*Youngjun Kim, Kwanghoon Kim, Jeonghoon Mo and Moonsoo Kang (Information and Communications University)*

**12:00 ~ 13:00 Lunch**

**13:00 ~ 14:20 Paper Session 3 (Community Computing Application 1)**

- A Rule-based System for Sense-and-Respond Telematics Applications  
*SangWoo Lee (IBM Ubiquitous Computing Laboratory), Jonathan Munson (IBM T.J. Watson Research Center), DaeRyung Lee (IBM Ubiquitous Computing Laboratory), Gerry Thompson (IBM T.J. Watson Research Center), JungSun Park (IBM Ubiquitous Computing Laboratory)*
- COCOLAB: Supporting Human Life in Ubiquitous Environment by Community Computing  
*Sounghun You, Jaedong Choi, Gil Heo, Dongsoon Choi, Heejung Park, Hyeonsook Kim, Weduke Cho (Center of Excellence for Ubiquitous Computing & Networking)*

- Experiences on Building Applications, Services, and System Infrastructures for Ubiquitous Computing

*Eiji Tokunaga, Kaori Fujinami, Tatsuo Nakajima (Waseda University)*

- A Study on the Energy Consumption of Cluster-based Multi-Hop Wireless Network

*Yuki Miyagoshi, Shigeru Teruhi, Shuichi Yoshino, Masashi Shimizu (NTT Inc.)*

#### **14:20 ~ 14:40 Coffee break**

#### **13:00 ~ 14:40 Poster Session 2 (Community Computing Networks 1)**

- 1) Enhancing Routing Protocol with Memory in Mobile Ad Hoc Networks

*Yongjun Dai, Changhee Joo, and Saewoong Bahk (Seoul National University)*

- 2) A Study on Self-organizing Wireless Ad-hoc network for High-rate Multimedia communication

*Jin-hee Park, Jin-woong Cho (Korea Electronics Technology Institute), We-duke Cho (Center of Excellence for Ubiquitous Computing & Networking)*

- 3) Dynamic Acknowledgement for the Energy Efficiency of the High-rate Wireless PAN

*Byungjoo Lee, Seung Hyong Rhee, WoongChul Choi, Kwangsue Chung (Kwangju University), Jang-Yeon Lee, Jin-Woong cho (Korea Electronics Technology Institute) and We-Duke Cho (Waseda University)*

- 4) An Efficient Routing Protocol for the Hybrid Wireless Networks

*Seyoung Lim and Myungsik Yoo (Soongsil University)*

- 5) A Robust Authentication Mechanism Allowing Dynamic Position of Sensors for Wireless Sensor Network

*Miyoun Yoon, KwangKyum Lee (Soongsil University), Kyoung-hwa Do (Ministry of Government Administration), Yongtae Shin, Moonseog Jun (Soongsil University)*

- 6) A Simple Service Discovery and Delivery Protocol for Ubiquitous Environments

*Byong-In Lim, Seung-Hyun Lee, Seung-Jae Song and Dong-Ryeol Shin (Sungkyunkwan University)*

- 7) A Wireless Body Sensor Network Platform for Ubiquitous Health Care

*Young-Dong Lee, Do-Un Jeong and Wan-Young Chung (Dongseo University)*

- 8) Dynamic Wireless-path Selection Control

*Shigeru Ueda, Hisao Kumai (Sharp Corporation)*

- 9) Flexible Network System for Ubiquitous Computing Using Fabric Material

*Masashi Toda (Future University-Hakodate), Junichi Akita (Kanazawa University), Kunio Iwata (Future University-Hakodate)*

#### **14:40 ~ 16:00 Paper Session 4 (Context Awareness)**

- Unified Context Describing User-Centric Situation: Who, Where, When, What, How and Why  
*Seiie Jang and Woontack Woo (GIST.)*
- Context aware service control based on personal history  
*Eiji Kobayashi (NTT Corporation), Masanori Ogawara (NTT Comware Corporation), Ikuo Yoda (NTT Corporation)*
- Design of a Ubiquitous Learning Support System based on Behavior Analysis  
*Zixue Cheng et al, Shengguo Sun, Mizuo Kansen, Tongjun huang (The University of Aizu)*
- Proposal of Ambient Communication using Context Awareness Technology  
*Kazunari Takahashi, Daisuke Yamada, Tadaaki Arimura, Tatsuta Nakamura, Shigetoshi Yokoyama (NTT DATA CORPORATION)*

#### **16:00 ~ 16:20 Coffee break**

#### **14:40 ~ 16:20 Poster Session 3 (Community Computing Application)**

- 1) Attentive Probe: Design of 3D Geometry-based Information Visualization Tool for ActiveHome  
*Hyoungjin Kim, Kyoung Shin Park and Minsoo Hahn (Information & Communications University)*
- 2) Effective Information Gathering of Predictable Agent System over Wireless Sensor Networks  
*Young-Min Ji (Korea University), Kang-Ho Woon, Sung-Dong Kim (Korea Electronics Technology Institute), Dong-Hyun Chae and Sun-Shin An (Korea University)*
- 3) Development of a Ubiquitous Emergency Healthcare System by Implementing Real-time Connectivity between a Cardiac Patient and a Medical Doctor  
*HyunSoon Ahn, SeungHan Lee, SangKyung Lee (ISU-UBCare Co., Ltd.)*
- 4) Introduction of 'ubiHome' Testbed  
*Seiie Jang, Choonsung Shin, Yoosoo Oh, and Woontack Woo (GIST)*
- 5) Half-mirror system based on face-gesture Interface in Ubiquitous computing environment  
*Young-Joon Kwon, Dae-Jin Kim and Zeungnam Bien (KAIST)*
- 6) Developing the Design Guideline to Evaluate Quality of Life in Smart Home  
*Ilju Lee and Jinwon Choi (Yonsei University)*
- 7) Physiological signal sensing on acupoints for emotion recognition  
*Ahyoung Choi and Woontack Woo (GIST)*
- 8) Invisible DNA Barcode System for Ubiquitous Application  
*Jin-Ho Choy, Sang-Tae Kim, Sung-Su Park (Ewha Womans University)*

9) The 3D Shape Information Tags for Recognizing Objects in Real World

*Yutaka Yanagisawa, Kaoru Hiramatsu, Takashi Hattori, Tatsumi Yamada, Tsuyoshi Okadome (NTT Corporation)*

**16:20 ~ 17:00 Invitation Lecture**

**17:00 ~ 18:00 Opening Ceremony**

**18:00 ~ Banquet & Concert**

## 2nd Day (June 10)

### 09:00 ~ 10:20 Paper Session 5 (Community Computing Technology 2)

- A visual framework for monitoring and controlling distributed service components  
*Takahiro Kimura, Haruaki Tamada, Hiroshi Igaki, Masahide Nakamura, Ken-ichi Matsumoto (Nara Institute of Science and Technology)*
- Ambient Browser: Web Browser for Daily Use  
*Satoshi nakamura, Mitsuru minakuchi (National Institute of Information and Communications Technology), Katsumi tanaka (Kyoto University)*
- A framework for presentation and use of everyday interaction histories  
*Yoshinari Shirai, Kumiyo Nakakoji (NTT Corporation, University of Tokyo), Yasuhiro Yamamoto (University of Tokyo), Elisa Giaccardi (University of Colorado)*
- Document Based Context Aware Computing  
*Kazuki Yokoi, Tsubasa Unemura (Ritsumeikan University), Shigeo Fujiwara (Advanced Solution R&D Center) , Nobuhiko Nishio (Ritsumeikan University)*

### 10:20 ~ 10:40 Coffee break

### 09:00 ~ 10:40 Poster Session 4 (Context Awareness)

- 1) Situation-Aware based Digital Appliance Control System for Smart Home  
*Hee-Jung Park, Gil Heo, We-Duke Cho (Ajou University)*
- 2) Support of Context-awareness in Ubiquitous Networks using Smart Packet  
*Jaeduck Choi, Hyosun Roh, Souhwan Jung, Younghan Kim (Soongsil University)*
- 3) User Profile Management for Context-aware Applications in ubiHome  
*Youngjung Suh and Woontack Woo (GIST)*
- 4) ubi-UCAM 2.0: A Unified Context-aware Application Model for Ubiquitous Computing Environments  
*Yoosoo Oh, Choonsung Shin, Seije Jang and Woontack Woo (GIST)*
- 5) A Context Model based on Ontology in Ubiquitous Computing Environment  
*Kim Eunhoe and Choi Jaeyoung (Soongsil University)*
- 6) Vr-UCAM2.0: A Unified Context-aware Application Model for Virtual Environments  
*Sejin Oh, Youngho Lee and Woontack Woo (GIST)*
- 7) A Novel Approach for Conflict Resolution in Multi-Contexts Situation  
*Keonsoo Lee, Minkoo Kim (Ajou University)*
- 8) Conflict Resolution based on User Preference and Service Profile for Context-aware Media Services

*Choonsung Shin and Woontack Woo (GIST)*

9) MAGIC-Surfaces: Prototyping Location-aware Smart Building Materials

*Youhei Nishizawa, Masateru Minami (Shibaura Institute of Technology), Hiroyuki Morikawa, Tomonori Aoyama (The University of Tokyo)*

10) Automatic configuration of sensor locations by tracking human movement

*Jin Hoshino, Kenichi Yamazaki (NTT DoCoMo, Inc.)*

11) Context based AR Interaction Table using Tangible Objects

*Youngmin Park and Woontack Woo (GIST)*

**10:40 ~ 12:00 Paper Session 6 (uT Networks 2)**

- RFID Privacy Enhanced Protocol for Library Operation

*Gembu morohashi, Shingo kinoshita, Fumitaka hoshino (NTT Corporation)*

- Modeling and evaluation of trace-ability in ubiquitous networking services

*Masafumi Kato (Fujitsu Limited), Tsuguo Kato, Takafumi Chujo (Fujitsu Laboratories)*

- Ubiquitous Networking System for Seamless Communications across Heterogeneous Networks and Devices

*Masugi Inoue, Mikio Hasegawa (National Institute of Information and Communications Technology-NICT), Hiroyuki Morikawa (The University of Tokyo, National Institute of Information and Communications Technology-NICT)*

- A Neighbor Discovery Method for Wireless Sensor Networks

*Shigeru teruhi, Shuichi yoshino, Masashi shimizu (NTT Corporation)*

**10:40 ~ 12:00 Poster Session 5 (Community Computing Networks 2)**

1) A Study of Effective Interface between e-Trade platform and Information Systems of Trade Agencies

*Seokyoung Back, Yongjin Park (Hanyang University)*

2) A New Packet Scheduling Scheme for Improving Fairness in Wireless Sensor Network

*Byunghun Song (Korea Electronics Technology Institute), Hyung Su Lee (Korea Electronics Technology Institute, Sungkyunkwan University), Hee Yong Youn (Sungkyunkwan University)*

3) U1-chip: A simple wireless communication module for local service discovery

*Yee-Loo Foo, Yuichi Taguchi, Shunsuke Saruwatari (The University of Tokyo), Hiroyuki Morikawa (The University of Tokyo, National Institute of Information and Communications Technology-NICT), Tomonori Aoyama (The University of Tokyo), Mikio Hasegawa, Masugi Inoue (National Institute of Information and Communications Technology-NICT)*

4) Impact of Clock Skewness on Synchronized Sensor Clusters Operating with IEEE 802.15.4

## MAC

*Kenji Leibnitz, Naoki Wakamiya, Masayuki Murata (Osaka University)*

### 5) Weighting strategy in state space problem for the DS-CDMA code acquisition

*Ruo Ando, Yoshiyasu Takefuji (Keio University)*

### 6) u-Con: A Smart Space Remote Control System

*Hidetoshi Tokuda, Gen Takahashi, Masaya Kadota, Masayuki Iwai, Hideyuki Tokuda (Keio University)*

### 7) AIR: Ambient/Abstract/Atmosphere-like Information Representator

*Atsushi Kanda, Yoshihiro Kawahara, Hiroyuki Morikawa, Tomonori Aoyama (The University of Tokyo)*

### 8) Location Error Compensation for a Virtual World Application Using Mobile Phones with GPS

*Hiroyuki Tarumi (Kagawa University, SpaceTag, Inc), Takatoshi Hori (Kagawa University)*

### 9) Autonomic Network Management for u-Zone Network

*Shafique Ahmad Chaudhry, Ali Hammad Akbar, Faysal Adeem Siddiqui, and Won-Sik Yoon (Ajou University)*

## 12:00 ~ 13:00 Lunch

## 13:00 ~ 14:20 Paper Session 7 (Community Computing Application 2)

- Information-offering method in personal communication

*Miho Nakamura , Eri Sano , Yukihiro Usui , Osamu Mizuno (NTT Information Sharing Platform Laboratories)*

- CatchMe: Multi-Camera Person Tracking System for Indoor Public Space

*Akinori Komaki, Kohtake Naohiko, Kazunori Takashio, Hideyuki Tokuda (Keio University)*

- Distributed and Cooperative Service Platform "UKARI-Kernel Plan for Networked Appliances

*Tatsuya Yamazaki (National Institute of Information and Communications Technology-NICT), Atsushi Sawada(National Institute of Information and Communications Technology-NICT, Kyoto University), Toshikazu Nishimura (National Institute of Information and Communications Technology-NICT, Ritsumeikan University), Masanori Takaoka (NEC Communication Systems), Yosuke Tajika (Toshiba Corporation), Michihiko Minoh (National Institute of Information and Communications Technology-NICT, Kyoto University)*

- UGI: A Unified Interaction Gesture Interface for Home Computing Environment

*Shunsaku Yamazaki, Hideyuki Tokuda (Keio University)*

**14:20 ~ 14:40 Coffee break**

**13:00 ~ 14:40 Poster Session 6 (uT Technology)**

- 1) The Effect of Privacy Policy to the Acceptance of Ubiquitous Computing Services  
*Ohbyung Kwon, Ji-hoon Kim (Kyunghee University)*
- 2) Privacy-aware Service Mechanism for Ubiquitous Computing Environment  
*Song-hwa Chae, Gunhee Lee, Manpyo Hong (Ajou University)*
- 3) wear-UCAM: A Toolkit for Wearable Computing  
*Dongpyo Hong and Woontack Woo (GIST)*
- 4) Design of RFID Antennas in UHF Band  
*Hosung Choo, Jaeyul Choo (Hongik University), Ikmo Park (Ajou University), Yisok Oh (Hongik University), Youngkil Kim (Ajou University)*
- 5) Toward an open telematics infrastructure  
*Wonil Lee, YoungJu Tak, Wanhee Byun, YoungWoo Pae (IBM Ubiquitous Computing Lab.)*
- 6) Developing Design Requirements for Ubiquitous Technology-based Products and Services for the Smart Office  
*Mi-Yun Kim, Jin-Won Choi (Yonsei University)*
- 7) The Development of 13.56MHz RFID Reader Using Embedded System and Wireless LAN  
*Gi-Hyun Hwang, Won-Tae Jang, and Kyoung-Seek Lim (Dongseoh University)*
- 8) RFID-based Middleware System for Providing Ubiquitous Information Service  
*Sewon Oh, Youngil Kim, Yongjoon Lee (Electronics and Telecommunications Research Institute)*
- 9) Design of a Wearable Micro Info-Broadcasting System  
*Kenji Sasaki, Ushio Inoue, and Yoshito Tobe (Tokyo Denki University)*
- 10) Profile Blog : Blog-based Life Log Viewer Capable of Integrating Dispersed User Profiles  
*Masaru Honjo, Daisuke Morikawa (KDDI Corporation), Akira Yamaguchi (ATR), Masayoshi Ohashi (KDDI Corporation)*
- 11) An embedded intelligence model: Issues in the real-world empowered organizational computing  
*Toshihiko Yamakami ( ACCESS)*

**14:40 ~ 16:00 Paper Session 8 (uT Technology)**

- WindowActive: An Interactive House Window On Demand  
*Jae-Seon Lee, Kyoung-Shin Park, Min-Soo Hahn (Information and Communication University.)*

- Indoor Orientation tracking method using ubiTrack  
*Woojin Jung and Woontack Woo (GIST)*
- Proposal of Secure Easy Remote Access Technology: Softwire  
*Nobuyuki Enomoto, Hideo Yoshimi, Youichi Hidaka, Kazuo Takagi, Atsushi IWATA (NEC Corporation)*
- Double-Decker RFID Tags -- Basic Structures and Applications  
*Shin-ichi Minato, Masaharu Yoshioka (Hokkaido University)*

**16:00 ~ 16:20 Coffee break**

**16:20 ~ 17:40 Paper Session 9 (uT Technology)**

- Design and Application of GIS/LBS Technology for Developing Ubiquitous Environment  
*Sang-Hoon Lee, Tae-Hoon Kim and Jee-Hee Koo (Korea Institute of Construction Technology)*
- Case with ubiquitous house designed from aspect of interior  
*Hiroyuki Yoshida (Daiwahouse Industry Co. LTD R&D division), Nobuhiko Nishio (Ritsumeikan University)*
- Extended FACE Routing Protocol for Mobile Ad-Hoc Networks Author(s), Hideaki TAKAHASHI and Hiroaki HIGAKI  
*Hideaki Takahashi, Hiroaki Higaki (Tokyo Denki University)*
- Development The UHF RFID Reader Platform Based on RISC Processor  
*Jong-Ho Kim (Digitalsys), We-Duke Cho (Center of Excellence in Ubiquitous Computing & Networking), Ho-Sung Choo (Hongik University) and Young-Kil Kim (Ajou University)*