



MobiQuitous 2005

The Second Annual International Conference on Mobile
and Ubiquitous Systems: Networking and Services
Sponsored by

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www.mobiquitous.org

July 17-21, 2005

University of California, San Diego
La Jolla, California



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Second Annual International Conference on Mobile and
July 17-21, 2005 Ubiquitous Systems: Networking and Services
University of California, San Diego, La Jolla, CA <http://www.mobiquitous.org>

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Keynote Speakers

July 18, 2005

Dr. Robert Hecht-Nielsen

University of California, San Diego, Calif 2

July 19, 2005

Dr. Martin Cooper

Executive Chairman and Co-founder, ArrayComm Inc

Panel Discussion -1

Security, cooperation and safety in mobile ubiquitous networks

Lead Panelist: Dr. Ahmed Helmy,
University of Southern California, LA

Panel Discussion -2

Challenges – new areas of research

Dr. Tatsuya Suda, Univ. of California, Irvine

Dr. Jennifer Hou, Univ. of Illinois

Dr. Sharad Mehrotra, Univ. of California, Irvine

Dr. Mario Gerla, Univ of California, Los Angeles

Technical Symposium

I. Security and Resource Management

July 18, 2005 10:30 AM – 12:00 Noon

A Reputation-based Mechanism for Isolating Selfish Nodes in Ad Hoc Networks

Mohamed Tamer Refaei, Vivek Srivastava, Luiz DaSilva, Mohamed Eltoweissy

Secure Reporting of Traffic Forwarding Activity in Mobile Ad Hoc Networks

Heesook Choi, William Enck, Jaesheung Shin, Patrick McDaniel, Thomas La Porta

Defend Against Cache Consistency Attacks in Wireless Ad Hoc Networks

Wensheng Zhang, Guohong Cao

An ECA-P Policy-based framework for managing ubiquitous computing Environments

Chetan Shiva Shankar, Anand Ranganathan, Roy Campbell

III. Security in Sensor Networks

July 19, 2005 10:30 AM – 12:00 Noon

SWAT: Small World-based Attacker Traceback in Ad-hoc Networks

Yongjin Kim, Ahmed Helmy

Correlation analysis for alleviating effects of inserted data in wireless sensor networks

Sapon Tanachaiwiwat, Ahmed Helmy

Efficient Aggregation of encrypted data in Wireless Sensor Networks

Claude Castelluccia, Einar Mykletun, Gene Tsudik

Practical Broadcast Authentication in Sensor Networks

Donggang Liu, Peng Ning, Sencun Zhu, S Jajodia

II. Routing in Ad Hoc Networks

July 18, 2005 3:30 pm – 5:00 pm

Content-Based Routing in Mobile Ad Hoc Networks

Milenko Petrovic, Vinod Muthusamy, Hans-Arno Jacobsen

Multi-Constraint Dynamic Access Selection in Always Best Connected Networks

Bo Xing, Nalini Venkatasubramanian

Extended ZRP: Performance Evaluation of a Routing Layer Based Service Discovery Protocol for Mobile Ad Hoc Networks

Christopher Ververidis, George Polyzos

Market Models and Pricing Mechanisms in a Multihop Wireless Hotspot

Kai Chen, Zhenyu Yang, Christian Wagener, Klara Nahrstedt

IV. Handoff and MAC protocols

July 19, 2005 4:00 PM – 5:30 PM

PPP Migration: A Technique for Low-Latency Handoff in CDMA2000 Networks

Anand Kagalkar, Sarit Mukherjee, Sampath Rangarajan, Katherine Guo

A Relay Based Multi-rate MAC Protocol for Ad-hoc Networks

Weilin Zeng, Haixia Tan, Tatsuya Suda

MPA assisted Optimized Proactive Handoff Scheme

Ashutosh Dutta, Yoshihiro Ohba, Kenichi Taniuchi,

Henning Schulzrinne

An Enhanced Dynamic Framed Slotted ALOHA

Algorithm for RFID Tag Identification

Su-Ryun Lee, Sung-Don Joo, Chae-Woo Lee

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V. Middleware

July 19, 2005 4:00 PM – 5:30 PM

Loosely Coupling Ontological Reasoning with an Efficient Middleware for Context-awareness
Claudio Bettini, Alessandra Agostini, Daniele Riboni

Contextualizing Applications via Semantic Middleware

Ora Lassila, Deepali Khushraj

Plethora: A Framework for Converting Generic Applications to Run in a Ubiquitous Environment
Zahid Anwar, Jalal Al-Muhtadi, Roy H. Campbell
Exploiting co-location history for efficient service selection in ubiquitous computing systems
Alexandros Karypidis, Spyros Lalis

VII. Querying

July 20, 2005 8:30 AM – 10:00 AM

On Incremental Processing of Continual Range Queries for Location-Aware Services and Applications

Kun-Lung Wu, ShyhKwei Chen, Philip Yu

Decentralizing Query Processing in Sensor Networks

Ross Rosemark, Wang-Chien LEE

Energy Efficient Processing of K Nearest Neighbor Queries in Location-aware Sensor Networks

Julian Winter, Yingqi Xu, Wang-Chien LEE

A location aware mobile tourist guide selecting and interpreting sights and services by context matching

Klaus ten Hagen, Ronny Kramer

IX. Locating and Mobility

Jul 20, 2005 10:30 AM – 12:30 PM

Multivariate Analysis for Probabilistic WLAN Location Determination Systems

Moustafa Youssef, Mohamed Abdallah, Ashok Agrawala

Proxy-based Hand-Off of Web Sessions for User Mobility

Eugenio Zimeo, Gerardo Canfora, Giuseppe Di Santo, Gabriele Venturi, Maria Vittoria Zito

WebProfiles: A Negotiation Model for User Awareness in Personal Area Networks

Juan Ignacio Vazquez, Diego Lopez de Ipina

A SIP-based Architecture model for Contextual Coalition Access Control for Ubiquitous Computing

Ramiro Liscano, Kaining Wang

A Cooperative Learning Framework for Mobility-Aware Resource Management in Multi-Inhabitant Smart Homes

Nirmalya Roy, Abhishek Roy, S. K. Das, Kalyan Basu

VI. Routing in Ad Hoc networks

July 20, 2005 8:30 AM – 10:00 AM

A Generalization of the Face Routing Algorithm to Some Non-Planar Networks

Jaroslav Opatrny, Sabeel Ansari, Lata Narayanan

Routing in MANETs with Address Conflicts

Kwan-Wu Chin, Darryn Lowe, William

Transparent Heterogeneous Mobile Ad Hoc Networks

Patrick Stuedi, Gustavo Alonso

SRDP: Securing Route Discovery in DSR

Gene Tsudik, Jihye Kim

VIII. Network Architectures

July 20, 2005 10:30 AM – 12:30 PM

Decentralized Optimization of Dynamic Bluetooth Scatternets

Sewook Jung, Csaba Kiss Kalló, Mario Gerla,

Mauro Brunato

Improving Connectivity of Wireless Ad-Hoc Networks

Ning Li, Jennifer Hou

Efficient Continuous Mapping in Sensor Networks Using Isolines

Ignacio Solis, Katia Obraczka

A Peer-to-Peer Architecture for Context Lookup

Tao Gu

Community-Based Asynchronous Wakeup Protocol for Wireless Peer-to-Peer File Sharing Networks

Yu Kwong Kwok

X. Ad Hoc Networks

July 20, 2005 1:30 PM – 3:00 PM

Multi-path Admission Control for Mobile Ad hoc Networks

Anders Lindgren, Elizabeth Belding-Royer

Personal Access Point for IEEE 802.11 Systems

Lei Zan, Jidong Wang, Lichun Bao

On Upper Bound and Heuristics for Multicast

Lifetime Maximization Using Dynamic Routing in Energy-Limited Wireless Ad Hoc Networks

Song Guo

A Feedback Control Scheme for Resource Allocation in Wireless Multi-hop Ad Hoc Networks

Wenbo He, Xue Liu, Klara Nahrstedt

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XI. : Applications

July 20, 2005 1:30 PM – 3:00 PM

StateSnap: A Snapshot-based Interface for State- Reproducible Operation of Networked Appliances

Naohiko Kohtake, Takeshi Iwamoto, Genta Suzuki,
Shun Aoki, Kazunori Takashio, Hideyuki Tokuda
**Bluetooth Base Station Minimal Deployment for
High Definition Positioning**
Salvatore Sorce, Alessandro Genco, Giuseppe
Scelfo

An assessment of the audio codec performance in Voice over WLAN (VoWLAN) systems

Mirosław Narbutt, Mark Davis

Poster Session I

July 18, 2005 10:00 AM – 12:30 PM

Dynamically Re-Configurable Communication Protocols using Key Identifiers

Kaushalya Premadasa, Bjorn Landfeldt

An Analysis of Strategies for Mitigating the Sensor Network Hot Spot Problem

Zhao Cheng, Mark Perillo, Wendi Heinzelman

JiTS: Just-in-Time Scheduling for Real-Time Sensor Data Dissemination

Ke Liu, Nael Abu-Ghazaleh

CustoMed: A Power Optimized Customizable and Mobile Medical Monitoring and Analysis System

Roozbeh Jafari, Foad Dabiri, Majid Sarrafzadeh

Agent Negotiation in Ad-Hoc Networks

Cosmin Carabelea, Michael Berger

Building a Ubiquitous Platform for Remote Sensing Using Smartphones

Dirk Trossen, Dana Pavel

Orion: P2P-based Inter-space Context Discovery Platform

Chung-Yau Chin, Daqing Zhang, Mohan Gurusamy

MAIPAN -- Middleware for Application

Interconnection in Personal Area Networks

Miklos Aurel Ronai, Kristof Fodor, Gergely Biczok,
Zoltan Turanyi, Andras Valko

Workshops

July 19, 2005

Wireless Sensor Networks : SenMetrics :

senmetrics.org

Peer-to-Peer Systems : HOT-P2P : hot-p2p.org

Peer-to-Peer Knowledge Management : P2PKM :

p2pkm.org

Vehicle-to-Vehicle Communications : V2VCOM ::

v2vcom.org

Poster Session II

July 19, 2005 10:00 AM – 12:30 PM

KTR: an Efficient Key Management Scheme For Air Access Control

Qijun Gu, Peng Liu, Wang-Chien LEE, Chao-Hsien
Chu

Temporal Transcoding for Mobile Video Communication

Francesca Martelli, Maurizio A. Bonuccelli, Francesca
Lonetti

Smart Components in a Pervasive Messaging Service

Wolfgang Narzt, Gustav Pomberger, Alois Ferscha,
Dieter Kolb, Reiner Muller, Jan Wiegardt, Horst
Hortner, Roland Haring, Christopher Lindinger

Embedded SW Design Issues for Distributed Applications on Mobile Terminals

Giovanni Perbellini, Stefano Martini, Franco Fummi,
Fabio Ricciato, Maura Turolla

An Efficient Peer-to-Peer Lookup Protocol for Location-Aware Mobile Ad Hoc Networks

Daewoong Kim, Chanik Park

Design and Implementation of a Software Infrastructure for Integrating Sentient Artefacts

Fahim Kawsar , Kaori Fujinami, Tatsuo Nakajima

Geographically Bound Mobile Agent in MANET

Kenji Tei, Nobukazu Yoshioka, Yoshiaki Fukazawa,
Shinichi Honiden

Secure Address Auto-configuration for Mobile Ad Hoc Networks

Pan Wang, Douglas Reeves, Peng Ning