

Call for Participation



MDM 2003

4th International Conference on Mobile Data Management,
21-24 January, 2003, Melbourne, Australia

<http://www.csse.monash.edu.au/mdm2003/>

In cooperation with ACM SIGMOD, SIGMOBILE, ACS

We are rapidly heading towards a world in which the computing infrastructure will contain billions of devices, which will interact with other computing/communications devices that are carried or worn by users as they go through their daily routines.

Such devices provide data access to mobile users as they move within buildings, cities, or across the globe. This new infrastructure presents tremendous challenges for data management technology including: huge scale; variable and intermittent connectivity; location-centric and location-dependent applications; bandwidth, power, and device size limitations; and multimedia data delivery across hybrid networks and systems. Traditional data management technologies such as query processing, transaction management, workflow, business process management and metadata management must all be re-evaluated in this emerging environment. Furthermore, non-traditional issues such as semantics of mobile data, location-dependent querying, broadcast and multicast delivery and caching/pre-fetching techniques must all be addressed. The ability to track monitor people raises serious issue of security and privacy. This conference aims to investigate these and other issues, focusing on the challenges and opportunities for data management and data access technology in the rapidly evolving world of mobile, pervasive, ubiquitous, invisible and wearable computing.

TUTORIALS

Johan Hjelm, Senior Specialist, Ericsson Research, "Mobile Services Development: Styling, Adaptation, and Contextualization. An overview of current tools, standards, and methods and (possible) future developments"

Ouri Wolfson, Univ. of Illinois, Chicago, "Moving Objects Databases"

Sanjay Kumar Madria, University of Missouri-Rolla, Data Management in Mobile Computing

KEYNOTES

Badri Nath, Rutgers University, Data, data everywhere: Avoiding petabyte on your face

Ravi Jain, NTT DoCoMo USA Labs, 4G Services, Architectures and Networks: Speculation and Challenges

Anatole Gershman, Accenture Technology Labs, Ubiquitous Commerce

TECHNICAL PROGRAMME

Storage Management

Storing and Accessing User Context, *Stéphanie Riché, Gavin Brebner, HP Labs, France*

Cooperative Caching in Ad Hoc Networks, *Sailhan Françoise, Valerie Issarny, INRIA, France*

Investigation of Cache Maintenance Strategies for Multi-cell Environments, *Zhijun Wang, Mohan Kumar, Sajal Das, Huaping Shen, University of Texas at Arlington, USA*

Resilient Data-Centric Storage in Wireless Ad-Hoc Sensor Networks, *Abhishek Ghose, Jens Grossklags, John Chuang, University of California at Berkeley, USA*

Location Tracking

Shape-based Similarity Query for Trajectory of Mobile Objects, *Yutaka Yanagisawa, Junichi Akahani, Tetsuji Satoh, NTT Communication Science Laboratory, Japan*

An Efficient Spatiotemporal Indexing Method for Moving Objects in Mobile Communication Environments, *Hyun Kyo Park, Jin Hyun Son, Myoung Ho Kim, KAIST, Korea*

DynaMark: A Benchmark for Dynamic Spatial Indexing, *Jussi Myllymaki, James Kaufman, IBM Almaden Research Center, USA*

Information Management

Using Separate Processing for Read-Only Transactions in Mobile Environment, *Eddie Chan, Victor Lee, Kwok-Wa Lam, City University of Hong Kong, China*

Publish/Subscribe Tree Construction in Wireless Ad-Hoc Networks, *Yongqiang Huang, Hector Garcia-Molina, Stanford University, USA*

Personal Workflows: Modeling and Management, *San-Yih Hwang, Ya-Fan Chen, National Sun Yat-sen University, Taiwan*

Location Aware Services

Architectural Support for Global Smart Spaces, *Ron Morrison¹, Kevin Mullen¹, Alan Dearle¹, Graham Kirby¹, Yanyan Yang¹, Richard Connor², Paula Welen², Andy Wilson², ¹University of St Andrews, ²University of Strathclyde, UK*

FATES: Finding A Time dEpendent Shortest path, *Hae Don Chon¹, Divy Agrawal², Amr El Abbad², ¹Samsung Electronics, ²University of California at Santa Barbara, USA*

Search K Nearest Neighbors on Air, *Baihua Zheng¹, Wang-Chien Lee², Dik Lee¹, ¹Hong Kong University of Science & Technology, ²Penn State University, USA*

Adaptive Location Management in Mobile Environments, *Ratul Majumdar¹, Krithi Ramamritham¹, Ming Xiong², ¹Indian Institute of Technology, India, ²Lucent Bell Labs, USA*

Context Aware Services

Policy-driven Binding to Information Resources in Mobility-enabled Scenarios, *Paolo Bellavista¹, Antonio Corradi¹,*

Rebecca Montanari¹, Cesare Stefanelli², ¹University of Bologna, ²University of Ferrara, Italy

Constructing Environment-Aware Mobile Applications Adaptive to Small, Networked Appliances in Ubiquitous Computing Environment, Kazunori Takashio¹, Masakazu Mori², Masataka Funayama², Hideyuki Tokuda¹, ¹Keio University, ²The University of Electro-Communications, Japan

Experiences in using CC/PP in context-aware systems Jadwiga Indulska, Ricky Robinson, Andry Rakotonirainy, Karen Henriksen, University of Queensland, Australia

Document Visualization on Small Displays, Dik Lee, Hoi Ka Kit, Jianliang Xu, HongKong University of Science & Technology, China

Resource Discovery

Towards Autonomous Services for Smart Mobile Devices, Thomas Strang, German Aerospace Center, Germany

NOMAD: Application Participation in a Global Location Service, Kris Bubendorfer, John Hine, Victoria University of Wellington, New Zealand

Mobiscope: A Spatial Discovery Service for Mobile Network Resources, Matthew Denny¹, Mike Franklin¹, Paul Castro², Apratim Purakayastha², ¹University of California at Berkeley, ²IBM T.J. Watson Research Center, USA

Location Management

Presence, Location and Instant Messaging in a Context-Aware Application Framework, Arjan Peddemors, Marc Lankhorst, Johan de Heer, Telematica Instituut, Netherlands

CAMEL: A Moving Object Database Approach for Intelligent Location Aware Services, Ying Chen, Fangyan Rao, Xiulan Yu, Dong Liu, IBM China Research Lab, China

Using Hashing and Caching for Location Management in Wireless Mobile Systems, Weiping He, Athman Bouguettaya, Virginia Tech., USA

SEB-Tree: An Approach to Index Continuously Moving Objects, Zhexuan Song, Nick Roussopoulos, University of Maryland, USA

Best Movement of Mobile Agent in Mobile Computing Systems, Chao-Chun Chen, Chiang Lee, Chih-Horng Ke, National Cheng-Kung University, Taiwan

Storage Management and Query Processing

Clique: A transparent, peer-to-peer replicated file system, Bruno Richard, Donal Mac Nioclais, Denis Chalon, HP Laboratories, France

Transactional Peer-to-Peer Information Processing: The AMOR Approach, Klaus Haller¹, Heiko Schuldt², Hans-J. Schek², ¹ETH, Switzerland, ²University for Health Informatics and Technology Tyrol

Performance Evaluation of Transcoding-enabled Streaming Media Caching System, Bo Shen, Sung-Ju Lee, Sujoy Basu, Hewlett-Packard Labs, USA

Adaptive File Cache Management for Mobile Computing, Jiangmei Mei, Rick Bunt, University of Saskatchewan, Canada

Adaptive Power-Aware Prefetching Schemes for Mobile Broadcast Environments, Haibo Hu, Jianliang Xu, Dik Lee, Hong Kong University of Science & Technology, China

A Multi-Layered Database Model for Mobile Environment, Sanjay Madria¹, Malik Tubaishat¹, Y Jian¹, Y Fu¹, Sourav Bhowmick², ¹University of Missouri-Rolla, USA, ²Nanyang Technological University, Singapore

Context Aware Information Services

A Task Oriented Approach to Delivery in Mobile Environments, Francois Paradis, Francis Crimmins, Nadine Ozkan, CSIRO, Australia

Picturing the Future Personal Navigation Products and Services by Means of Scenarios, Olli Sotamaa¹, Veikko Ikonen², ¹University of Tampere, ²VTT Information Technology, Finland

Personal Digest System for Professional Baseball Programs in Mobile Environment, Takako Hashimoto, Takashi Katooka, Atsushi Iizawa, Ricoh Company, Japan

Handling Client Mobility and Intermittent Connectivity in Mobile Web Accesses, Purushottam Kulkarni¹, Prashant Shenoy¹, Krithi Ramamritham², ¹University of Massachusetts Amherst, USA, ²Indian Institute of Technology, India

Enabling Web-based Location-Dependent Information Services in Mobile Environments, Yongbo Niu¹, Shanping Li², Jianliang Xu³, ¹Lucent Technologies, ²Zhejiang University, ³HongKong University of Science & Technology, China

INDUSTRY TRACK

Generating Context Management Infrastructure from Context Models, Karen Hendricksen, Jadwiga Indulska, and Andry Rakotonirainy

Distributed Fleet Management over GPRS with Solid FlowEngine, Ali Paasimaa

Potential Harmonized UI Elements for Mobile Terminals and Data Services, Bruno von Niman, Matthias Schneider-Hufschmidt and Harri Kiljander

A Standard Spoken Command Vocabulary for ICT Devices and Services, B. von Niman, C. Chaplin, J-A Collado-Vega, L. Groh, S. McGlashan, W. Mellors, and D. van Leeuwen

Mobile Multimedia Content Search using RDF, H. Sumino, N. Ishikawa, T. Kato, Y. Yu, Z. Zhu, and J. Hjelm

A System Model and Algorithm of Content-based Routing in Mobile Peer-to-Peer Information Search, Z. Zhu, Y. Yu, J. Hjelm, N. Ishikawa, H. Sumino, and E. Omata

REGISTRATION

Your registration fee covers proceedings of MDM2003, refreshments, lunches, conference dinner, welcome reception and tutorials. Additional Proceedings and Dinner tickets are available for purchase.

To register for the conference please use one of the methods on the web-page

<http://www.csse.monash.edu.au/mdm2003/>

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