

# Mobile HCI 2002

## Fourth International Symposium on Human Computer Interaction with Mobile Devices



C.N.R. Research Area of Pisa  
Pisa, Italy  
September 18-20, 2002



Mobile HCI 2002, the Fourth International Symposium on Human Computer Interaction with Mobile Devices, will be held in Pisa, Italy. The Symposium provides a forum for academics and practitioners to discuss the challenges and potential solutions for effective interaction with mobile systems. It is intended to cover the design, evaluation and applications of techniques and approaches for all mobile computing devices.

The Symposium is organised by I.S.T.I.-C.N.R.

In cooperation with:



Microsoft

### Wednesday, 18<sup>th</sup> September 2002

08:30–09:00	Registration
09:00–09:15	Opening – Welcome <i>P. Maestrini, Director of I.S.T.I.-C.N.R.</i>
09:15–09:30	Introduction to Mobile HCI 2002 <i>F. Paternò, Symposium Chair, I.S.T.I.-C.N.R.</i>
09:30–10:30	Building Usable Wireless Applications for Mobile Phones <i>Invited Talk Luca Passani, Openwave Systems</i>
10:30–11:00	Coffee Break
<b>Session 1</b>	<b>Design Criteria</b> <i>Chair: Cristina Chesta, Motorola</i>
11:00–11:30	A New Transcoding Technique for Pda Browsers, Based on Content Hierarchy. <i>F. J. González-Castaño, L. Anido-Rifón and E. Costa-Montenegro</i>
11:30–12:00	Sorting Out Searching on Small Screen Devices. <i>M. Jones, G. Buchanan and H. Thimbleby</i>
12:00–12:15	XHTML in Mobile Application Development. <i>A. Kaikkonen, V. Roto</i>
12:15–12:30	Consistent Multi-device Design Using Device Categories. <i>M. van Welie, B. de Groot</i>
12:30–12:45	Pushing Web Pages into Personal Digital Assistants: Need, Tools and Solutions. <i>E. Costa-Montenegro, F. J. González-Castaño, J. García-Reinoso, J. Vales-Alonso, L. Anido Rifón</i>
12:45–13:00	Emigre: Metalevel Architecture and Migratory Work. <i>P. Dourish and A. van der Hoek</i>
13:00–14:30	Lunch (in “Chiostro”)
<b>Session 2</b>	<b>Context-Dependent Systems</b> <i>Chair: Carmen Santoro, I.S.T.I.-C.N.R.</i>
14:30–15:00	Adapting Applications in Mobile Terminals Using Fuzzy Context Information. <i>J. Mantyjarvi and T. Seppanen</i>
15:00–15:30	Direct Combination: a New User Interaction Principle for Mobile and Ubiquitous HCI. <i>S. Holland, D. R. Morse and H. Gedenryd</i>
15:30–16:00	ASUR++: A Design Notation for Mobile Mixed Systems. <i>E. Dubois, P. Gray and L. Nigay</i>
16:00–16:30	Coffee Break
<b>Session 3</b>	<b>Innovative Case Studies</b> <i>Chair: Keith Cheverst, Lancaster University</i>
16:30–17:00	Designing Lol@, A Mobile Tourist Guide for UMTS. <i>G. Pospischil, M. Umlauf, E. Michlmayr</i>
17:00–17:30	Location-Aware Shopping Assistance: Evaluation of a Decision-Theoretic Approach. <i>T. Bohnenberger, A. Jameson, A. Krüger and A. Butz</i>
17:30–18:00	Handimessenger: Awareness-Enhanced Universal Communication for Mobile Users. <i>S. Hibino, A. Mockus</i>
18:30	Welcome Cocktail

### Thursday, 19<sup>th</sup> September 2002

08:30–09:30	Mobile Devices for Control <i>Invited Talk Brad A. Myers, Carnegie Mellon University</i> <i>Chair: Maria Francesca Costabile, Univ. of Bari</i>
<b>Session 4</b>	<b>Novel User Interfaces for Mobile Devices</b> <i>Chair: Luca Chittaro, University of Udine</i>
09:30–10:00	Mobile and Collaborative Augmented Reality: A Scenario Based Design Approach. <i>L. Nigay, P. Salembier, T. Marchand, P. Renevier, L. Pasqualetti</i>
10:00–10:30	The Unigesture Approach: One-Handed Text Entry for Small Devices. <i>V. Sazawal, R. Want and G. Borriello</i>
10:30–10:45	A Cross-modal Electronic Travel Aid Device. <i>F. Fontana, A. Fusiello, M. Gobbi, V. Murino, D. Rocchesso, L. Sartor and A. Panuccio</i>
10:45–11:00	An Interface with Weight: Taking Interaction by Tilt beyond Disembodied Metaphors. <i>D. Fallman</i>
11:00–11:30	Coffee Break
<b>Session 5</b>	<b>Location Awareness</b> <i>Chair: Bruno von Niman, Ericsson Enterprise</i>
11:30–12:00	A Diary Study Of Rendezvousing: Group Size, Time Pressure and Connectivity. <i>M. Colbert</i>
12:00–12:30	Automated Multimedia Diaries of Mobile Device Users Need Summarization. <i>M. Gelgon and K.Tilhou</i>
12:30–13:00	Personal Location Agent for Communicating Entities (PLACE). <i>J. Lin, R. Laddaga and H. Naito</i>
13:00–13:30	Distributing Event Information by Simulating Word-of-Mouth Exchanges. <i>E. Huang, M. Terry, E. Mynatt, K. Lyons, A. Chen</i>
13:30–14:30	Lunch (in “Chiostro”)
<b>Session 6</b>	<b>Demos (Room Number 30, Building A)</b> An Ubiquitous, User-Adaptive Tourist Guide. <i>L. Ardissono, A. Goy, G. Petrone, M. Segnan, P. Torasso</i> Demonstration of Mobile Devices for Control. <i>B. A. Myers</i> Mobile Peer-to-peer Entertainment: Putting FolkMusic Back on the Streets Again When Peer-to-peer Goes Mobile. <i>M. Wiberg</i> Talking, Typing and SMS:ing - Natural Interaction for Mobile Applications using Dejima-Direct. <i>I.-M. Jonsson</i> Collaborative Pocket PiCoMap: A Demonstration of Real-Time Support for Collaborative Work with Handheld Computers. <i>K. Luchini, A. Wiecek, N. Nandihalli, C. Quintana, E. Soloway</i> A New Wireless Camera for Usability Evaluation of Mobile Devices. <i>L.P.J.J. Noldus, J.J.M. Theuws, W.J. ten Hove and J.N.C. van der Pers</i> Prototypes for User Centered Design Process of Mobile Services. <i>L.F. Petroni, M. Catanzaro, M. Palmonari</i>
14:30–15:30	

Visiting a Museum with a Handheld Interactive Support.  
*C. Ciavarella and F. Paternò*  
Mini-Camera for Usability Tests and Demonstrations.  
*T. Nyyssönen, V. Roto and A. Kaikkonen*  
TERESA: A tool for designing nomadic applications.  
*G. Mori, F. Paternò and C. Santoro*

**Session 7**  
**There Is Not Only Graphics in Mobile Devices**  
**Chair: Laurence Nigay, University of Grenoble**

- 15:30–15:45 “Do as I say! ... But Who Says What I Should Say-or Do?” On the Definition of a Standard Spoken Command Vocabulary for ICT. *B. von Niman, C. Chaplin, J.-A. Collado-Vega, L. Groh, S. McGlashan, W. Mellors and D. van Leeuwen*
- 15:45–16:00 Globalization of Voice-Enabled Internet Access Solutions. *C. Chesta*
- 16:00–16:15 New Generation of IP-Phone Enabled Mobile Devices. *M. Kohno and J. Rekimoto*
- 16:15–16:30 Utilizing Gaze Detection to Simulate the Affordances of Paper in the RSVP Format. *G. Öquist, S. Björk and M. Goldstein*
- 16:30–16:45 Low-Resolution Supplementary Tactile Cues for Navigational Assistance. *T. Sokoler, L. Nelson, E. R. Pedersen*
- 16:45–17:00 Structured Menu Presentation Using Spatial Sound Separation. *G. Lorho, J. Hiipakka and Juha Marila*
- 17:00 Buses for Visit to Lucca and Social Dinner (Trattoria “Da Giulio”)

## Friday, September 20<sup>th</sup> 2002

08:30–09:30 **Presentation and Discussion on the EU European Session**  
**Framework Programme VI**  
**Franco Accordino, Information Society Directorate-General, European Commission**  
**Chair: Fabio Paternò, I.S.T.I.-C.N.R.**

**Session 8**  
**Model-based Design of Applications for Mobile Devices**  
**Chair: Monique Noirhomme, University of Namur**

- 09:30–09:45 Interactions Model and Code Generation for J2ME Applications. *D. Carboni, S. Sanna, S. Giroux, G. Paddeu*
- 09:45–10:00 UML Modelling of Device-Independent Interfaces and Services for a Home Environment Application. *O. Mayora-Ibarra, E. Cambranes-Martínez, C. Miranda-Palma, A. Fuentes-Penna and O. De la Paz-Arroyo*
- 10:00–10:15 Addressing Mobile HCI Needs through Agents. *G. O'Hare, M. O'Grady*
- 10:15–10:30 Supporting Adaptivity to Heterogeneous Platforms through User Models  
*L. Marucci and F. Paternò*
- 10:30–11:00 Coffee Break

**Session 9**  
**Usability Evaluation in Small Devices**

**Chair: Manfred Tscheligi, University of Vienna**

- 11:00–11:30 An Empirical Study of the Minimum Required Size and the Minimum Number of Targets for Pen Input on the Small Display. *S. Mizobuchi, K. Mori, X Ren and Y. Michiaki*
- 11:30–12:00 KSPC (KeyStrokes Per Character) As a Characteristic of Text Entry Techniques. *S.I. MacKenzie*
- 12:00–12:30 Lost Or Found? A Usability Evaluation of a Mobile Navigation and Location-Based Service. *D. Chincholle, M. Goldstein, M. Nyberg and M. Eriksson*
- 12:30–13:00 Towards an Improved Readability on Mobile Devices: Evaluating Adaptive Rapid Serial Visual Presentation. *G. Öquist and M. Goldstein*
- 13:00–14:00 Lunch (in “Chioistro”)

**Session 10**  
**Design for Mobile Applications**

**Chair: Borys de Ruiter, Philips Research**

- 14:00–14:15 “Just-in-Place” Information for Mobile Device Interfaces. *J. Kjeldskovst*
- 14:15–14:30 A Content Provider-Specified Web Clipping Approach for Mobile Content Adaptation. *S. Yang, H. Lee, K. Chung and H. Kim*
- 14:30–14:45 Leveraging the Context of Use in Mobile Service Design. *B. de Groot, M. van Welie*
- 14:45–15:00 A Ubiquitous Computing Environment for Language Learning. *M. Paredes, P.P Sánchez-Villalón, M. Ortega, J.A. Velázquez-Iturbide*
- 15:00–15:15 Understanding Contextual Interactions to Design Navigational Context-Aware Applications. *N. A. Bradley, M. D. Dunlop*
- 15:15–15:30 Mobile Image Messaging - Anticipating the Outlines of the Usage Culture. *A. Soronen and V. Tuomisto*
- 15:30–15:45 On Interfaces for Mobile Information Retrieval. *E. Schofield and G. Kubin*
- 15:45–16:00 Visualizing Bar Charts on WAP Phones. *L. Chittaro and A. Camaggio*
- 16:00–16:30 Coffee Break

**Session 11**  
**Applications for Mobile Devices**

**Chair: Brad A. Myers, Carnegie Mellon University**

- 16:30–16:45 iTutor: a Wireless and Multimodal Support to Industrial Maintenance Activities. *L. Tummolini, A. Lorenzon, G. Bo and R. Vaccaro*
- 16:45–17:00 ArtemisExpress: a Case Study in Designing Handheld Interfaces for an Online Digital Library. *K. Luchini, C. Quintana and E. Soloway*
- 17:00–17:15 Case Study: a PDA example of User Centered Design. *H. Lamberts*
- 17:15–17:30 Towards Scalable User Interfaces in 3D City

Information Systems.

- 17:30–17:45 Remote Control of Home Automation Systems with Mobile Devices. *L. Tarrini, R. Bianchi Bandinelli, V. Miori and G. Bertini*
- 17:45–18:00 Mobile Interface for a Smart Wheelchair. *J. Abascal, D. Cagigas, N. Garay and L. Gardeazabal*
- 18:00–18:15 User Requirement Analysis and Interface Conception for a Mobile, Location-Based Fair Guide. *F. Hermann and F. Heidmann*
- 18:15–18:30 Map-based Access to Multiple Educational On-Line Resources from Mobile Wireless Devices. *P. Brusilovsky and R. Rizzo*
- 18:30–18:45 Mobile HCI 2003  
*L. Chittaro, University of Udine*
- 18:45 Closing

## Symposium Venue:

C.N.R. Research Area of Pisa. Via G. Moruzzi 1, 56100 Pisa.  
The Symposium will be held in the “Auditorium”.

## Workshops: (Tuesday, September 17th 2002)

Workshop 1: “Mobile Tourism Support Systems”.  
*K. Cheverst, E.-M. Melchior, S. Poslad and B. Schmidt-Belz*  
Room number 27, Building A

Workshop 3: “Main Issues in Designing Interactive Mobile Services”. *A. C. Roibás, S. Marcoli and G. da Bormida*  
Room number 28, Building A

## Tutorials: (Tuesday, September 17th 2002)

- Tutorial 1: “Designing Highly Usable Wireless Services for Next Generation Devices and Networks”. *D. Chincholle, M. Eriksson*  
Room number 29, Building A (afternoon session).

- Tutorial 2: “From Desktop to Handheld: a Learner-Centered Design Approach to Developing Software That Scaffolds Learning across Platforms”. *C. Quintana, K. Luchini, E. Soloway, C. Norris*  
Room number 29, Building A (morning session).

## Tuesday, September 17<sup>th</sup> 2002

- 09:00–10:30 Workshop 1 / Workshop 3 / Tutorial 2
- 10:30–11:00 Coffee Break
- 11:00–13:00 Workshop 1 / Workshop 3 / Tutorial 2
- 13:00–14:30 Lunch (in “Chioistro”)
- 14:30–16:00 Workshop 1 / Workshop 3 / Tutorial 1
- 16:00–16:30 Coffee Break
- 16:30–18:00 Workshop 1 / Workshop 3 / Tutorial 1