

Table of Contents

Keynotes

Assistive Systems: A Paradigm Shift in Technology and Medical Care	1
<i>Michael Meyer, Arthur F. Pease, and Michael Lang</i>	
Qualitative Locomotion Patterns in Convex Spaces	13
<i>Björn Gottfried</i>	

Innovative User Interfaces

Mobile Interaction with Geo-Notes: A Gesture-Driven User Interface for Browsing User-Generated Content in Mobile Web Applications	25
<i>Hidir Aras and Denis Huber</i>	
Realization of Tangible Mobile Human Machine Interfaces Using Wireless Personal Area Networks	37
<i>Jens Ziegler and Leon Urbas</i>	
On-the-Fly Device Adaptation Using Progressive Contents	49
<i>Conrad Thiede, Heidrun Schumann, and René Rosenbaum</i>	

Assistive Systems

A Java-Based Approach for Consistent User Assistance in Distributed Heterogeneous Environments	61
<i>Johannes Weber and Andreas Rehkopf</i>	
Service-Oriented University: Infrastructure for the University of Tomorrow	73
<i>Raphael Zender and Djamshid Tavangarian</i>	
Portable Real Time Needs Expression for People with Communication Disabilities	85
<i>Lau Bee Theng</i>	
Recommendation of Personalized Routes with Public Transport Connections	97
<i>Bernd Ludwig, Bjørn Zenker, and Jan Schrader</i>	
KopAL – A Mobile Orientation System for Dementia Patients	109
<i>Sebastian Fudickar and Bettina Schnor</i>	

Smart Home Challenges and Approaches to Solve Them: A Practical Industrial Perspective	119
<i>Roland Eckl and Asa MacWilliams</i>	

Mobile Communication

A Generic Framework for Using Interactive Visualization on Mobile Devices	131
<i>Marcus Hoffmann and Jörn Kohlhammer</i>	
Speed-Dependent Camera Control in 3D Mobile Roadmaps.....	143
<i>Timo Partala, Teemu Flink, Mika Luimula, and Ossi Saukko</i>	
Heterogeneous Communication in Smart Ensembles	155
<i>Enrico Dressler and Djamshid Tavangarian</i>	

Context Awareness

Location Based Logistics Services and Event Driven Business Process Management	167
<i>Christoph Emmersberger, Florian Springer, and Christian Wolff</i>	
My World – Social Networking through Mobile Computing and Context Aware Application	179
<i>Keyur Sorathia and Anirudha Joshi</i>	

Semantics

Challenges in Content Based, Semantically Decoupled Communication on Neighbor-Relations	189
<i>Henry Ristau</i>	
Towards a Spatial Position Information Management System for Interactive Building Environments	201
<i>Stefan Knauth, Rolf Kistler, and Alexander Klapproth</i>	
Modelling Device Actions in Smart Environments	213
<i>Christiane Plociennik, Christoph Burghardt, Florian Marquardt, Thomas Kirste, and Adelinde Uhrmacher</i>	

System Development

SPARK Rapid Prototyping Environment – Mobile Phone Development Made Easy	225
<i>Robert Adelmann and Marc Langheinrich</i>	

Rapid Prototyping and Evaluation of Intention Analysis for Smart Environments	239
<i>Christoph Burghardt, Stefan Propp, Thomas Kirste, and Peter Forbrig</i>	

Use Cases and Task Models as Driving Forces to Identify Requirements in Smart Environments	251
<i>Maik Wurdel and Peter Forbrig</i>	

Intelligence

Creating AI Planning Domains for Smart Environments Using PDDL	263
<i>Florian Marquardt and Adelinde Uhrmacher</i>	

Finding Stops in Error-Prone Trajectories of Moving Objects with Time-Based Clustering	275
<i>Max Zimmermann, Thomas Kirste, and Myra Spiliopoulou</i>	

Goal Understanding and Achievement for Humanoid Assistive Robots	287
<i>Peter Nauth</i>	

Security and Privacy

Sequential Authentication Concept to Improve WLAN Handover Performance.....	295
<i>Andreas Roos, Arne Keller, Andreas Th. Schwarzbacher, and Sabine Wieland</i>	

Simulation and Analysis of Ad Hoc Privacy Control in Smart Environments	307
<i>Christian Bünnig</i>	

Passive Tracking of Transceiver-Free Users with RFID	319
<i>Dominik Lieckfeldt, Jiayi You, and Dirk Timmermann</i>	

Short Papers

A New Generation Digital Video Assist System with Intelligent Multi-Camera Control and Support for Creative Work on the Film Set	331
<i>Christian Martin, Bernhard Prell, and Andreas Kesper</i>	

RFM: A Radio Flashing Tool for Microcontrollers	333
<i>Stefan Goldmann and Ralf Salomon</i>	

Adequate Assistance for Elderly People in Homely Rehab	337
<i>Alexander Mertens, Philipp Przybysz, Bernhard Kausch, Daniel Dünnebacke, and Christopher Schlick</i>	
Self-adaptation for Deployment Decision Making	339
<i>Rico Kusber, Nermin Brgulja, and Klaus David</i>	
Towards Building User-Centric Privacy-Respecting Collaborative Applications.....	341
<i>Mohamed Bourimi, Thomas Barth, Bernd Ueberschär, and Kesdogan Dogan</i>	
Author Index	343