Preface

This volume contains the proceedings of the Internet of Things (IOT) Conference 2008, the first international conference of its kind. The conference took place in Zurich, Switzerland, March 26–28, 2008. The term ‘Internet of Things’ has come to describe a number of technologies and research disciplines that enable the Internet to reach out into the real world of physical objects. Technologies such as RFID, short-range wireless communications, real-time localization, and sensor networks are becoming increasingly common, bringing the ‘Internet of Things’ into industrial, commercial, and domestic use. IOT 2008 brought together leading researchers and practitioners, from both academia and industry, to facilitate the sharing of ideas, applications, and research results.

IOT 2008 attracted 92 high-quality submissions, from which the technical program committee accepted 23 papers, resulting in a competitive 25% acceptance rate. In total, there were over 250 individual authors from 23 countries, representing both academic and industrial organizations. Papers were selected solely on the quality of their blind peer reviews. We were fortunate to draw on the combined experience of our 59 program committee members, coming from the most prestigious universities and research labs in Europe, North America, Asia, and Australia. Program committee members were aided by no less than 63 external reviewers in this rigorous process, in which each committee member wrote about 6 reviews. The total of 336 entered reviews resulted in an average of 3.7 reviews per paper, or slightly more than 1000 words of feedback for each paper submitted. To ensure that we had quality reviews as well as substantive deliberation on each paper, a subsequent discussion phase generated 270 discussion items. As a result, some 40 submissions were selected for discussion at the meeting of the program chairs.

The term ‘Internet of Things’ describes an area with tremendous potential; where new sensing and communication technologies, along with their associated usage scenarios and applications, are driving many new research projects and business models. Three major themes pervade the technical discussions collected in this volume: novel sensing technologies to capture real-world phenomena; the evaluation of novel applications using both new and existing technologies; and the appropriate infrastructure to facilitate communication with (and the localization of) billions of networked real-world objects. While all these technological developments are exciting, they also bear profound challenges from a social, legal, and economic perspective. The research areas covered at IOT 2008 were thus not only technical in nature, but reflected the diverse angles from which to approach this emerging research field.

The scientific papers presented at IOT 2008 were not its only highlight. In addition to the technical sessions, the conference featured keynote speeches by leading figures from industry and academia, such as Bob Iannucci (Nokia), Gerd
VI Preface

Wolfram (Metro Group), Peter Zencke (SAP), and Haruhisa Ichikawa (UEC Tokyo). IOT 2008 also included an industrial track where industry experts presented challenges and lessons learned from current technology deployments. The conference offered a demo reception, as well as a full day of workshops and tutorials.

Several organizations provided financial and logistical assistance in putting IOT 2008 together, and we would like to acknowledge their support. We thank ETH Zurich for the conference organization and for managing the local arrangements. We very much appreciate the support of our Platinum Sponsor SAP, along with the generous donations from Siemens, Metro Group, Google, ERCIM, and IBM. We would also like to thank the keynote speakers and industrial experts who provided a fascinating commercial perspective on current developments towards an ‘Internet of Things’. Lastly, we would like to thank both the authors who submitted their work to IOT 2008 and the program committee members and our external reviewers, who spent many hours reviewing submissions, shepherding papers, and providing the feedback that resulted in the selection of the papers featured in these proceedings.

March 2008

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# Table of Contents

## EPC Network

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multipolarity for the Object Naming Service</td>
<td>1</td>
</tr>
<tr>
<td><em>Sergei Evdokimov, Benjamin Fabian, and Oliver Günther</em></td>
<td></td>
</tr>
<tr>
<td>Discovery Service Design in the EPCglobal Network: Towards Full</td>
<td>19</td>
</tr>
<tr>
<td><em>Chris Kürschner, Cosmin Condea, Oliver Kasten, and Frédéric Thiesse</em></td>
<td></td>
</tr>
<tr>
<td>Fine-Grained Access Control for EPC Information Services</td>
<td>35</td>
</tr>
<tr>
<td><em>Eberhard Grummt and Markus Müller</em></td>
<td></td>
</tr>
</tbody>
</table>

## Middleware

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCRADES: A Web Service Based Shop Floor Integration</td>
<td>50</td>
</tr>
<tr>
<td>*Luciana Moreira Sá de Souza, Patrik Spiess, Dominique Guinard,</td>
<td></td>
</tr>
<tr>
<td><em>Moritz Köhler, Stamatis Karnouskos, and Domnic Savio</em></td>
<td></td>
</tr>
<tr>
<td>Automation of Facility Management Processes Using</td>
<td>68</td>
</tr>
<tr>
<td>*Sudha Krishnamurthy, Omer Anson, Lior Sapir, Chanan Glezer,</td>
<td></td>
</tr>
<tr>
<td><em>Mauro Rois, Ilana Shub, and Kilian Schloeder</em></td>
<td></td>
</tr>
<tr>
<td>The Software Fabric for the Internet of Things</td>
<td>87</td>
</tr>
<tr>
<td>*Jan S. Rellermeyer, Michael Duller, Ken Gilmer,</td>
<td></td>
</tr>
<tr>
<td><em>Damianos Maragkos, Dimitrios Papageorgiou, and Gustavo Alonso</em></td>
<td></td>
</tr>
</tbody>
</table>

## Business Aspects

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Benefits of Embedded Intelligence – Tasks and Applications for</td>
<td>105</td>
</tr>
<tr>
<td>Ubiquitous Computing in Logistics</td>
<td></td>
</tr>
<tr>
<td><em>Reiner Jedermann and Walter Lang</em></td>
<td></td>
</tr>
<tr>
<td>User Acceptance of the Intelligent Fridge: Empirical Results from a</td>
<td>123</td>
</tr>
<tr>
<td>Simulation</td>
<td></td>
</tr>
<tr>
<td><em>Matthias Rothensee</em></td>
<td></td>
</tr>
<tr>
<td>Sensor Applications in the Supply Chain: The Example of Quality-Based</td>
<td>140</td>
</tr>
<tr>
<td>Issuing of Perishables</td>
<td></td>
</tr>
<tr>
<td><em>Ali Dada and Frédéric Thiesse</em></td>
<td></td>
</tr>
</tbody>
</table>
Cost-Benefit Model for Smart Items in the Supply Chain

Christian Decker, Martin Berchtold, Leonardo Weiss F. Chaves, Michael Beigl, Daniel Roehr, Till Riedel, Monty Beuster, Thomas Herzog, and Daniel Herzig

155

RFID Technology and Regulatory Issues

Generalized Handling of User-Specific Data in Networked RFID

Kosuke Osaka, Jin Mitsugi, Osamu Nakamura, and Jun Murai

173

A Passive UHF RFID System with Huffman Sequence Spreading Backscatter Signals

Hsin-Chin Liu and Xin-Can Guo

184

Radio Frequency Identification Law Beyond 2007

Viola Schmid

196

Why Marketing Short Range Devices as Active Radio Frequency Identifiers Might Backfire

Daniel Ronzani

214

Applications

Object Recognition for the Internet of Things

Till Quack, Herbert Bay, and Luc Van Gool

230

The Digital Sommelier: Interacting with Intelligent Products

Michael Schmitz, Jörg Baus, and Robert Dörr

247

Socially Intelligent Interfaces for Increased Energy Awareness in the Home

Jussi Karlgren, Lennart E. Fahlén, Anders Wallberg, Pär Hansson, Olov Ståhl, Jonas Söderberg, and Karl-Petter Åkesson

263

Connect with Things through Instant Messaging

Jongmyung Choi and Chae-Woo Yoo

276

Developing a Wearable Assistant for Hospital Ward Rounds: An Experience Report

Kurt Adamer, David Bannach, Tobias Klug, Paul Lukowicz, Marco Luca Sbodio, Mimi Tresman, Andreas Zinnen, and Thomas Ziegert

289

Social Devices: Autonomous Artifacts That Communicate on the Internet

Juan Ignacio Vazquez and Diego Lopez-de-Ipina

308
<table>
<thead>
<tr>
<th>Sensing Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor Location Tracking Using Inertial Navigation Sensors and Radio Beacons</td>
</tr>
<tr>
<td>Pedro Coronel, Simeon Furrer, Wolfgang Schott, and Beat Weiss</td>
</tr>
<tr>
<td>Raluca Marin-Perianu, Clemens Lombriser, Paul Havinga, Hans Scholten, and Gerhard Tröster</td>
</tr>
<tr>
<td>Stream Feeds - An Abstraction for the World Wide Sensor Web</td>
</tr>
<tr>
<td>Robert Dickerson, Jiakang Lu, Jian Lu, and Kamin Whitehouse</td>
</tr>
<tr>
<td>Author Index</td>
</tr>
</tbody>
</table>