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The Internet of Things

First International Conference, IOT 2008
Zurich, Switzerland, March 26-28, 2008
Proceedings

Volume Editors

Christian Floerkemeier
Sanjay E. Sarma
Massachusetts Institute of Technology
Auto-ID Labs
77 Massachusetts Avenue, Cambridge, MA 02139, USA
E-mail: {floerkem,sesarma}@mit.edu

Marc Langheinrich
Friedemann Mattern
ETH Zurich
Inst. for Pervasive Computing
Clausiusstr. 59, 8092 Zurich, Switzerland
E-mail: {langhein,mattern}@inf.ethz.ch

Elgar Fleisch
ETH Zurich and
University of St. Gallen
Dufourstrasse 40a, 9000 St. Gallen, Switzerland
E-mail: elgar.fleisch@ethz.ch

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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

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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