Message from the Workshop Chairs

The world of embedded devices has experienced radical changes over the past few years, as more and more everyday and real-world objects can now easily connect to the Internet. This convergence of physical computing devices (wireless sensor networks, mobile phones, embedded computers, etc.) and the Internet provides new design opportunities and challenges. The Internet of Things community has mainly focused on establishing connectivity in a variety of challenging and constrained networking environments, which is a necessary step for a more networked world. The next logical step in the evolution of pervasive computing builds on top of network connectivity by focusing on the application layer: how to develop ubiquitous computing applications on top of heterogeneous environments? The Web of Things is the vision that brings embedded devices into the Web by leveraging existing Web standards to design and build application protocols to interact with the physical world.

The aim of this workshop is to bring together the pervasive computing and Web communities to explore the use of the core principles and technologies of the modern Web architecture (e.g., HTTP, REST, Atom, JSON, Webhooks, etc.) for seamless integration of things into the Web and developing applications on top of Web-enabled devices (physical mashups). Using a Web-based approach, new constraints and design issues must be considered. While certain application scenarios might not map well to Web concepts, the opportunities and networks effects offered by the Web makes it worthwhile to build the “Web of Things”.

The first edition of this workshop mainly focuses on architectures for the Web of Things. It features contributions about communication architectures for everyday objects, RESTful, WS-* and OSGi based services for resource limited devices, and also Web-enabled frameworks for wireless sensor networks. Other contributions explore making the Web of Things more usable, with topics such as semantic description of physical devices, sharing based on social networks and open repositories, and opportunistic composition of smart things.

We would like to thank all the contributors and authors for the 30 contributions from 15 different countries, a quite promising number! All papers have been evaluated through a double-blind review, from which 12 research papers and two demonstration papers have been accepted. We also want to thank the 20 members (coming from 10 countries) of our program committee and all the external reviewers for their invaluable help with evaluating the papers. We want to acknowledge the great support of the PerCom 2010 team and in particular the workshop chairs for their very valuable help in organizing WoT 2010. Finally, we want to thank ETH Zurich, SAP Research, the EU-project SENSEI, and the UC Berkeley School of Information's ISD Program for supporting the organization of this workshop.

The discussions and outcomes of this workshop will be available online at:
http://www.webofthings.com/wot/2010

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