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# Constructing Ambient Intelligence

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# Preface

A foreword for the present workshop proceedings cannot be provided without first looking at the larger context of the AMI conference in which the workshops were organized. The AMI 2007 conference has roots in preceding events, but in many respects, AMI can be called a novel conference format and hence a premiere. Among the several aims that inspired and shaped this new conference format, the following two are particularly worth considering: (1) to provide a forum for the *ambient intelligence* flavor of research on the Post-PC era of computer science, complementing the *ubiquitous computing* and *pervasive computing* flavors emphasized by already-existing conferences; (2) to offer an event that attracts contributions from all over the globe yet emphasizes European strengths – with particular reference to the Information Society Technologies (IST) branch of the EU research framework programs (FPs), which carry the same label as the conference.

The workshop organization chairs reflected these unique characteristics of the new AMI conference series in the *call for workshop proposals* using two corresponding measures: (1) by particularly soliciting workshops on in-depth topics corresponding to the above-mentioned ambient intelligence flavor of Post-PC research; (2) by offering two different workshop threads: one 'usual' thread for advanced topics (called "SW workshops") and one thread for workshops related to concrete EU FP6 and FP7 projects (called "EU workshops").

Considering the new-born status of the conference format, we were more than satisfied with the response to our call. For both threads, we received substantially more submissions than we could accommodate. We established a careful review process, in which we involved other members of the AMI Organizing Committee, and tried to resolve conflicts and overlaps partially as submissions were announced or came in. In this respect, the final acceptance rate is hard to quantify exactly, but the ten workshops finally accepted and held represent a little more than 50% of the original submissions. We did not collect formal reviews after the workshops, but received a large number of very positive comments. In particular, the attendance finally rose to more than half of the total number of conference attendants, a fact that we consider a spectacular success.

The ten accepted workshops turned out to be well distributed over the two threads: six SW and four EU workshops were held. Among the SW workshops, SW1 followed the above-mentioned spirit of AMI in that it emphasized artificial intelligence methods for AMI. The papers addressed pertinent topics like reasoning, ontologies, pattern search, and intelligent information networks. SW4 looked at building blocks for AMI systems under the label "smart products." Business aspects related to consumer products and novel IT security aspects came into focus in this workshop due to the particular accepted papers. Two workshops were "putting the human in the center" of interest: SW3 looked at model-driven approaches to multimodal interaction for AMI, and SW6 at human factors of AMI in general. SW5 concentrated on a particular application domain, namely, ambient-assisted living (AAL); the nice collection of papers covered diverse aspects, ranging from requirements over development support to pilots and

experiences, plus the pertinent topic of activity detection. The remaining workshop of this thread, SW2, was particular with respect to its emphasis on a "meta" problem, namely, user studies and user-centric evaluation of AMI systems in general.

The standard format proposed for EU workshops was a gathering for mutual updates on the status and achievements of the research work carried out in a particular large EU project; closed and open workshops were permitted. For such events, representation in the proceedings was restricted to summary and conclusion papers, typically one per workshop, in order to assure the scientific quality of the overall publication. The workshops on wirelessly accessible sensor platforms (WASP, EU2), on ambient knowledge discovery (KDubiq, EU5), and AAL (EU3, representing the two European projects SOPRANO and PERSONA, not to be confused with SW5) followed this format. The open, thoroughly reviewed workshop on the Amigo project (a large-scale EU activity on AMI in the home) deviated from the standard format for EU project workshops in that participants were allowed to contribute individual, quality-assured papers to the workshop proceedings. This exemption was given due to the high scientific standards observed by the organizers.

In conclusion, the valuable contributions compiled in this volume manifest the success and high scientific quality of the first set of workshops collocated with the AMI conference series. The workshop organizers would like to express their particular gratitude to Dr. Aitenbichler and Andreas Petter from Telecooperation, Technische Universität Darmstadt, and would like to thank the organizers of the individual workshops and all authors. These individuals – and more "helpers in the background" who must be left unmentioned for the sake of brevity – were truly instrumental for the realization and success of the AMI workshops. With the present proceedings, we are all privileged to harvest the fruits of hard work in the preparation, realization, and compilation of the AMI workshops. We hope that they are considered by the readers as worthwhile, valuable manifestations of creative scientific work.

January 2008                                                    Max Mühlhäuser
                                                               Alois Ferscha

# Table of Contents

## Smart Products: Building Blocks of Ambient Intelligence

## Ambient Assisted Living

## Human Aspects in Ambient Intelligence

## Amigo

## WASP - Wirelessly Accessible Sensor Populations

## Conjoint PERSONA - SOPRANO Workshop

## KDubiq Workshop