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Proceedings

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Preface

The ICT-EurAsia conference is thought as a platform for the exchange of ideas, experiences, and opinions among theoreticians and practitioners and for defining requirements of future systems in the area of ICT with a special focus on fostering long-term relationships among and with researchers and leading organizations in Eurasia.

On the one hand the idea of organizing this cross-domain scientific event came from the IFIP president Leon Strous at the IFIP 2010 World Computer Congress in Brisbane and on the other hand by the many activities of the ASEA-UNINET (ASEAN-European Academic University Network). This network was founded in 1994 especially to enhance scientific and research cooperation between ASEAN countries and Europe. The great success of ASEA-UNINET led to the foundation of the EPU-network (Eurasia Pacific University Network), which complements the geographic area of ASEA-UNINET covering the Eurasian super-continent. Both university networks have a strong focus on ICT.

The IFIP organizers of this event, especially the Technical Committees TC 5 (IT Applications) and TC 8 (Information Systems), very much welcome the fertilization of this event by the collocation of AsiaARES as a special track on Availability, Reliability and Security.

We would like to express our thanks to all institutions actively supporting this event:

- University Udayana, Indonesia
- International Federation for Information Processing (IFIP)
- ASEAN-European University Network
- Eurasia-Pacific University Network
- The Austrian Competence Centres for Excellent Technology SBA (Secure Business Austria)
- The Austrian Agency for International Cooperation in Education and Research
- The Austrian Embassy in Jakarta

The papers presented at this conference were selected after extensive reviews by the Program Committee and associated reviewers. We would like to thank all Program Committee members for their valuable advice, the chair of the special sessions, and the authors for their contributions.

Many persons contributed numerous hours to organize this conference. Their names will appear on the following pages as committee members of this scientific conference.

We are greatly indebted to the University of Udayana for the wholehearted support of its leaders. We would like to specifically mention the very significant support of President Prof. Ketut Suastika and Prof. I Made Suastra.

Last but not least, we want to thank Amin Anjomshoaa and Yvonne Poul for their contribution that made this edition of the conference proceedings possible.

January 2014

Linawati
Made Sudiana Mahendra
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Invited Talks

Interoperability - Problems and Solutions

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Abstract. Interoperability is a qualitative property of computing infrastructures that denotes the ability of the sending and receiving systems to exchange and properly interpret information objects across system boundaries.

Since this property is not given by default, the interoperability problem involves the representation of meaning and has been an active research topic for approximately four decades. Early database models such as the Relational Model used schemas to express semantics and implicitly aimed at achieving interoperability by providing programming independence of data storage and access.

After a number of intermediate steps such as Object Oriented Data Bases and Semi – Structured Data such as hypertext and XML document models, the notions of semantics and interoperability became what they have been over the last ten years in the context of the World Wide Web and more recently the concept of Open Linked Data.

The talk will concentrate on the early history but also investigate the (reoccurring) problem of interoperability as it can be found in the massive data collections around the Open Linked Data concepts. We investigate semantics and interoperability research from the point of view of information systems. It should give an overview of existing old and new interoperability techniques and point out future research directions, especially for concepts found in Open Linked Data and the Semantic WEB.

Sifting through the Rubble of Big Data for the Human Face of Mobile

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Abstract. As the landscape around Big data continues to exponentially evolve, the “big” facet of Big data is no more number one priority of researchers and IT professionals. The race has recently become more about how to sift through torrents of data to find the hidden diamond and engineer a better, smarter and healthier world. The ease with which our mobile captures daily data about ourselves makes it an exceptionally suitable means for ultimately improving the quality of our lives and gaining valuable insights into our affective, mental and physical state. This talk takes the first exploratory step into this direction by presenting motivating cases, discussing research directions and describing how to use mobiles to process and analyze the “digital exhaust” it collects about us to automatically recognize our emotional states and automatically respond to them in the most effective and “human” way possible. To achieve this we treat all theoretical, technical, psycho-somatic, and cognitive aspects of emotion observation and prediction, and repackage all these elements into a mobile multimodal emotion recognition system that can be used on any mobile device.

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