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IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of information technology for the benefit of all people.

IFIP is a non-profitmaking organization, run almost solely by 2500 volunteers. It operates through a number of technical committees, which organize events and publications. IFIP's events range from an international congress to local seminars, but the most important are:

- The IFIP World Computer Congress, held every second year;
- Open conferences;
- Working conferences.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is small and by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is also rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

Any national society whose primary activity is about information processing may apply to become a full member of IFIP, although full membership is restricted to one society per country. Full members are entitled to vote at the annual General Assembly, National societies preferring a less committed involvement may apply for associate or corresponding membership. Associate members enjoy the same benefits as full members, but without voting rights. Corresponding members are not represented in IFIP bodies. Affiliated membership is open to non-national societies, and individual and honorary membership schemes are also offered.

Yves Rybarczyk Tiago Cardoso
João Rosas Luis M. Camarinha-Matos (Eds.)

Innovative and Creative Developments in Multimodal Interaction Systems

9th IFIP WG 5.5 International Summer Workshop
on Multimodal Interfaces, eNTERFACE 2013
Lisbon, Portugal, July 15 – August 9, 2013
Proceedings



Springer

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Preface

This book contains the proceedings of the 9th International Summer Workshop on Multimodal Interfaces (eNTERFACE 2013), which was held in Lisbon, Portugal, during July 15th to August 9th, 2013. Following the tremendous success of the previous eNTERFACE workshops (www.enterface.net) held in Mons, Belgium (2005), Dubrovnik, Croatia (2006), Istanbul, Turkey (2007), Paris, France (2008), Genoa, Italy (2009), Amsterdam, The Netherlands (2010), Plzen, Czech Republic (2011) and Metz, France (2012), eNTERFACE 2013 aimed at continuing and enhancing the tradition of collaborative, localized research and development work by gathering, in a single place, leading researchers in multimodal interfaces and students to work on specific projects for four complete weeks. In this respect, it is an innovative and intensive collaboration scheme, designed to allow researchers to integrate their software tools, deploy demonstrators, collect novel databases, and work side by side with a great number of experts. It is thus radically different from traditional scientific workshops, in which only specialists meet for a few days to discuss state-of-the-art problems, but do not really work together.

In 2013, more than seventy researchers participated in eNTERFACE, which confirmed it as the largest workshop on multimodal interfaces. The event was attended by senior researchers, who were mainly university professors, industrial or governmental researchers presently working in widely dispersed locations, and junior researchers, who were mostly PhD students. In the first phase of the workshop, a call for proposals was circulated, for which interested researchers submitted project ideas. This was an international call, and it was widely circulated in all related major scientific networks. The Scientific Committee evaluated the proposals, and selected nine projects. In the second phase, a call for participation was circulated, in which the project leaders got to build their team. The would-be participants sent in a CV and why they were interested in joining a project. A small number of under-graduates were also selected, set on outstanding academic promise. Graduate students familiar with the field were selected in accordance with their demonstrated performance. This year, we have targeted projects on Innovative and Creative Developments in Multimodal Interaction Systems.

All the eNTERFACE 2013 projects have tackled new trends in human-machine interaction (HMI). The way in which the individual interacts with the devices is changing, mainly because of the boom of the gaming industry. This change encompasses two aspects. First of all, the user interfaces are more and more natural; and the large number of projects using a Kinect is a good example of this fact. The current HMI does not involve a single kind of input/output anymore, but a sophisticate signal processing from a combination of sensorial modalities and motor skills. Second, the development of applications based on

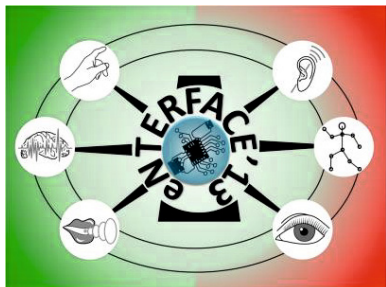
innovative scenario inspired from game concepts, for professional purposes (e.g. serious games), has significantly increased during the last decade. To address such a tendency, the studies presented in this volume have required a thin collaboration between computer scientists who have developed the prototypes, and other parties who have asked the relevant questions (e.g. artists, psychologists, industrial partners). The nine articles that compose this book are organized in two topical sections. The first one presents different proposals focused on some fundamental issues regarding multimodal interactions (i.e. telepresence, speech synthesis and interactive agents modeling). The second is a set of development examples in key areas of HMI applications (i.e. education, entertainment, and assistive technologies).

We would like to thank the authors for their contribution and the Steering Committee of eNTERFACE for the reviewing process of the articles, especially Albert Ali Salah, Gualtiero Volpe, Igor Pandzic, Antonio Camurri and Olivier Pietquin. We are also grateful to the sponsors of the event: Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa, UNINOVA, EUCog network and IFIP. Finally, we also wish to express our thanks to Springer for making the publication of this book possible.

January 2014

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9th International Summer Workshop on Multimodal Interfaces

Lisbon, Portugal,
15 July – 9 August 2013

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