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Universal Access

Theoretical Perspectives,
Practice, and Experience

7th ERCIM International Workshop on User Interfaces for All
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Revised Papers



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EDITORIAL

The 7th ERCIM Workshop “User Interfaces for All” took place in Paris (Chantilly), France, on 24–25 October 2002, building upon the results of the six previous workshops held in Heraklion, Crete, Greece, 30–31 October 1995; Prague, Czech Republic, 7–8 November 1996; Obernai, France, 3–4 November 1997; Stockholm, Sweden, 19–21 October 1998; Dagstuhl, Germany, 28 November–1 December 1999; and Florence, Italy, 25–26 October 2000.

The vision of User Interfaces for All advocates the proactive realization of the “design for all” principle in the field of Human-Computer Interaction (HCI), and involves the development of user interfaces to interactive applications and telematic services, which provide universal access and usability to potentially all users.

In the tradition of its predecessors, the 7th ERCIM Workshop “User Interfaces for All” aimed to consolidate recent work and to stimulate further discussion on the state of the art in User Interfaces for All and its increasing range of applications in the emerging Information Society.

The emphasis of the 2002 event was on “Universal Access.” The requirement for Universal Access stems from the growing impact of the fusion of the emerging technologies and from the different dimensions of diversity that are intrinsic to the Information Society. These dimensions become evident when considering the broad range of user characteristics, the changing nature of human activities, the variety of contexts of use, the increasing availability and diversification of information, knowledge sources and services, the proliferation of technological platforms, etc.

In this context, Universal Access refers to the accessibility, usability and, ultimately, acceptability of Information Society technologies by anyone, anywhere, anytime, thus enabling equitable access and the active participation of potentially all citizens in existing and emerging computer-mediated human activities. The user population includes people with different cultural, educational, training and employment backgrounds, novice and experienced computer users, the very young and the elderly, and people with different types of disabilities in various interaction contexts and scenarios of use. As people experience technology through their contact with the user interface of interactive products, applications and services, the field of HCI has a critical and catalytic role to play towards a universally accessible, usable and acceptable Information Society.

Efforts towards universal access to Information Society technologies have met wide appreciation by an increasing proportion of the international research community, leading to various European and international research and policy initiatives, and to the establishment of forums for the diffusion and exchange of ideas and research results. These initiatives contribute to appropriating the benefits of the increasing international momentum and interest in the topics of universal design and universal access. Among them, the ERCIM working group on “User Interfaces for All” plays a

catalytic role in bringing closer researchers and teams working in the different ERCIM organizations (but also organizations beyond ERCIM or the European boundaries), and sharing common interests and aspirations to contribute towards making the emerging Information Society equally accessible to all.

The 7th ERCIM Workshop “User Interfaces for All” attracted the strongest ever interest worldwide, with submissions covering a wide range of topics that include novel interaction paradigms and contexts of use, universal access to multimedia applications, software design and architecture for User Interfaces for All, design issues in User Interfaces for All, new modalities and dialogue styles, accessibility issues in novel interaction paradigms, design and usability in mobile computing, privacy issues in Universal Access and assessment and standards. The workshop featured two keynote speeches: “The Kiss of the Spiderbot” by Dr. Steven Pemberton (CWI, The Netherlands) and “Universal Access and Privacy: Making AVANTI Legal” by Prof. Alfred Kobsa (University of California, Irvine, USA).

The present volume was organized into 6 thematic parts.

The first two parts focus on research aiming at increasing the accessibility of current software applications for users with disabilities. Contributions in the first part address usability issues dealing with experimental, methodological, and application-oriented approaches. In the second part, design approaches, tools, and an assessment methodology are proposed for implementing universal access.

The third part is centered on providing easy access for the general public to major emerging computer applications in the Information Society. The application domains addressed by papers in this part are e-government, digital and interactive TV, and collaborative or sociable virtual environments. The issue of privacy, which was the topic of the invited talk by Prof. Alfred Kobsa, is also addressed in a paper in this part.

In the fourth and fifth parts, new interaction media, modalities, forms of multimodality, and dialogue styles which may contribute to increased computer accessibility are considered from the software and usability points of view. A number of papers in the fourth part focus on the design and implementation of new interaction modalities, whereas other papers address software and the usability aspects of anthropomorphic HCI, and especially issues relating to the introduction of human avatars. The first three papers in the fifth part illustrate how alternative media and modalities can be used to improve computer accessibility, whereas the last paper draws on the results of recent scientific and technical advances in this area to facilitate the interaction of ill-sighted people with the real world.

Finally, in the sixth part, research on mobile human-computer interaction, another facet of universal access, is presented. In particular, one paper in this part hints at the fruitful relationships that could be developed between research on providing computer access for all and work on enabling computer access in all contexts by illustrating how mobile computing may benefit from research on augmentative alternative

communication for users suffering from amyotrophic lateral sclerosis. Other contributions address design issues, usability assessment, and standardization.

We would like to thank all the contributors and participants who made this workshop a very successful international event. In particular, we wish to thank the Scientific Programme Committee and the external reviewers for their dedicated efforts to ascertain the scientific quality of the Workshop, as well as the invited speakers Dr. Steven Pemberton and Prof. Alfred Kobsa.

December 2002

Noëlle Carbonell, Constantine Stephanidis

7th ERCIM Workshop “User Interfaces for All”

Paris (Chantilly), France, 24–25 October 2002

Special Theme: “Universal Access”

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