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Human-Computer Interaction – INTERACT 2007

11th IFIP TC 13 International Conference
Rio de Janeiro, Brazil, September 2007
Proceedings, Part I

1 Part I

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Foreword

INTERACT 2007 was the 11th of a series of INTERACT international conferences supported by the IFIP Technical Committee 13 on Huma – Computer Interaction. This year, INTERACT was held in Rio de Janeiro (Brazil), organized by the Informatics Department at the Pontifcia Universidade Catlica do Rio de Janeiro, with the support of PETROBRAS, CGI.BR (Comit Gestor da Internet no Brasil), and Microsoft.

Like its predecessors, INTERACT 2007 highlighted, to both the academic and industrial world, the importance of the human – computer interaction (HCI) area and its most recent breakthroughs on current applications. Both experienced HCI researchers and professionals, as well as newcomers to the HCI field, interested in designing or evaluating interactive software, developing new interaction technologies, or investigating overarching theories of HCI, found in INTERACT 2007 a great forum to communicate with people with similar interests, to encourage collaboration, and to learn.

INTERACT 2007 had "socially responsible interaction as its special theme. Human beings have evolved for many millennia; during most of that time, our major social contacts were within small, tightly knit groups who shared a common language culture and physical context. In the last historical eyeblink, we rather suddenly find ourselves part of a global community. We have very different cultures, languages, perspectives, and physical contexts. Moreover, as a species, we face the possibility of bringing about our own extinction if we cannot solve some exceedingly challenging problems. Our individual brainpower has not increased significantly in the last 100,000 years. Computing and communication technologies offer some potential, however, to increase greatly our collective intelligence and creativity. With the proper attention to both the human and technological aspects of HCI, we have the possibility to make a crucial difference in a variety of issues. For example, it is now possible as never before to design technology to support universal usability and accessibility. We desperately need new thinking for our political, social, economic, and ecological problems. We can now build tools to support creativity, discovery, and innovation. Recently, we have begun to understand more about how to use technology to help integrate how we work as a team or in groups and communities. Medical informatics and personal medical devices offer new opportunities to reduce skyrocketing health care costs in the developed world and offer new hope to eradicate disease in developing countries.

Being the first edition in Latin America, INTERACT 2007 served as a window to new purposes, focuses, and cultural approaches. If one of the main aims of the International Federation for Information Processing is to balance the development of computer technology internationally and to assist in the sharing of the knowledge in this area among all the countries, then the HCI field is of vital

importance so to facilitate the access to technology by all kinds of users. We hope that INTERACT 2007 will be remembered as a milestone in the progress towards a world able to share and balance the benefits of computer technologies.

September 2007   Simone D.J. Barbosa
                                                      Julio Abascal

IFIP TC13

Established in 1989, the International Federation for Information Processing Technical Committee on Human – Computer Interaction (IFIP TC13) is an international committee of 29-member national societies and 5 working groups, representing specialists in human factors, ergonomics, cognitive science, computer science, design and related disciplines. INTERACT is its flagship conference, staged biennially in different countries.

IFIP TC13 aims to develop the science and technology of human – computer interaction (HCI) by encouraging empirical research, promoting the use of knowledge and methods from the human sciences in design and evaluation of computer systems; promoting better understanding of the relation between formal design methods and system usability and acceptability; developing guidelines, models and methods by which designers may provide better human-oriented computer systems; and, cooperating with other groups, inside and outside IFIP, to promote user-orientation and humanization in system design. Thus, TC13 seeks to improve interactions between people and computers, encourage the growth of HCI research and disseminate these benefits world-wide.

The main orientation is towards users, especially non-computer professional users, and how to improve human – computer relations. Areas of study include: the problems people have with computers; the impact on people in individual and organizational contexts; the determinants of utility, usability and acceptability; the appropriate allocation of tasks between computers and users; modeling the user to aid better system design; and harmonizing the computer to user characteristics and needs.

While the scope is thus set wide, with a tendency towards general principles rather than particular systems, it is recognized that progress will only be achieved through both general studies to advance theoretical understanding and specific studies on practical issues (e.g., interface design standards, software system consistency, documentation, appropriateness of alternative communication media, human factor guidelines for dialogue design, the problems of integrating multimedia systems to match system needs and organizational practices, etc.).

IFIP TC13 stimulates working events and activities through its working groups (WGs). WGs consist of HCI experts from many countries, who seek to expand knowledge and find solutions to HCI issues and concerns within their domains, as outlined below.

In 1999, TC13 initiated a special IFIP Award, the Brian Shackel Award, for the most outstanding contribution in the form of a refereed paper submitted to and delivered at each INTERACT event. The award draws attention to the need for a comprehensive human-centred approach in the design and use of information technology in which the human and social implications have been

taken into account. Since the process to decide the award takes place after papers are submitted for publication, the award is not identified in the proceedings.

WG13.1 (Education in HCI and HCI Curricula) aims to improve HCI education at all levels of higher education, coordinate and unite efforts to develop HCI curricula and promote HCI teaching.

WG13.2 (Methodology for User-Centred System Design) aims to foster research, dissemination of information and good practice in the methodical application of HCI to software engineering.

WG13.3 (HCI and Disability) aims to make HCI designers aware of the needs of people with disabilities and encourage development of information systems and tools permitting adaptation of interfaces to specific users.

WG13.4 (also WG2.7) (User Interface Engineering) investigates the nature, concepts and construction of user interfaces for software systems, using a framework for reasoning about interactive systems and an engineering model for developing user interfaces.

WG13.5 (Human Error, Safety and System Development) seeks a framework for studying human factors relating to systems failure, develops leading-edge techniques in hazard analysis and safety engineering of computer-based systems, and guides international accreditation activities for safety-critical systems.

WG13.6 (Human-Work Interaction Design) aims at establishing relationships between extensive empirical work-domain studies and HCI design. It will promote the use of knowledge, concepts, methods and techniques that enables user studies to procure a better apprehension of the complex interplay between individual, social and organizational contexts and thereby a better understanding of how and why people work in the ways that they do.

New Working Groups are formed as areas of significance to HCI arise. Further information is available at the IFIP TC13 Web site: http://www.ifip-hci.org/

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