

Accessible Design in the Digital World

Gerhard Weber, Helen Petrie, Jenny Darzentas

► **To cite this version:**

Gerhard Weber, Helen Petrie, Jenny Darzentas. Accessible Design in the Digital World. Pedro Campos; Nicholas Graham; Joaquim Jorge; Nuno Nunes; Philippe Palanque; Marco Winckler. 13th International Conference on Human-Computer Interaction (INTERACT), Sep 2011, Lisbon, Portugal. Springer, Lecture Notes in Computer Science, LNCS-6949 (Part IV), pp.720-721, 2011, Human-Computer Interaction – INTERACT 2011. <10.1007/978-3-642-23768-3_132>. <hal-01596908>

HAL Id: hal-01596908

<https://hal.inria.fr/hal-01596908>

Submitted on 28 Sep 2017

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Accessible Design in the Digital World

Gerhard Weber¹, Helen Petrie², JennyDarzentas³

¹Department of Computer Science, Technical University of Dresden
Nöthnitzer Straße 46, 01187 Dresden, Germany
Gerhard.Weber@tu-dresden.de

²Department of Computer Science, University of York,
Deramore Lane, Heslington East,
York YO10 5GH United Kingdom
Helen.Petrie@cs.york.ac.uk

³Department of Product and Systems Design Engineering, University of the
Aegean, Konstantinoupoleos, 2 Hermoupolis, Syros Greece
jennyd@aegean.gr

Abstract. The workshop provides an opportunity for researchers, practitioners and designers interested in eAccessibility to discuss and debate the possibilities for accessibility and usability in the emerging world of Web 2.0, ubiquitous and pervasive technologies, and multimodal interaction, bridging desktop and mobile applications.

1 Background to the Workshop

Many approaches for developing user interfaces are based on the concept of user centered design (UCD). If UCD is applicable, the capabilities of users, analysis of tasks and contexts are the basis for all further work including the evaluation of some interactive system. An approach for designing accessible user interfaces is much harder to implement as in all steps users with large variations of capabilities and preferences have to be considered.

Communities of users have unique ways of addressing issues and different approaches for solving problems arising from lack of accessibility. Web 2.0 addresses communities of users specifically and allows authoring of content in flexible ways. But authoring of Web 2.0 content by users with different disabilities is still difficult and new approaches to implement assistive technologies will be needed to ensure successful integration of these users.

2 Goals and Issues

The workshop aims to develop a better understanding of the varied communities of users in the digital world, how accessible design solutions benefit from collaboration of users having possibly different if not contradicting requirements, systems that support such collaboration and evaluation methods allowing better insight by experts into the limitations of assistive technologies while using services in the digital world collaboratively.

Web 2.0 has arrived with a plethora of possibilities to contribute information through many types of media. The workshop is interested in studies accessibility issues related to usage of such services.

Mobile devices combine social platforms with location based services. Thereby the digital and the physical world may be bridged while taking the physical context of services and applications into account. In this context, lack of mobility adds to the possible of accessibility of mobile services. Reporting about obstacles, collaborative pre-journey systems, finding accessible routes and rating places from the perspective of users with a disability or who are elderly are topics of this workshop.

Novel cyber-physical systems (Lee, 2008) integrate computational with physical design, propose more natural user interfaces, may be multimodal, and are implemented as embedded systems. Accessibility of cyber-physical devices is much harder to ensure as embedded devices lack assistive technologies by and large. Tangible user interfaces are one example. Access by physically impaired people to collaborative tangible interaction for example on large multitouch tables cannot easily be ensured by writing software and must be designed from the beginning on. Submissions to this workshop should address solutions for designing accessible cyber-physical systems.

Support tools and methods in all stages of user-centered design are to be considered in Web 2.0 application domains such as education, location-based services, and e-government. Cloud-based computing and collaborative accessibility are examples for new technologies which may be utilized for better integration of all users.

Organisation

The Accessible Design in the Digital World conference was conceived by the University of Dundee's Digital Media Access Group, which was held in Dundee in 2005. ADDW 2008 was hosted by York University and brought an international group together, who were presenting their papers over two days (Petrie, 2008).

ADDW 2011 is supported by IFIP Working Group TC 13.3 *HCI and Disabilities*. Organizers of ADDW 2008 and chairs of WG 13.3 are organizing this workshop.

References

- Lee, Edward. Cyber Physical Systems: Design Challenges. University of California, Berkeley Technical Report No. UCB/EECS-2008-8.
<http://www.eecs.berkeley.edu/Pubs/TechRpts/2008/EECS-2008-8.html>. (January 23, 2008).
Petrie, H. (ed.) Proc. ADDW 2008, CD-ROM, University of York, Dept. Computer Science.