

Including Accessibility and Inclusive Design in the Curriculum for Human-Computer Interaction

Joint Workshop of IFIP WG 13.1 on Education in HCI and HCI Curriculum and
IFIP WG 13.3 on HCI and Disability

M Noirhomme-Fraiture¹, C Nicolle², P Kotzé³ & J Abascal⁴

¹Institut d'Informatique, Facultés Univ. N.D. de la Paix, Namur, Belgium

²Ergonomics and Safety Research Institute (ESRI), Loughborough University,
Loughborough, United Kingdom

³School of Computing, University of South Africa, Pretoria, South Africa

⁴Laboratory of HCI for Special Needs, University of the Basque Country,
Donostia, Spain

mnoirhomme@info.fundp.ac.be, c.a.nicolle@lboro.ac.uk, kotzep@unisa.ac.za,
julio@si.ehu.es

1 Background

Older and disabled people need to be able to access information and communication technology (ICT), and also have a right to be able to use ICT easily and effectively. IFIP Working Group 13.3 on HCI and Disability are co-sponsoring this workshop with Working Group 13.1 on Education in HCI and HCI Curriculum.

Two of the aims of WG13.1 are to coordinate and unite efforts to enhance the development of HCI curricula, and to recommend fundamental structures for curricula and course materials and for their adaptation to the various national educational systems. The principal aims of WG13.3 on Human-Computer Interaction and Disability are to make HCI designers aware of the special needs of disabled and elderly people, to recommend guidelines for the design of HCI to facilitate the use of computers by disabled persons, and to encourage the development of systems equipped with hardware and software tools which permit the adaptation of the human interface to each specific user.

The aims of these two working groups therefore create a topical and strategic opportunity to coordinate their efforts to enhance the development

of HCI curricula with an awareness of the concepts and principles of accessibility and inclusive design.

Results from the workshop will also support the objectives of eEurope¹ and the European Secretariat for the Design for All e-Accessibility Network (EdeAN)² with regard to the development of curriculum recommendations in the area of Design for All in ICT. This will take place through cooperation with the IDCnet project under the Information Society Technologies Programme of the European Commission³. IDCnet is a Thematic Network whose main objective is to develop curricula recommendations for ICT designers and engineers that include Design for All (or Universal Access) in dialogue with industry.

2 Motivation

It is well known that user issues are not sufficiently considered in many curricula. For this reason, WG13.1 aims to enhance the presence of user

¹ http://europa.eu.int/information_society/eeurope

² <http://www.e-accessibility.org>

³ <http://www.idcnet.info/idcnet/home.xhtml>

related topics, such as usability, human-centred design, etc., in a variety of disciplines such as computer science, information systems, engineering studies, etc. Nevertheless, human aspects are frequently introduced without giving enough importance to human diversity. It is very important to acknowledge that some users, such as disabled and elderly people, non-native speakers, people using the computer in special conditions (while driving, working, walking, etc.) have special needs. Although there has been some advancements in coping with special needs, and industry is very interested in studying new styles of interaction (often related to ubiquitous computing), the human users who have special needs are usually forgotten.

One of the reasons for not keeping users with disabilities in mind is the lack of knowledge about their needs. Even when the designers are interested in creating inclusive devices or services, they do not know how to do it.

Therefore, it is crucial to integrate in the curricula topics related to accessibility and inclusive design. Future designers must know sound inclusive design methodologies, master adequate design tools and base their designs in trustful sets of guidelines.

3 Scope and Purpose

The purpose of the workshop is to promote the importance of training in the design community in the principles of accessibility and inclusive design that will include the needs of as many users as possible. The scope of this work will be:

- To collect examples of accessibility and inclusive design in the HCI curriculum.
- To discuss the needs of industry with regard to HCI, accessibility and inclusive design.
- To exchange information on existing curricula, course literature and other relevant materials on HCI, accessibility and inclusive design.
- To produce recommendations for HCI curricula at different levels of higher education which will incorporate the concepts and principles of accessibility and inclusive design.
- To network and learn from each other.

The following topics will be presented and discussed:

- The needs of industry with regard to HCI, accessibility and inclusive design.
- The needs of academia with regard to HCI, accessibility and inclusive design.

- Examples of accessibility and inclusive design in the HCI curriculum, including existing curricula, course literature and other relevant materials on HCI, accessibility and inclusive design, and covering a range of application areas, e.g. web design, office hardware and software, consumer products, etc.

The anticipated outcomes of the workshop is an official joint publication by Working Groups 13.1 and 13.3 consisting of papers, discussions, results, as well as a list of statements that can be the starting point for further research on the issues involved.

References to Past Work of the Working Groups

- Abascal J. and Nicolle C. (2000). The Application of USERfit Methodology to Teach Usability Guidelines. In C. Farenc & J. Vanderdonck (eds.), *Tools for Working with Guidelines* (pp. 209-216). London: Springer.
- Kotzé, P. and Oestreicher L. (2002). Teaching Human-Computer Interaction: Qualitative Support for an Alternative Approach.. In J Hammond, T Gross & J Wesson (eds), *Usability Gaining a Competitive Edge*, IFIP 17th World Computer Congress – TC13 Stream on Usability, Kluwer Academic Publishers, 267–281.
- Nicolle, C. and Abascal, J. (eds.) (2001). *Inclusive Design Guidelines for HCI*. London: Taylor & Francis.
- Noirhomme-Fraiture, M. (1999). Report of IFIP WG 13.3 workshop on *Making Designers Aware of Existing Guidelines for Accessibility*. Interact'99, Edinburgh, in ACM Sigcaph, No. 65, September 1999. (Individual papers in No. 69 and No. 70)
- Noirhomme-Fraiture, M. and Nicolle, C. (2001). *Are Guidelines for Accessibility Accessible?* Report of IFIP 13.3 Workshop, IHM-HCI 2001 Conference, Lille.
- Oestreicher, L. and Kotzé, P. (2000). Workshop on Developing Educational Material for HCI. In: Gulliksen, J, Lantz, A, Oestreicher, L. & Severinson-Eklundh, S., (eds). NordiCHI 2000 – Design vs. Design, Proceedings from the 1st Nordic Conference on Computer-Human Interaction, Stockholm.