

Technologies for Enhancing Accessibility and Fighting Info-exclusion

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Information and Communication Technologies (ICT) play a major role in our lives. However, ICT development which is indifferent to the concerns of social inclusion may raise barriers and increase the gap between the average user and those with special needs, instead of contributing to eliminating this gap and promoting equal rights and opportunities for all.

Senior citizens and others with special needs are often faced with multiple minor disabilities that prevent them from enjoying the benefits of technology and higher quality of life standards. According to the UN Convention on the Rights of Persons with Disabilities, technology design should take into account accessibility and usability features for the protection and promotion of the human rights of persons with disabilities, in all policies and programmes.

This special issue of the Journal of Universal Computer Science contains a selection of papers from the 4th International Conference on Software Development for Enhancing Accessibility and Fighting Info-Exclusion – DSAI 2012, which was held in the Douro Region, in Portugal on 19-22 July, 2012. The contributions selected show the wide range of topics in the area of universal access and assistive technologies.

Ramiro Gonçalves et al. “Can I access my school website? Auditing Accessibility of the Portuguese Teaching Institutions ‘Websites’” evaluates the accessibility levels

of the Portuguese teaching institutions' websites, using a specialized software tool and according to WCAG 2.0. They propose a model that aims to improve the web accessibility levels by fostering the creation of relations and group activities between the actors in the web content creation.

The contribution by María González-García et al., entitled "A Model-Based Graphical Editor to Design Accessible Media Players", is a tool that provides support to designers with little background in accessibility to design accessible media players. The tool aims to provide technology and platform independency and also facilitates the design of accessible media players by designers new to the area of accessibility.

In their paper "Development of Navigation Skills through Audio Haptic Videogaming in Learners who are Blind", Jaime Sánchez and Marcia de Borba Campos evaluate the usability and the impact of the use of an audio and haptic-based videogame on the development of orientation and mobility skills in school-age learners who are blind.

Katerina Kalyvioti and Tassos Mikropoulos in their paper "A Virtual Reality Test for the Identification of Memory Strengths of Dyslexic Students in Higher Education" present studies for the identification of visuospatial strengths that enable the exploration of nonverbal problem solving treatment and the increase of awareness in educators and parents of children with dyslexia. The study suggests that hands on Virtual Reality applications, become an indispensable part of these deficits' cognitive assessment and rehabilitation.

In the paper by Sofia Dias and José Diniz, "From Blended to Inclusive Learning: Accessibility, Profiles, Openness, and Higher Education", the main propose is to understand users' needs and to identify their profiles, in order to empower the quality of the online teaching-learning process. The study can support an inclusive, multi-dimensional and holistic ICT knowledge for choosing adjustable teaching-learning strategies.

We would like to thank all the reviewers for their valuable input, as well as the authors, who at all times pursued the best quality. Special thanks to J.UCS managing editor Christian Gütl, for his guidance and to Dana Kaiser assistant editor for all the help during the process. Finally, we hope all our readers enjoy and learn from the shared experiences on technologies for enhancing accessibility and fighting info-exclusion for further research and collaboration on this domain!

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Special Issue Guest Editors