View metadata, citation and similar papers at core.ac.uk

brought to you by CORE

provided by Elsevier - Publisher Connector

Available online at www.sciencedirect.com

SciVerse ScienceDirect

Procedia Computer Science 14 (2012) iii–iv

Procedia Computer Science

Contents

AsTeRICS, a Flexible Assistive Technology Construction Set
R. Ossmann, D. Thaller, G. Nussbaum, F. Pühretmair, C. Veigl, C. Weiß, B. Morales, U. Diaz . . . 1
MobiFree: A Set of Electronic Mobility Aids for the Blind
S.I. Lopes, J.M.N. Vieira, Ó.F.F. Lopes, P.R.M. Rosa, N.A.S. Dias . . . 10
A Web-based Application to Address Individual Interests of Children with Autism Spectrum Disorders
M.L. da Silva, D. Gonçalves, T. Guerreiro, H. Silva . . . 20
Evaluating the Accessibility of Web Applications
N. Fernandes, D. Costa, C. Duarte, L. Carriço . . . 28
Evaluation of Web Accessibility: An Approach Related to Functional Illiteracy
E.P. Capra, S.B.L. Ferreira, D.S. da Silveira, A.O. Ferreira . . . 36
Protocols for Evaluation of Site Accessibility with the Participation of Blind Users
S.B.L. Ferreira, D.S. da Silveira, E.P. Capra, A.O. Ferreira . . . 47
Web Accessibility and Digital Businesses: The Potential Economic Value of Portuguese People with Disability
T. Rocha, M. Bessa, R. Gonçalves, E. Peres, L. Magalhães . . . 56
Indoor Localization and Navigation for Blind Persons using Visual Landmarks and a GIS
M. Serrão, J.M.F. Rodrigues, J.I. Rodrigues, J.M.H. du Buf . . . 65
Realtime Local Navigation for the Blind: Detection of Lateral Doors and Sound Interface
M. Moreno, S. Shahrabadi, J. José, J.M.H du Buf, J.M.F. Rodrigues . . . 74
Obstacle Detection using Stereo Imaging to Assist the Navigation of Visually Impaired People
P. Costa, H. Fernandes, P. Martins, J. Barroso, L.J. Hadjileontiadis . . . 83
Blind Navigation Support System based on Microsoft Kinect
V. Filipe, F. Fernandes, H. Fernandes, A. Sousa, H. Paredes, J. Barroso . . . 94
Development of Navigation Skills Through Audio Haptic Videogaming in Learners Who are Blind
J. Sánchez . . . 102
Music Spectrum: A Music Immersion Virtual Environment for Children with Autism
D. Lima, T. Castro . . . 111
Usability Test of 3Dconnexion 3D Mice Versus Keyboard+Mouse in Second Life Undertaken by People with Motor Disabilities due to Medullary Lesions
M. Martins, A. Cunha, L. Morgado . . . 119
New Interaction Paradigms to Fight the Digital Divide: A Pilot Case Study Regarding Multi-touch Technology
D. Carvalho, M. Bessa, L. Oliveira, C. Guedes, E. Peres, L. Magalhães . . . 128
A Tool to Facilitate Including Accessible Content in Moodle to the Person with Visual Impairment
V.R. Ulbricht, T. Vanzin, M. Amaral, V. Vilarouco, S.R.P. de Quevedo, L.A.M. Moretto, A.R.B. Flores . . . 138
A Tool to Evaluate the Level of Inclusion of Digital Learning Objects
M. Guenaga, I. Mechaca, S. Romero, A. Eguíluz . . . 148
Accessibility Guidelines for the Development of Learning Objects
C.M.S. de Macedo, V.R. Ulbricht . . . 155
Connecting Families and Schools of Students with Deafness: Describing the ICT and Internet use in Education
S. Capitão, A.M.P. Almeida, R.M. Vieira . . . 163
Transforming a Paper based Process to a Natural User Interfaces Process in a Chronic Care Hospital
J. Anacleto, S. Fels, R. Silvestre . . . 173
A Bluetooth Approach to Diabetes Sensing on Ambient Assisted Living systems
S. Silva, H. Martins, A. Valente, S. Soares . . . 181
User-Centered Healthcare Design
J. Duarte, A. Guerra . . . 189
Multitouch Tabletop Technology for People with Autism Spectrum Disorder: A Review of the Literature
W. Chen . . . 198
AMIGA - An Interactive Musical Environment for Gerontechnology
L.S. Reis, G. Reis, J. Barroso, A. Pereira . . . 208
RoboGuideDog: Guiding Blind users Through Physical Environments with Laser Range Scanners
J.V. Gomez, F.E. Sandnes . . . 218
A Mobile Application for Displaying More Accessible eBooks for People with Dyslexia
L. Rello, G. Kanvinde, R. Baeza-Yates . . . 226

Evaluation of Potential Communication Breakdowns in the Interaction of the Deaf in Corporate Information Systems on the Web
A. da Silva Alves, S.B.L. Ferreira, V.S. de Oliveira, D.S. da Silva 234
Accessibility for People with Cerebral Palsy: The Use of Blogs as an Agent of Social Inclusion
A.O. Ferreira, S.B.L. Ferreira, D.S da Silveira 245
An Approach to User Interface Design of an Accessible User Agent
M. González, L. Moreno, P. Martínez 254
Aligning Usability Requirements with the Accessibility Guidelines Focusing on the Visually-impaired
S.B.L. Ferreira, R.R. Nunes, D.S. da Silveira 263
Accessible Content Generation an Integral Part of Accessible Web Design
K. Matausch, B. Peböck, F. Pühretmair 274
Evaluation of Brain-computer Interfaces in Accessing Computer and other Devices by People with Severe Motor Impairments
G. Pires, U. Nunes, M. Castelo-Branco 283
The International Classification of Functioning, Disability and Health as a Conceptual Model for the Evaluation of Environmental Factors
A.I. Martins, A. Queirós, M. Cerqueira, N. Rocha, A. Teixeira 293
Usability Evaluation of Electronic Government Services for Interactive TV
C.A. Tambascia, E.M. Menezes, S.M. Kutiishi, R.C. Barbosa 301
Panorama of the Accessibility Add-ons use in Firefox
T.J. Bittar, A.K. Almeida, R.P. de Mattos Fortes 311
Haptic Perception of Document Structure for Visually Impaired People on Handled Devices
F. Maurel, G. Dias, J.-M. Routoure, M. Vautier, P. Beust, M. Molina, C. Sann 319
The Evolving University: Disruptive Change and Institutional Innovation
P.M.A. Baker, K.R. Bujak, R. DeMillo 330
Social Media, Avatars, and Virtual Worlds: Re-imagine an Inclusive Learning Environment for Adolescents and Adults with Literacy Barriers
N. Gregg, Y. Chang, R. Todd 336
Universal Design for Learning: Enhancing Achievement of Students with Disabilities
M.V. Izzo 343
An Online Accessible Learning Environment for a Selection and Training Process of Teachers in the Public Basic Education System in Brazil
L.H. Mauch, C. Mauch 351
Use of Text-to-speech Software to Improve Reading Skills of High School Struggling Readers
R.A. Stodden, K.D. Roberts, K. Takahashi, H.J. Park, N.J. Stodden 359
Implementation of Accessibility Standards in the Process of Course Design in Virtual Learning Environments
H.R. Amado-Salvatierra, R. Hernández, J.R. Hilera 363
The Challenge of Teaching to Create Accessible Learning Objects to Higher Education Lecturers
E.G.y. Restrepo, C. Benavidez, H. Gutiérrez 371
Including Accessibility in Higher Education Curricula for ICT
J.L. Fuertes, Á.L. González, L. Martínez 382
Knowledge Representation in Support of Adaptable eLearning Services for all
J. Sarraipa, S. Baldiris, R. Fabregat, R. Jardim-Goncalves 391
Including Diversity Through Cooperation
A. Ribeiro, L.A. Pires 403
Memory Performance of Dyslexic Adults in Virtual Environments
K. Kalyvioti, T.A. Mikropoulos 410
Teaching Intervention Through a Hypermedia Application for Children with Learning and Communication Difficulties
E. Morfidi, T.A. Mikropoulos, I. Bellou 419
An Online Expert System for Diagnostic Assessment Procedures on Young Children's Oral Speech and Language
E.I. Toki, J. Pange, T.A. Mikropoulos 428
Blended Learning in Higher Education: Different Needs, Different Profiles
S.B. Dias, J.A. Diniz 438