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Intelligent Information Technologies for Blind and Visually Impaired Peoples

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Introduction: Disabled people should be able to play their part in our information society using new technologies under the same conditions as any other citizen. There are now tools that, to a greater or lesser extent, can alleviate the difficulties arising from visual impairment, and there are also design standards for Web pages that make Internet access possible for the visually impaired who, in turn, should commit to accessibility by using and helping to develop the new solutions. The two fundamental problems facing blind people are the difficulty of knowing where they are and getting about, and the impossibility of having direct access to information, whether in written or in electronic form. The introduction of computer technology into the work-place and education has had a great impact on opportunities available to visually disabled people in both education and employment. For example, Deaf-Blind people can be guided and can obtain various types of information by using a wearable computer equipped with the Finger-Braille device and an RFID tag reader. Moreover, Communication support technology and position identification technology are essential to support Deaf-Blind people. As communication interfaces, we proposed wearable Finger-Braille interfaces which are hands-free and can communicate with others in real-time. Learners with visual impairment need to acquire basic competencies in the communication and information society and enjoy the same learning opportunities in ICT as their sighted counterparts. Sighted children observe, imitate, and are constantly surrounded by technology. They press buttons, touch computers and "play" on them whenever they are allowed to. However, visually impaired children need help and support at this initial stage. They require existing resources to be adapted to their needs and presented to them by others. To give people with visual disabilities the chance to have access to multimedia games should be seen as an important issue for better inclusion and participation in society. Designing

games that work for visually impaired children is quite a challenge since the main feedback channel in games is usually visual. Indeed even if audio is more and more used in mainstream games, it has only a complementary role in a huge majority of cases. It improves the experience of the player but it is usually not bringing necessary pieces of information that the player would not get visually. For instance most of these games can be played efficiently with sound switched off. This workshop will focus mainly on the problems and applications that deal with the intelligent Information Technologies for Blind and Visually Impaired Peoples using intelligent computing and virtual reality technologies as an emerging research area.

- Computer Vision Tools for Visually Impaired Children Learning
- Virtual reality technologies for blind people and people with special needs
- Intelligent Image Processing for blind and Visually Impaired Peoples
- Computer Games and Visually Impaired People
- Improving the Reality Perception of Visually Impaired through Pervasive Computing
- Virtual Leading Blocks for the Deaf-Blind
- Wearable Finger-Braille Interface for Navigation of Deaf-Blind in Ubiquitous
- Access to Scientific Content by Visually Impaired People
- Intelligent Game Accessibility for blind and Visually Impaired People
- Intelligent navigating in speech for blind
- Augmented Indoor Modeling for Navigation Support for the Blind

- Web based information system for blind and visually impaired
- Creation of a virtual acoustic space Haptic virtual reality for blind
- RFID in robot-assisted indoor navigation for the visually impaired.
- Interact with computer-generated graphical information for Blind people
- Initial design and evaluation of an interface to hypermedia systems for blind users
- Issue of Technical Assistance for Blind People
- Assistive Technology for the Blind
- Design of an Intelligence Auditory Interfaces
- Designing an intelligent haptic computer interfaces for blind people
- Interpretation and understanding of complex scientific data for blind peoples
- Indoor navigation system for blind individuals with impaired vision
- An Intelligent Mobility System for for visually impaired peoples

International Program Committee

TBA

Instructions for Authors:

Papers must correspond to the requirements detailed in the (Paper Submission) on the conference flyer http://cig.iet.unipi.it/isda2010/flyer.pdf The ISDA 2010 Proceedings will be included in the IEEE Xplore digital library. Before publishing your final work at IEL, we need your kind help to ensure the availability and the compatibility of your camera-ready paper.

Registration Fees:

All papers must be presented by one of the authors, who must pay the registration fees.
http://cig.iet.unipi.it/isda2010/

Paper Reviewing and Publication

Submitted papers will be reviewed. Accepted papers, which should not exceed 6 pages (PDF) following the double column IEEE format. All accepted papers will be published in the proceedings of the IEEE-ISDA'10. Selected papers will be published in special issues of a selection of International Journals (to be announced).

Tentative Dates of Submission and Acceptance

➢ Deadline for paper submission June 26, 2010

➢ Notification of acceptance August 14, 2010

➢ Camera-ready manuscript submission September 15, 2010