1st International Workshop on Media Studies and Implementations that help Improving Access to Disabled Users (MSIADU'09)

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ABSTRACT
This Workshop is based on the work carried out during the 3rd International Workshop on Human-Centered Computing (HCC08) held at the ACM Multimedia 2008 conference in Vancouver [1]. There, participants discussed on how to use technology to achieve an accessible environment for the disabled.

The event seeks to find original and highly innovative research in the area of Multimedia (studies and implementations) in order to improve accessibility to real and virtual scenarios that might be applied to all kinds of users with disabilities or difficulties when implementing concrete actions (navigation or interaction with a particular medium). Furthermore, we need solutions to adapt the environment, products and services, to the final needs of the user.

Categories and Subject Descriptors
D.2.10 [**Design**]: Methodologies, Representation.
H.1.2 [**User/Machine Systems**]: Human factors.
H.5.2 [**User Interface**]: User-Centered Design.
I.4.9 [**Image Processing and Computer Vision**]: Applications.

General Terms
Performance, Design, Experimentation, Security, Human Factors, Theory.

Keywords
Accessibility, Human-Centered Computing, Multimedia, User Experience, Design.

1. INTRODUCTION
At present, it is estimated that there are several millions of people with disabilities worldwide. Focusing on the Internet users, the estimated percentage goes around 10% [2]. There are several contributions that might be highlighted among the organizations that have studied the classification of disabilities. Among those, the work of the WHO/OMS (World Health Organization [3]), the

W3C (World Wide Web Consortium) and the WAI (Web Accessibility Initiative). Major disability types include visual, auditory, motor and cognitive or related to language use. Moreover that, other "unofficial" disabilities due to the lack of technology alphabetization (no access or inappropriate equipment and specific audiences like the elderly, rural, children, etc). According to Microsoft: almost 40% of people have problems when accessing a computer while only 1% is explicitly declared as disabled. Accessibility as applied to virtual and real environments also benefits people without disabilities. A key principle is the design of flexible resources to meet different user needs, preferences and situations.

As a major topic, this invited proposal seeks to discuss about Multimedia (in general) and Usability (in particular), helping to increase the current levels of Accessibility regarding virtual and physical interactive environments where the disabled community can participate.

The main objectives for this workshop are:

- Presenting different results regarding experimental research works with the disabled users plus their use of technology in different contexts where the Multimedia field can be helpful. From theoretical approaches of the Usability field to very practical developments of accessible materials.

- Discussing the key aspects that will ensure a quality-living experience for the disabled or non-trained audience when interacting with a device, either virtual or real.

The constantly growing number of technologies available causes users to experience more difficulties while using them. The Multimedia field addresses that by definition, making applications and resources manage a greater interactivity, ease of use and audiovisual feedback. It is necessary to review whether such studies or implementations are not only usable and accessible but can be adapted to specific users while generating a satisfactory experience of use in them.

2. WORKSHOP FORMAT
Following the format of HCC '08 [1], we structured the MSIADU'09 as follows:

- The speaker will have a constrained time for the presentation (max. 5 minutes per article) plus an extended time for related questions.

- Attendees will join a group (2 or 3 teams, depending on the assistance). Each group will work on a specific topic, identifying keywords, methods, techniques and/or theoretical approaches in order to improve the field, as a future work or within a research line. Finally, all the teams will present their particular schedule (the workshop organizers will provide a template plus all the necessary items to fill it) while comparing results and summarizing several conclusions.

3. WORKSHOP CONTRIBUTIONS

The papers selected are related to the following topics:

- Accessibility for All.
- Accessible Architecture.
- Accessible Multimedia.
- Applications in Virtual Reality, Multimedia and Gaming.
- Human Affect Analysis and Affective Computing.
- Human-Centered Computing.
- Human-Computer Interfaces.
- Perceptual and Multimodal User Interfaces.
- Person Behavior and Interaction Analysis.
- Technological Novelties, Evaluations and Solutions.
- Trends in Disability.
- Usability and Accessibility.
- User-Experience, Studies and Evaluations.

Target audience includes researchers, designers, experts and scholars, in the field of usability, accessibility, disabilities, multimedia development, sociology, psychology, graphical design, among others and its related areas. These areas include content creation, human-computer-interaction and usability expertise. Workshop participants shall have previous experience in this or related fields to be able to contribute on a high scientific level. We welcome multidisciplinary contributions coming from the media technology, artistic and human experience side. Case studies (successful or unsuccessful), disabled-oriented installations, technologies, media studies, and user-experience evaluations are highly welcome.

3.1 Papers Selected

The following contributions were conditionally accepted, waiting for the final registration (please see workshop proceedings to view more information about them, here we include only the article names):

- Application of Virtual Reality Technologies in Rapid Development and Assessment of Ambient Assisted Living Environments.
- Disabled Personages in the Full-lenght Films of Pixar Animation Studios (1995-2006).
- Examining the feasibility of face gesture detection using a wheelchair mounted camera.
- Formal Specification of an Adaptable Personal Learning Environment Using Prolog.
- Is Visual Information Useful for Music Communication?
- MAS: Learning Support Software Platform for People with Disabilities.
- Person Localization using a Wearable Camera towards Enhancing Social Interactions for Individuals with Visual Impairment.
- The Elderly Interacting with a Digital Agenda through an RFID pen and a Tactile Screen.
- UbiMeds: A mobile application to improve accessibility and support medication adherence.
- User Capability in the Adaptive World

A Keynote Speaker, related to the fields of usability and accessibility, will present the work entitled: "Improving the design of accessible web pages through a study of user experience in order to define requirements".

Participants will be able to observe many different works and projects related to the field of accessibility from a multicultural perspective. A selected series of proposals will be aimed to be developed cooperatively from a multidisciplinary and multicultural view, to search for possible global solutions to the problems related to creating adaptable and accessible interfaces.

4. REFERENCES

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[3] World Health Organization, 2002. Towards a Common Language for Functioning, Disability and Health: International Classification for Functioning, Disability and Health, Geneva 2002.