Fourth International Workshop on Management and Interaction with Multimodal Information Content - MIMIC 2010

Message from the Organizers

The availability of large amount of multimodal data and information, the development of very natural users’ interaction approaches and techniques involving the five human senses and, the evolution of the Web technologies, enable people to access these information and/or to use a multimodal dialog approach in order to access information and/or services in different application areas.

The purpose of the International Workshop on Management and Interaction with Multimodal Information Content (MIMIC) is to discuss and provide a scenario about: 1) theories and techniques about multimodal information retrieval and multimodal databases for indexing, representing, organizing, querying and extracting features from multimodal data, and 2) multimodal interfaces, systems and Social Networking technologies.

This fourth edition of MIMIC, held in conjunction with the International Conference on Database and Expert Systems Applications (DEXA 2010), has focused its discussion on the health care area. The event provides a relevant contribution to the scientific debate on various aspects related to theories, techniques, software platforms and social networking techniques and applications involving multimodality and its wide use in the health care area.

In this edition five papers have been accepted for inclusion in the workshop proceedings.

The first paper, titled “Evaluation of Global Descriptors for Multimedia Retrieval in Medical Applications”, addresses the problem of information retrieval for Multimedia resources with a particular focus on the health care context. In particular, the authors provide an evaluation of the global descriptors for image search, applied to the radiology images scenario and, they describe a multimedia retrieval platform prototype, which allows textual or visual searches using the descriptors. The descriptors evaluation process follows an information retrieval perspective, using similarity instead of classifying images through positive and negative examples.

The analysis and interpretation of images is the focus of the second paper titled “UPDRS Tests for Diagnosis of Parkinson’s Disease Employing Virtual-Touchpad”. The authors present an interface based on image processing and introduce a new approach to support the diagnosis of Parkinson disease on the base of the UPDRS test and the image analysis. The multimodal interface called Virtual-Touchpad was developed at the MSD. The authors combine advanced image processing methods with typical medical activities such as patients’ diagnosis.

Supporting an health care activity is the aim of issues addressed in the third paper, titled “Data Management for Multimodal Rehabilitation Games”; its authors propose a system for multimodal games, aiming at the rehabilitation of patients with Multiple Sclerosis. This system manages different types of data such as data about games, therapy sessions and data logged while patients executed the games.

The fourth paper describes “Scent Emitting Multimodal Computer Interface for Learning Enhancement”. In particular, the concept of “scent emitting computer interface” is the interesting issue of this paper; it is presented considering its use in the poly-sensoric stimulation process and its essential role
in education and therapy for children with disorders such as for example autism, and aromatherapy and

The previously introduced four papers describe issues involving data and senses from sight to smell. They provide a short discussion of applications and multimodal methodologies used in the health care area.

The last paper, titled “Multimodal Social Networking for Healthcare Professionals” presents Social Networking platform for healthcare professionals devoted to facilitate the access and sharing of health care services. Starting from the results obtained by some interviews to physicians, the characteristics and services that the Social Network platform has to offer have been defined. The platform involves multimodal interaction and multimodal information, and it can be used by Skype technologies, developed for communication, and in particular for telecommunication.

Many people worked long and hard to help this edition become a reality. We would like to acknowledge and sincerely thank the PC members for their timely and insightful valuable comments and evaluations of the manuscripts that greatly improved the quality of the final versions. Of course, we offer thanks to all the authors for their contribution and cooperation. Finally, we express our thanks to all the DEXA 2010 committees, to the DEXA Workshop Chairs, A Min Tjoa, Roland R. Wagner, and our special appreciation goes to Gabriela Wagner for her support and valuable suggestions.

**The MIMIC 2010 Chairs**
Richard Chbeir, Karin Coninx, Fernando Ferri, and Patrizia Grifoni