Invited Talk I

Getting Personal: Emotional and Cognitive Aspects in Movies, iTV and Multimedia Access

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Abstract
Movies often engage viewers perceptually, cognitively and emotionally, by combining diverse symbol systems, such as images, texts, music and narration to tell stories. As such, movies are considered an important art form, a source of entertainment and a powerful method for educating, having great power to affect us. They can influence our mood, our health, inspire us and they can create a difference in our lives. Media and personal differences influence our preferences in cognitive modes and styles, type of information, and emotional reactions that could be taken into account to improve media access and make the most out of its potential for everyone. Technological developments and the trends for media convergence are turning video into a dominant and pervasive medium, through the web and interactive TV (iTV), changing the way we access, search, browse and view videos, movies, and related media in the information realm. The improvement of new techniques for gathering emotional information expressed in videos or felt by the users, both through content analysis or user implicit feedback, and the power and flexibility associated with interactive multimedia spaces that support different cognitive modes, are unfolding new ways for exploring media and its impact on users, bringing out new perspectives to personalize information access. In this keynote, I will identify and describe emotional and cognitive aspects relevant in the access to movies, iTV and Multimedia, and will illustrate the concepts, potential benefits, challenges, and approaches explored in some of our research projects.

About the Author
Teresa Chambel is a professor and researcher at Faculty of Sciences, University of Lisbon, Portugal, where she received a Ph.D. in Informatics, on video, hypermedia and learning technologies, and a B.Sc. in Computer Science. Her M.Sc. was in Electrical and Computer Engineering at the Technical University of Lisbon, on distributed hypermedia. She is a member of the Human-Computer Interaction and Multimedia Group at the Lasige Lab, Faculty of Sciences, University of Lisbon, since 1998, and was previously a member of the Multimedia and Interaction Techniques Group at INESC, Lisbon. Her teaching has been done in the areas of multimedia, hypermedia, human-computer interaction and information systems, and previously in operating and distributed systems. Her research interests include multimedia and hypermedia, with a special emphasis on video and hyper video, human-computer interaction, e-learning, creativity, visualization, accessibility, cognition and emotions, interactive TV, digital talking books and digital art. She has been involved in national and international research projects and collaborations, and in the organization of scientific events, and scientific committees of conferences and journals in these areas. Teresa Chambel and her students have recently received the best paper award at Euro iTV 2011, the Ninth European Conference on Interactive TV and Video, with the paper “iFelt: Accessing Movies Through Our Emotions”. For more information, visit: www.di.fc.ul.pt/~tc/
Invited Talk II

The Role of Fuzzy Ontologies in User Personalization

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Abstract
During the last years, the interest in user personalization and content adaptation technologies has grown significantly. Knowledge mobilization is a recent paradigm that consists of making knowledge available for real-time use in a form which is adapted to the context of use and to the needs and cognitive profile of the user. Context is usually considered as any information that can be used to characterize the situation of an entity, including geographical information, ambient sensor inputs, user profiles (preferences, intentions, or history), etc. Most of the works in the field of contextual representation have only taken into account ad hoc context representations, mainly based on application-dependent heuristics. The main drawback of these approaches is that they are hardly applicable to different domains, difficult to scale, and costly to integrate with other systems. Fuzzy ontologies are much more suitable artifacts due to the reasoning capabilities they enable, plus their knowledge exchange and reusability features. Following this view, we have proposed an ontology design pattern in order to help ontology developers to represent contextual information: the Context-Domain Significance (CDS) model, which explicitly represents relevance relations between domain-specific information and user context. The objective of this invited talk is twofold. On the one hand, I will provide a detailed and comprehensive account of the state of art in fuzzy ontologies: languages, reasoning algorithms, and existing implementations. On the other hand, I will address the question of how the use of fuzzy ontologies can improve the task of user personalization. For the sake of a concrete illustration, I will discuss the main features of our fuzzy CDS model.

About the Author
Fernando Bobillo received his M.Sc. degree in Computer Science in 2004, and his Ph.D. degree in 2008, both from the University of Granada. Currently, he is an Assistant Professor at the Department of Computer Science and Systems Engineering, at the University of Zaragoza. His main research interests include: Knowledge Representation and Reasoning, Uncertainty and Logics, Description Logics, Ontology Engineering and the Semantic Web. He is involved in the development of several Semantic Web applications, such as the fuzzy ontology reasoners fuzzyDL and DeLorean. He is coauthor of more than 45 scientific papers, and has participated in 8 national and international funded research projects. He is one of the organizers of the series of International Workshops on Uncertainty reasoning for the Semantic Web (URSW), and is or was member of the W3C Uncertainty Reasoning for the World Wide Web Incubator Group (URW3), the Working group on Mathematical Fuzzy Logic (MathFuzzLog), and the IEEE Intelligent Systems Applications Technical Committee (ISATC) on the Semantic Web.