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CSCWD: Applications and Challenges

J.UCS Special Issue

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Design of complex artifacts and systems requires the cooperation of multidisciplinary design teams. In recent years, the universal and nearly free access to the Internet has made it much easier for people to coordinate and do collaborative design jobs without any geographical boundaries. This context and the wide scope requirement meet its realization in the CSCWD (Computer Supported Cooperative Work in Design) field. The new technologies and applications from CSCWD have significantly contributed to the work of multidisciplinary design teams. CSCWD communities have been actively involved in the dynamic research and practical developments from both academia and industry. In order to present the response to the new challenges that CSCWD communities are facing, we carefully selected 10 manuscripts from 125 papers presented at the 13th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2009), Santiago, Chile, on April 22-24, 2009, to forge this J.UCS special issue. It is intended for researchers and practitioners interested in CSCWD Applications and Challenges. All selected papers have been revised, adjusted to the scope of this special issue and extended into current versions by three rigorous review rounds.

Sapateiro, Baloian and Antunes describe the design of a mobile collaborative tool that helps teams managing critical computing infrastructures in organizations. Herskovic, Ochoa, Pino and Neyem present a framework that specifies a list of mobile collaboration requirements to be considered during the conception and design of a collaborative system. Cheikhrouhou, Pouly, Huber and Choudhary discuss the human aspects, such as trust, communication and mutual understanding, that constitute key factors for the success or failure of collaborative enterprise networks. Agost, Company

and Romero present their study on the singularities of new product development processes to tailor product lifecycle management tools and mechanisms. Rieder, Pinho and Raposo describe a methodology that supports the design and implementation of software modules, which represent the individual and collaborative three-dimensional interaction processes. Carvalho, Vivacqua, Souza and Medeiros report the benefits of deciding in large groups and describe a system to support decisions in these settings. Gonçalves, Santoro and Baião present a method and a graphical supporting tool for process elicitation and modeling that combine Group Storytelling with Text Mining and Natural Language Processing. The next three articles deal with collaborative learning. Yong presents his research on security and privacy concerns for e-learning systems, focusing on the use of portable devices. Kuswara and Richards discuss the potential of social software for collaborative learning purposes and analyze how students exploit the use of wikis for group collaboration. Finally, Hurtado and Guerrero illustrate their study on mobile collaboration with a PDA-based software tool that allows teachers to create workgroups in their classrooms.

The Computer-Supported Cooperative Work in Design field is close to maturity, progressing firmly to support contemporary collaboration-related applications. Advanced computing technologies evolve CSCWD research and applications. The selected 10 papers reflect this dynamics. We hope that you find this selection as inspiring as we do, and that it encourages you to actively engage in research in this exciting field.

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