Message from the Special Session Chair

Next Generation of Web Computing

For the design and implementation of distributed systems for cooperation purposes communication facilities play a key role in the World Wide Web. Internet communication facilities allow processes to be spread over the Web to communicate and to access remote resources. Performance of the whole distributed system, in particular a distributed workflow and communication system, depends on this facility. In the field of CSCW several concepts and prototypes for the flexible support of cooperation including functionality for the exchange of information, sharing of information, coordination and collaboration among distributed workgroups have been developed.

This session aims to bring together experts from academia and industry who share an interest in the study and design of effective Web Computing solutions as well as approaches and methodologies. It focuses on understanding the impact of Web Computing environments in order to facilitate the design of complex cooperation systems. This session is an opportunity for designers and researchers to discuss their experiences with implementing cooperative systems on the Web in large organizations such as industry, government and academia. It is open for sharing information about new Web technologies and practices.

In this session we have two papers dealing with various advances of Web Computing. The first paper describes “SensBution: A Rule-Based Peer-to-Peer Approach for Sensor-Based Infrastructures” and was written by Tom Gross, Thilo Paul-Stueve and Tsvetomira Palakarska. The paper is on ubiquitous environments. These environments typically capture users’ presence and activities in a room with a multitude of sensors, process and infer on the captured data, and adapt the environment accordingly.

SensBution provides generic and flexible support for developers of ubiquitous environments through a combined approach that is event-based and rule-based, and offers client-server and peer-to-peer structures. In this paper the authors present the concept, the base technology used and the implementation of SensBution.

The second paper “Interactivity in legal web courses through direct response systems” is by Michael Sonntag. It is an analysis of deficiencies of lectures held over the web, namely the lacking interactivity. While systems usually provide for a two-way communication, which is reduced in modality compared to presence courses, this is problematic in the area of legal teaching, especially in practices where the typical didactic setting is discussing cases.

Enhancing the reverse communication, learners to teacher, is possible through direct response systems, which are known from classroom settings. Transferred to the web these can be modelled as several brief surveys. Such a didactic tool has been successfully employed in the practice part of a legal course. This paper reports results of the accompanying study, identifies different learner groups and the influence of this approach on their learning, and proposes interesting improvements.

Overall, the described Web technologies promise a better support of human communication than it was previously possible. Yet, if this vision is to be realized, many difficult problems remain to be solved and are the future challenges. Nevertheless the presented papers describe some important aspects influencing the design, the implementation and the evaluation of next generation Web Computing applications.

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