Guest Editorial Preface

Special Section on Web Technologies

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The increasing popularity and advances in Web technologies (XML, Web services, semantic Web, etc.) are enabling the development of new classes of applications and new trends in the design of information systems. This special section focuses on emerging Web technologies, architectures, and methodologies for building and managing advanced Web information systems. Internet-related technologies have created an interconnected world in which information can be exchanged easily, tasks can be processed collaboratively, communities of users with similar interests can be formed to achieve efficiency and improve performance, while security threats are present more than ever before. This special section on Web Technologies continues the efforts that were put into the Web Technologies Track that was held as part of the 23rd ACM Symposium on Applied Computing (SAC’2008, http://www710.univ-lyon1.fr/~dbenslim/sac2008-wt.html), Fortaleza, Ceara, Brazil. Three articles out of the articles that were accepted for presentation at the track were selected for inclusion in this special section after another round of review by experts in the field of Web technologies. The selection reflected the high standards for excellence used by the many esteemed members of the editorial board who contributed to this special section. Their contributions are greatly appreciated. The articles are organized as follows.

In an executable language/enactment engine approach for Designing and architecting process-aware Web applications”, Rossi and Turrini mention that today’s Web applications allow the participation of several actors in complex enterprise-wide (or even multi-enterprise) business processes and pose new challenges to software designers and architects. The design models have to address both navigational and process-based interactions; the software architecture has to provide the components to enact the process and has to define how these components interoperate with the other components of the Web applications. Rossi and Turrini show how, promoting an effective separation of concerns, a process modeling language and its enactment engine can be used in the modeling and implementation of process-aware Web applications.

In” AGATHE: An Agent- and Ontology-Based System for Gathering Information about Restricted Web Domains”, Espinasse, Fournier, and Freitas highlight the task complexity of relevant information gathering on the Web. Taking into account pages’ contexts and considering restricted domains, the authors propose an agent- and ontology-based restricted-domain cooperative information gathering approach. The approach takes advantage of some techniques of classification and extraction based on ontologies. A generic agent-oriented architecture called AGATHE is presented. A prototype of AGATHE was
developed and experiments were conducted using call for articles posted on the Web as information sources.

In “A Semantic Web-Based Approach for Building Personalized News Services”, Frasincar, Borsje, and Levering, look into the problem of setting up personalized news services from Really Simple Syndication (RSS) news feeds. The authors draw the attention on the fact that RSS annotations are coarse-grained and free-of-semantics, which make them difficult to be automatically processed by applications and understood by computers. As a result, the authors introduce a semantic-based framework, called Hermes, to retrieve news items related, directly or indirectly, to concepts of interests in a particular domain. Through the case study of NASDAQ stock market they illustrate how users can specify time constraint queries to classify news with respect to temporal constraints. The Hermes News Portal (HNP), which is an implementation of the Hermes framework demonstrates the capabilities and feasibility of their contribution.

We hope readers will find the content of this special section interesting and inspire them to look further into the challenges that are still ahead before the deployment of a new generation of Web-based applications. We would like to thank all the authors who submitted their articles to the special track on Web Technologies. In addition, we are very grateful to the anonymous referees for their time and efforts to review submissions. Last but not least, we would like to express our sincere thanks to Dr. In Lee, Editor in Chief of the International Journal of E-Business Research (IJEBR), for including this special section in the journal.