WHERE DO THE SEMANTIC WEB AND SOA MEET?

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Abstract

Systems and infrastructures are currently being developed based on the SOA paradigm. The main idea is to encapsulate organizations' functionalities within an appropriate interface and advertise it as a service which is self-contained and do not depend on the context or state of other services. Services are advertised, dynamically discovered, and composed to form trading processes working within distributed systems architecture. This talk will explores three issues that SOA brings to research which need to be explored: Semantic SOA, QoS for SOA and Quality Metrics for SOA. It has been largely discussed in the literature that the syntactic description of services is a strong limitation to develop systems that can scale in Internet setting. Therefore, we will discuss the techniques available to semantically enhance service descriptions. Additionally, SOA solutions cannot be developed while ignoring the importance of QoS measurements. The correct management of QoS specifications directly impacts the success of organizations that have adopted a SOA approach and also directly impacts the success and evolution of B2B and EC. Not only QoS models need to be associated with self-contained services, but algorithms and methods need to be constructed to automatically compute the QoS of SOA networks. Finally, in a competitive e-commerce and e-business market, organizations want their SOA solutions to be simple, modular, easy to understand, easy to maintain and easy to re-engineer. To achieve these objectives, one can calculate quality metrics and evaluate the complexity of SOA architectures. Quality metrics can give an important feedback concerning the understandability, effort, testability, reliability and maintainability of SOA solutions.

Short biography

Jorge Cardoso (http://www.dme.uma.pt/jcardoso) joined the University of Madeira (Portugal) in March 2003. He is currently the Director of the SEED Laboratory. He previously gave lectures at University of Georgia (USA) and at the Instituto Politécnico de Leiria (Portugal). Dr. Cardoso received his Ph.D. in Computer Science from the University of Georgia in 2002 (with Amit Sheth). While at the University of Georgia, he was part of the LSDIS Lab. where he did extensive research on workflow management systems. In 1999, he worked at the Boeing Company on enterprise application integration with Christoph Bussler. Dr. Cardoso was the co-organizer and co-chair of the First, Second, and Third International Workshop on Semantic and Dynamic Web Processes. He has published over 70 refereed papers in the areas of workflow management systems, semantic Web, and related fields. He has also edited 3 books on semantic Web and Web services. He is on the Editorial Board of the Enterprise Information Systems Journal, the International Journal on Semantic Web and Information systems, and the International Journal of Information Technology. He is also member of the Editorial Advisory Review Board of Idea Group Inc. Prior to joining the University of Georgia, he worked for two years at CCG, Zentrum für Graphische Datenverarbeitung, where is did research on Computer Supported Cooperative Work.