

Infrastructure for Ubiquitous Services (Invited talk)

Athman Bouguettaya¹

¹ CSIRO ICT Centre
GPO Box 664, Canberra ACT Australia 2601
Email: Athman.Bouguettaya@csiro.au

Abstract

Services science is slowly gaining acceptance in both industry and academia as the necessary vehicle to introduce large scale efficiencies in service economies that are now predominant in most developed and many developing countries. The development of service-oriented computing was the computing research community's response to the emerging multi-disciplinary field of services science. Service-oriented computing aims at providing a foundational computing framework to support a service-centric approach to solve the vexing problems of integration and interoperability. The Web is and will undoubtedly be the preferred delivery platform of targeted solutions. More specifically, Web services are poised to be the key component of the service-oriented approach for the efficient management of services on the Web. Fully delivering on the potential of next-generation Web services requires building a foundation that would provide a sound design for efficiently developing, deploying, publishing, discovering, composing, and optimizing access to Web services. The proposed Web service foundation will enable the development of a uniform framework called Web Service Management System that would be to Web services what DBMSs have been to data. In this framework, Web services would be treated as first-class objects that can be manipulated as if they were pieces of data. In this talk, I will first motivate the need for WSMSs. I will then overview our own research work developing the foundation of the core components of WSMSs which include: Web service query optimization, Web service composition, Web service change management, and Web service trust management. Finally, I will overview an E-government WSMS prototype that has been used as a deployment test-bed.