

An Industry View on Service-Oriented Architecture and Web Services

Jen-Yao Chung
IBM T. J. Watson Research Center
jychung@us.ibm.com

Abstract

Web services are autonomous software systems identifiable by URIs that can be advertised, located, and accessed through standard-based XML messages (e.g. SOAP, WSDL, and UDDI) and transmitted via Internet protocols. Web services encapsulate application functionalities and information resources, and make them available through programmatic interfaces, as opposed to the typical interfaces provided by traditional Web applications specifically for manual interactions [1].

Web Services integration enables a dynamic e-business model that fosters collaboration with heterogeneous business services and opens the doors for new business opportunities. A service-oriented architecture (SOA) is an application framework that takes everyday business applications and breaks them down into individual business functions and processes, called services [2]. With the widely acceptance and adoption of SOA that wraps software resources over the network as services and provides a standard-based IT infrastructure, we anticipate and envision more opportunities for the software industry to adopt a Service business model.

In this talk, we will discuss dynamic Web services integration and show various patterns when implementing on demand integrations. We will present guidelines for applying the SOA approach to several industrial business scenarios and for selecting Web services technologies. We will conclude with our view about the trends and directions of Web Services and SOA in the on demand world.

References

- [1] J. Chung, K. Lin, R. Mathieu, "Web Services Computing: Advancing Software Interoperability", IEEE Computer, Oct. 2003, pp 35-37.
- [2] <http://www-306.ibm.com/software/solutions/webservices/soa/index.html>

Biography

Dr. Jen-Yao Chung received the M.S. and Ph.D. degrees in computer science from the University of Illinois at Urbana-Champaign. In 1989, he joined T. J. Watson Research Center as a research staff member. Currently, he is the Chief Technology Officer for IBM Global Electronics Industry, where he is responsible for identifying and growing new technologies into future businesses for IBM. Before that, he was senior manager of the electronic commerce and supply chain department, and program director for the IBM Institute for Advanced Commerce Technology office. He has been involved in research, development, and customer engagements in business process integration & management, electronic commerce, electronic marketplaces, and Web application systems. Dr. Chung is the co-chair for IEEE technical committee on e-Commerce (TCEC). He has authored or coauthored over 120 technical papers in published journals or conference proceedings. He was awarded an IEEE Outstanding Paper award in 1995, two IBM Outstanding Technical Achievement awards, in 1994 and 2000, an IBM Outstanding Contribution award in 1997, and three IBM Research Division awards, in 1990, 1996, and 2001. He is a senior member of the IEEE and a member of ACM.