Serving Web 2.0 with SOA: Providing the Technology for Innovation and Specialization

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Abstract

Service-Oriented Architecture (SOA) using Web services has emerged as a major software architecture. The SOA concept evolves from earlier component-based software frameworks. However, since Web services standards are based on readily and openly available Internet protocols, and thus much cheaper and easier for companies to adopt, major computer and IT companies have quickly embraced SOA. Web 2.0 promotes Web experiences that encourage users to participate in sharing information and enriching services. Users may offer their own contributions as open services to be composed into new components and services. In addition, the combined network effects of pervasive two-way participation are creating a phenomenal communal service architecture on the Web. In order for users and companies to share knowledge and co-produce with peers anywhere, without synchronization, delay, or maintenance, they need to use some powerful underlying set of technologies and paradigms. This is where SOA may provide some help. This talk will discuss the service technology challenges and opportunities that are introduced by the dynamism of Web 2.0 services and requirements. The issues may require new concepts, methods, models, and technologies along with flexible and adaptive infrastructures for services composition and management in order to facilitate the two-way integration and formation of services across different sources. The future success of SOA will rely on the development of novel technologies to meet these new demands from the evolving Web 2.0 paradigm.

Biography

Kwei-Jay Lin received the BS in Electrical Engineering from National Taiwan University, the MS and Ph.D. in Computer Science from the University of Maryland, College Park. He is a Professor in the Department of Electrical Engineering and Computer Science at the University of California, Irvine. Prior to joining UCI, he was an Associate Professor in the Computer Science Department at the University of Illinois at Urbana-Champaign. Dr. Lin is an Editor-in-Chief of the International Journal of Service Oriented Computing and Applications (published by Springer), and the Editor-in-Chief of the Software Publication Track, Journal of Information Science and Engineering (published by Academia Sinica, Taiwan). He has served on the editorial boards of IEEE Transactions on Parallel and Distributed Systems and the IEEE Transactions on Computers. He was a guest editor of the IEEE Computer Special Issue on Web Services published in October 2003 and the IEEE Software Special Issue on Real-Time Systems Development published in September 1992. He is a Co-Chair of the IEEE Technical Committee on E-Commerce since 2004. He was an Executive Committee Member of the IEEE Technical Committee on Real-Time Systems from 1998 to 2002. He has chaired many international conferences, including Conference Chairs for the 2006 IEEE Conference on E-Commerce Technology in San Francisco, the 2004 IEEE Conference on e-Technology, e-Commerce and e-Service in Taipei, the 2003 IEEE Conference on E-Commerce in Newport Beach, CA, and the 1998 IEEE Real-Time Systems Symposium in Madrid, Spain. His research interests include service-oriented systems, e-commerce and enterprise computing, real-time systems, scheduling theory, and distributed computing. He has published more than 150 papers in academic journals and conference proceedings. Dr. Lin received the 1990 NCR Award of Excellence at the University of Illinois, and the IBM Faculty Research Award twice, in 1997 and 1998.