

www.cWeb Services and SOA for Communication

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Abstract

Recent advances in the field of Web services and SOA have made it practically possible to provide communication services through the Web service methods and to incorporate and integrate Web services for communication purposes. In particular, service-oriented communication is to enable communication through a service-oriented architecture and to make communication as service. This lecture is intended to introduce these new developments to the general audiences of researchers, engineers and developers.

We will cover the basic concepts of Web services and SOA in the first part of the lecture and provide a high level view on how these approaches are introduced and what problems/needs that they intend to address from the perspectives of software architecture and application enablement in distributed computing. It will include a brief overview of the industry standard development on Web services and SOA to illustrate the scope and impact of these approaches.

The second part of the lecture will focus on Web services methods and service-oriented communication paradigms for real-time communication services over IP. We show and demonstrate how Web service methods can be extended and applied to address problems in communication. In particular, we will introduce two-way Web services, event subscription/notification, stateful and session based Web service transactions, WIP (Web Service Initiation Protocol) for multimedia and voice communication over IP, etc. We will cover some theoretical aspects from the view of distributed computing as well as some practical use cases under the general context of service-oriented communication enablement.

About the presenter

Dr. Wu Chou is Director, Avaya Labs Fellow at Avaya Labs Research. He received M.S. degree in Mathematics in 1986, M.S. degree in Electrical Engineering in 1987, M.S. degree in Statistics in 1988, and Ph.D. degree in Electrical Engineering in June 1990, all from Stanford University, California, USA. He joined AT&T Bell Labs in July 1990. Since October 2000, he moved to Avaya Labs Research leading a group on converged communication and dialogue system research. His research activities extend from speech and language processing to converged communication, Web services, SOA, VoIP, SIP, multimedia communication, dialogue systems, mobility and wireless access, and multimodal interaction for intelligent human-machine communication. He published over 100 technical papers, three book chapters, and one edited book. He received Bell Labs Presidents Gold Award in 1997 and Avaya Leadership Award in 2005. He holds 20 US and International Patents, and he is an IEEE Fellow.

Dr. Wu Chou is an active figure in the industry standard development for Web services, converged communication, and SOA, serving as editor for multiple industry standards. He represents Avaya in the standard bodies of W3C, OASIS, and ECMA. In addition, he was an editor of IEEE Transactions on Speech and Audio Processing, general chair of 2002 IEEE International Conference on Computer, Communication, and Networking, etc. He is a TC member and Industry Track chair of IEEE International Conference on Web Services (2006-2007), and a member of Editorial Board of International Journal on Web Services Research (JWSR).