
XML Masters Series: Web Services

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Abstract

Our solution named OR-*, developed at the Ohio State University Medical Center, is a suite of secure systems based on Service Oriented Architecture. The solution uniformly treats collection of "medical actions" generated in a hospital as electronic medical records. One suite named OR-Eye allows (desktop or mobile) remote monitoring, recording, and replay of clinical data emerging from the Operating Rooms and Intensive Care Units. Another suite named OR-Medication enables recording of medication actions. A third suite named OR-Track, currently under construction, allows patient and equipment tracking. The solution is based on autonomous XML Web Services enhanced by WS-* specifications (WS-Policy, WS-Trust, WS-SecureConversation, WS-Reliable Messaging etc.). Ease of development was achieved by using Microsoft's Indigo technology. We estimate that our solution decreased the cost of implementing security by 80% compared to earlier systems built by us. The system also facilitates billing, auditing, efficient workflow, reduced errors, improved education and research.

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The author did not prepare a paper for the proceedings.

Biography

Farrukh **Khan**

Professor

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Prof. Khan and his team are responsible for the development of OR-*, a suite of healthcare systems based on Services Oriented Architecture (XML Web Services) for the Ohio State University Medical Center. Prof. Khan is an associate professor in the department of Electrical Engineering at the Ohio State University. He also holds joint positions in the department of Computer and Information Sciences in the College of Engineering, and department of Anesthesiology in the College of Medicine. He is currently interested in developing production healthcare systems based on SOAP Web Services enhanced by using emerging WS-* specifications (WS-Routing, WS-Security, WS-Policy, WS-Trust etc.). Prof. Khan has lectured extensively on enterprise distributed computing and security in the USA, Europe and Asia. His projects have been funded by the National Science Foundation, Naval Research Laboratory, Office of Naval Research, Air Force, Wright Patterson Air Force Base, Cray Research., Lucent Technologies, and Microsoft Research.

Gerald **Beuchelt**

Web Services Architect

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Gerald Beuchelt is a Web Services Architect in the Chief Technologist's Offices Business Alliance group. He is focusing on advanced web services and security technology and their application, with an in-depth focus on standards and Microsoft interoperability.

Before, Gerald was an Infrastructure Services Specialist in CTO's Competitive Strategy Group. He joined the CSG in 2000. Since then he has worked on operating systems, middleware software including Java and .NET, and security, specifically in Microsoft product related areas. In this function, he worked closely with Sun Legal.

Prior to that, he worked for Sun Microsystems Deutschland (Germany) as a Senior Systems Engineer, most recently taking the lead in orchestrating technical support for large sales projects.

Before joining Sun, Gerald worked as a lead network architect and system administrator in ITP and IGM, Cologne, Germany, and as a freelance writer for two major German computer periodicals.

Gerald recently submitted two invention disclosures to the Sun Patent Office and contributed to numerous field and engineering education summits. He also authored and co-authored various competitive white papers on Active Directory.

Education:

* BS Physics 1994, Ludwig-Maximillian-Universität, Munich

* MS Mathematical Physics 1997, Albertus Magnus Universität zu Köln, Cologne

Parand **Darugar**

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I'm responsible for architecture across Yahoo Search Marketing, yahoo's largest revenue segment. We use XML, REST, and SOAP extensively both internally and in our external APIs. Previously, I founded Blue Titan Software, a provider of software solutions for Web services management. Before that, I founded VelociGen, a provider of Web site acceleration technologies. I've written several XML related articles since 1998; an incomplete list can be found here:<http://www.parand.com/talks/My> latest is here:<http://www-128.ibm.com/developerworks/xml/library/x-abolns.html>I've presented at a number of conferences, including including NextWare, Web Services Reality, XML Edge, XML Devcon, Networld + Interop, O'Reilly Open Source Conference, Usenix Tcl conference, and others. I have a web site at <http://www.parand.com/say/>

John Evdemon

Industry Architect
Microsoft Corporation [<http://www.microsoft.com/>]
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Washington
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Former CTO of XMLSolutions and CTO/Director of Engineering for XML initiatives at Vitria. Over sixteen years of experience designing, developing, and implementing systems using a variety of platforms, architectures, and methodologies. Have been working with XML since 1997 and with Web Services since inception. Currently chairing the BPEL4WS Technical Committee at OASIS.

Christopher Ferris

Architect, Emerging e-Business Industry Architecture (and Chair of the WS-I Basic Profile Working Group)
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Chris is a senior technical staff member with IBM's Emerging e-business Industry Architecture group. Chris is actively engaged in the development of Web services and e-business standards. He has 23 years experience in the development of distributed systems. Chris currently is the chair of the Web Services Interoperability Organization's (WS-I) Basic Profile Working Group. He also represents IBM on the W3C Web Services Architecture WG (as lead editor). Prior to joining IBM, Chris served as chair of the Web Services Architecture WG, as Sun representative on the XML Protocols WG, and as a member of the OASIS ebXML Messaging TC.

Ed Horst

Vice President of Product Strategy
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Mr. Horst has more than twenty years of experience in planning, marketing and developing distributed systems, management frameworks and development tools. He was the vice president of Marketing at OnKilter, a strategy execution software vendor, and Provato, an electronic contract management solution provider that was acquired by I-Many. Previously, he was a founding member of the marketing team at Forte and held various engineering and product management positions at Ingres. In addition to his work at leading software companies, Mr. Horst served for several years as an I.T. Director for Atlas Die, a Midwestern manufacturing firm, where he was an early implementer of several early-stage technologies, including CAD applications, relational databases and wide area networking systems. Mr. Horst has participated in several panel discussions and many more speaking opportunities,

both within the United States and abroad, including several joint seminars with Forrester and Gartner analyst firms; user group meetings for IBM, Oracle, Forte and Sun; and industry exhibitions. Most recently, he spoke at XML Web Services One and hosted a live webcast with British Telecommunications on Web services management.

John Schneider

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John Schneider is founder and Chief Technology Officer at AgileDelta, Inc., an independent software vendor that supplies XML and Web Services infrastructure software for use on mobile computing platforms.

Prior to founding AgileDelta, Mr. Schneider led Engineering and Program Management for Crossgain Corporation, a high profile Microsoft spin-off founded to radically simplify building and deploying web services and applications (acquired by BEA). He was also Principal Systems Engineer at MITRE where he kick-started and led a variety of international XML initiatives for the United States and NATO.

Mr. Schneider founded and led ECMA's ECMAScript for XML (E4X) group, which developed the first mainstream programming language with native support for XML. He helped develop the XML Query Language and the XML Schema Language. He was a U.S. delegate to NATO on technology initiatives related to XML, messaging, data interoperability and integrated business processes.

Mr. Schneider has twenty years experience developing technology with a focus on mobile technologies, data encoding, information management, data interoperability and messaging. He has a Masters degree and Bachelors degree in Computer Science.