Conference Report

Next-Generation Enterprise Computing: Beyond EDOC 2006
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Advances in services computing technologies and infrastructure increase demand for interoperable ubiquitous access to networked services that support enterprise business. An enterprise service refers to an application component that provides either some e-business functionality or information to accomplish some business task through Web and mobile technologies.

With the increasing demand for networked and XML services, IT professionals need conferences like EDOC to discuss emerging technologies and next-generation enterprise computing.

Next-Generation Enterprise Computing: XML Services

Nowadays, enterprise computing encompasses XML technologies. We use XML to represent fine-grained data that originates in repositories in machine-readable format by providing structure and the possibility of adding type information, such as XML Schema.

A Web service is a software system that supports application-to-application interaction over the Internet. Web services are based on a set of XML standards, such as the Web Services Description Language, SOAP, and UDDI. Each service makes its functionality available through well-defined or standardized XML interfaces. The result of this approach is a service-oriented architecture.

XML plays an important role in the data transport protocol for Web services. For example, SOAP messages are used both by service requestors to invoke Web services and by Web services to answer requests. The interactions of SOAP messages between Web services form the theoretical model of SOAP Message Exchange Patterns.

Many enterprises aim to explore and investigate various research issues of XML data encapsulated by Web services over the network. In particular, we call these types of networked services XML services.

New challenges arise in the study of services engineering, an emerging research area devoted to the software engineering of service-oriented applications. Services engineering is an important area of the services computing discipline, as promoted by the IEEE Computer Society, Association for Computing Machinery, academia, and industry. The goal of those working in this field is to formulate effective solutions for the quality development, deployment, and management of these applications.

Evolving Conference

For these reasons, what started out as the Enterprise Distributed Object Computing (EDOC) Conference has come to encompass much more than just distributed objects. So this event now uses the name “International EDOC—The Enterprise Computing Conference,” to both recognize this broader scope and retain the initial conference’s name recognition.

Since 1997, EDOC has grown into an annual event focusing on the convergence of the paradigms, technologies, and methods involved in enterprise computing. EDOC emphasizes the integration and manage-
ment of enterprise computing research and development results, fostering an enterprise and social organizational engineering approach that can address and relate business, application, middleware, and technical levels. The themes of openness and distributed computing—based on services, components, and objects—provide a useful and unifying conceptual thread for this purpose. Now in its 11th year, this conference brings together leading researchers, architects, and practitioners from both academia and industry to discuss enterprise computing challenges and solutions. EDOC is the key annual event in enterprise computing.

**EDOC 2006**

EDOC 2006, which took place in October in Hong Kong, included 17 sessions: Enterprise Services; Enterprise Architecture; Enterprise Management; Enterprise Applications; Enterprise Security; Service Oriented Architecture; Service Management and Architecture; Web Services; Web Services Interoperability and Composition; Business Process Model; Business Contracts; Model Driven Design; Model Driven Architecture; Model Driven Development; Workflow Management; Workflow Technologies; and Systems Verification and Tolerant.

An article in the Business Contracts session, “From Trading to eCommunity Population: Responding to Social and Contractual Challenges” (Lea Kutvonen, Janne Metso, and Sini Ruohomaa) discusses the techniques of introducing trust-related decisions into eContracting and their effects. This development leads to strategic benefits for agile enterprises, but also to new challenges on enterprise system architectures and platforms.

The 2006 conference featured two keynote speakers. Masayoshi Ejiri from Fujitsu, Japan, in a talk titled “Paradigm Shift of Telecommunications Services and Management for NGN (Next Generation Networks),” discussed the new features required in next-generation networks to accommodate dramatic changes in telecommunications services. This new paradigm is based on a novel management architecture that encompasses enhanced business processes by ever-changing business partners—these services need to be brought rapidly together to create competitive telecommunications services. Next, Xindong Wu, from the University of Vermont, spoke about “User-Centered Agents for Structured Information Location on the Web,” documenting the design of a user-centered digital library system that integrates conventional digital library services with contemporary WWW advantages, such as comprehensive coverage and agents for information search and selection.

Eight workshops rounded out the EDOC 2006 program, including those on Vocabularies, Ontologies and Rules for the Enterprise; Middleware for Web Services; Models for Enterprise Computing; Trends in Enterprise Architecture Research; Open Distributed Processing for Enterprise Computing; Advances in Quality of Service Management; Electronic Document Management in an Enterprise Computing Environment; and Service Intelligence and Service Science. The Middleware for Web Services workshop included a keynote talk by Lionel Ni, from the Hong Kong University of Science and Technology. Ni presented a future research direction for middleware and data management for sensor networks.

EDOC 2006 continued to strengthen the foundation for tackling the research challenges inherent in next-generation enterprise computing. We and the other organizers look forward to the next EDOC in Annapolis, Maryland, 15-19 October 2007. For more details, visit http://www.edocconference.org.

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