

TECHNOLOGY TRANSFER PRESENTS

# MAX DOLGICER

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**SOA**

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**Architecture,  
Governance, Standards  
and Technologies**

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**NOVEMBER 17-19, 2008**

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**Modeling, Designing  
and Implementing  
SOA Applications**

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**NOVEMBER 20-21, 2008**

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VISCONTI PALACE HOTEL - VIA FEDERICO CESI, 37  
ROME (ITALY)



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## ABOUT THIS SEMINAR

SOA represents a unique and rare opportunity to bring IT and Business together. However, this opportunity often necessitates organizational changes in IT and how IT and the stakeholders on the Business side work together. The current IT culture must evolve, looking beyond the scope of project centric goals. We must consider requirements that span projects, lines of Business, or the Enterprise as a whole. This evolution drives the need for a new focus on Governance that is aimed to exploit the benefits of Service Orientation on a large scale.

XML, Web Services and other standards play important roles when implementing a Service Oriented Architecture, but it should not be overlooked that core Business functionality still has to be implemented behind the interfaces of the services. This requires a development methodology that is adapted to a Service Oriented Software Development Lifecycle (SDLC), as well as a comprehensive platform for service development, runtime, and management (e.g. Java EE Application Servers, .NET, ESBs, repositories, etc). This seminar starts with examples of popular Business strategies, explains how SOA can enable them to foster a better alignment between Business requirements and IT deliverables. It gives you insight into the key organizational challenges that IT Managers face with the adoption of SOA and how to master them through efficient Governance. Next, the seminar discusses the key standards that one should consider when implementing services and it outlines the important aspects of Enterprise Architecture that have to be addressed in order to make SOA projects successful. This includes defining a loosely coupled architecture and proper separation into service layers, as well as a comparison of traditional Web Services based and RESTful architectures. The seminar then shows how SOA enables new types of clients, it explains the benefits of a layered service model (i.e. orchestration, application, and infrastructure services), and it maps current standards to the architecture. Furthermore, the seminar will help you understand how SOA can be applied to integration initiatives within your company and introduces the concept of the Enterprise Service Bus (ESB). The seminar concludes with an examination of today's predominant platforms for building and deploying new Business applications (Java EE and .NET, as well as Open Source tools) in terms of their support for SOA.

### WHAT YOU WILL LEARN

- Learn how SOA can facilitate the alignment of IT with your Business
- Identify the challenges and benefits of developing an Enterprise Architecture
- Define a roadmap for creating an application architecture that conforms to SOA Best Practices
- Learn how IT culture has to change to successfully adopt the new style of architecture
- Understand how Web Services and other standards can be used to implement a SOA
- Discover the role of Java EE, .NET, and Open Source tools in a Service Oriented Architecture
- Learn how Enterprise Service Buses (ESB) can enable and facilitate integration of applications within your Enterprise and across a B2B Value Chain
- Understand the key elements of a Service Oriented Software Development Life Cycle

### WHO SHOULD ATTEND

- Architects who want to adopt a Service Oriented Architecture
- IT Professionals who need to see how SOA can be applied to development as well as integration projects
- IT Managers and IT Strategists selecting new standards and products for Enterprise Architecture
- IT Managers and IT Strategies evaluating feasible strategies for application development and integration
- Architects and Application Developers who want a detailed look at the different technologies that can be used to implement SOA
- Architects and Developers who want to know how these technologies can be applied to both, EAI and B2B Application Integration
- Consultants who need to recommend and use different implementation strategies for building a SOA

## OUTLINE

<p><b>1. Introduction to Service Oriented Architecture</b></p> <ul style="list-style-type: none"> <li>• The changing notion of applications</li> <li>• SOA defined</li> <li>• Where SOA can be applied</li> <li>• SOA challenges</li> <li>• Next generation SOA             <ul style="list-style-type: none"> <li>- From Client/Server SOA to Event &amp; Service Oriented Architecture (E-SOA)</li> </ul> </li> <li>• The pieces of the SOA puzzle</li> </ul> <p><b>2. The Business Perspective</b></p> <ul style="list-style-type: none"> <li>• How SOA enables Business strategies</li> <li>• How to align Business and IT through SOA</li> <li>• Moving beyond SOA             <ul style="list-style-type: none"> <li>- Business Activity Monitoring (BAM)</li> <li>- Complex Event Processing (CEP)</li> </ul> </li> </ul> <p><b>3. The IT Perspective</b></p> <ul style="list-style-type: none"> <li>• Governance             <ul style="list-style-type: none"> <li>- IT Governance</li> <li>- Architecture Governance</li> <li>- SOA Governance overview</li> <li>- Creating a system of record</li> <li>- Service lifecycle management</li> <li>- A place for policies</li> <li>- The operations perspective: fault resolution and SLA management</li> </ul> </li> <li>• SOA Center Of Excellence (COE)</li> <li>• Service Oriented development – A new SDLC methodology</li> <li>• Migration from previous architectures</li> <li>• Return On Investment (ROI) – A client example</li> </ul>	<p><b>4. Standards that are important for SOA</b></p> <ul style="list-style-type: none"> <li>• Services need data: organizing information through XML Schemas</li> <li>• Establishing connectivity through SOAP</li> <li>• Defining service interfaces with Web Services Definition Language (WSDL)</li> <li>• Representational State Transfer (REST)</li> <li>• Governing services with Service Repositories, Service Registries and UDDI</li> <li>• Using Business Process Execution Language (BPEL) and Business Process Management Notation (BPMN) for orchestration</li> <li>• Web Service Invocation Framework (WSIF)</li> <li>• Asynchronous service interaction: Notification</li> <li>• Reliable Messaging</li> <li>• Security</li> <li>• Transactions</li> <li>• Mapping Web Services to SOA</li> </ul> <p><b>5. Defining the Architecture</b></p> <ul style="list-style-type: none"> <li>• Definition of Enterprise Architecture</li> <li>• What drives the need for Enterprise Architecture?</li> <li>• Enterprise Reference Architectures             <ul style="list-style-type: none"> <li>- Sample outline for an architecture document</li> <li>- Enterprise Architecture modeling tools</li> </ul> </li> <li>• Typical application architectures that drive SOA             <ul style="list-style-type: none"> <li>- Multi-step Process</li> <li>- Composite Application</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Overview of loosely coupled architectures</li> <li>• Traditional Web Services based vs. RESTful architectures</li> <li>• High-level application architecture</li> <li>• How clients relate to services in a “Web Oriented Architecture”</li> <li>• The service layer model             <ul style="list-style-type: none"> <li>- Orchestration services layer</li> <li>- Application services layer</li> <li>- Infrastructure services layer</li> </ul> </li> <li>• Architecture Patterns for integration</li> <li>• Mapping standards onto the architecture</li> </ul> <p><b>6. How Service-Orientation Facilitates Integration</b></p> <ul style="list-style-type: none"> <li>• Strategies to leverage and preserve your investments</li> <li>• From SOA to Service Oriented Integration (SOI)</li> <li>• Evolution of integration solutions</li> <li>• The need for intermediation</li> <li>• Service virtualization</li> <li>• Enterprise Service Bus (ESB)             <ul style="list-style-type: none"> <li>- Introducing the Bus</li> <li>- ESB architectures</li> <li>- How standards could enable plug-and-play integration                 <ul style="list-style-type: none"> <li>* Java Business Integration (JBI)</li> </ul> </li> <li>- The Bus is not enough</li> </ul> </li> <li>• Integration across platforms and programming languages             <ul style="list-style-type: none"> <li>- The WS-I standard</li> </ul> </li> </ul> <p><b>7. Platform Choices for Developing Service-Oriented Applications: Java EE and .NET</b></p> <ul style="list-style-type: none"> <li>• Part 1: Java Enterprise Edition (Java EE)             <ul style="list-style-type: none"> <li>- Java EE Platform Layers</li> </ul> </li> </ul>
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- Enterprise Java Beans (EJB)
- How to utilize Java EE as a SOA platform
  - \* Java Messaging Service (JMS)
  - \* Web Services support
  - \* Other Java APIs for XML technologies
  - \* Client development
- Java Enterprise Edition 5 (Java EE 5)
- Java EE Application Servers
- Part 2: .NET
  - What is .NET?
    - \* The .NET Framework
  - How to utilize .NET as a SOA platform
    - \* Windows Communication Foundation (WCF)
    - \* WCF vs. ASP.NET
    - \* Remote Procedure Call (RPC), reliable messaging, publish/subscribe
    - \* Security
    - \* Client development

### 8. Platform Choices for Developing Service-Oriented Applications: Open Source Software (OSS)

- OSS definition
- Linux, Apache, MySQL, PHP (LAMP)
- OSS for SOA
  - Java Application Servers
  - Spring
  - Enterprise Service Buses
  - Web Services
  - Other tools
- OSS vs. Java and Microsoft
- How OSS and SOA Relate
- Concerns about OSS

### 9. Conclusions

- Open Source Software
- Summary of Best Practices
- Measuring success: the SOA Maturity Model
  - Organization into levels and key characteristics
  - How companies should progress through the model

**Max Dolgicer** is an internationally recognized expert, Technical Director and Principal at International System Group, (ISG) Inc., a leading consulting firm that specializes in design, development and integration of large-scale distributed applications using leading edge Middleware technologies. Mr. Dolgicer is a contributing editor for Application Development Trends magazine and recognized speaker, instructor and lecturer. Mr. Dolgicer has more than 27 years of management and technical experience in development and support of Business applications, software products and systems internals. Mr. Dolgicer's academic background includes a Master in Computer Science from Technion, Israel Institute of Technology.

## ABOUT THIS SEMINAR

Following a brief introduction the seminar first discusses key architectural guidelines for Service Oriented design. It covers the important characteristics of loosely coupled architectures and compares today's two mainstream approaches to SOA, namely traditional Web Services based architectures and RESTful architectures. It moves on to outline the options for moving processing from the server to the Web Services client, how components can be assembled into services, and how data can be accessed in a uniform, Service Oriented way. The seminar then addresses how a typical Object-Oriented application development methodology can be modified and adapted such that is suitable for implementing services. This is followed by an illustration of a layered services model, which fosters the separation of services into three distinct layers (orchestration, application, and infrastructure services layer). This separation is key to designing loosely coupled services and to ensure reusability of services across applications or Business processes.

A Case Study is used for a detailed illustration of the modeling and design of a SOA-based B2B gateway. It includes the design of service interfaces, the encapsulation of a legacy system, the definition of schemas that are broken down into reusable components, the development of Business processes, and a walk-through of the complete B2B gateway architecture.

### WHAT YOU WILL LEARN

- Learn the key aspects of modeling, designing and implementing services in a SOA
- Understand how a Service Oriented software development lifecycle is different from its Object-Oriented predecessors
- Be able to define practical guidelines that can help different project teams make the best architecture, design and implementation choices for SOA
- Learn about proper service layering and service design for reusability
- Gain insight into how Data Architecture relates to SOA
- Learn how to design XML Schema for componentization and reuse

### WHO SHOULD ATTEND

- Architects who want to adopt a Service Oriented Architecture
- IT Professionals who need to see how SOA can be applied to development projects
- IT Managers who want to adopt a Service Oriented software development lifecycle
- Consultants who need to recommend and use different implementation strategies for building a SOA

### PREREQUISITE

This class requires attendees to have an architectural understanding of Service Oriented Applications and core Web Services standards like XML Schema, SOAP, WSDL, etc.

## OUTLINE

<p><b>1. Introduction to Service Oriented Architecture</b></p> <ul style="list-style-type: none"> <li>• SOA defined</li> <li>• SOA applied             <ul style="list-style-type: none"> <li>- Defining application boundaries in SOA</li> </ul> </li> <li>• Moving from Client/Server SOA to Event and Service Oriented Architecture (e-SOA)</li> </ul> <p><b>2. Architectural Guidelines for Service Design</b></p> <ul style="list-style-type: none"> <li>• Overview of loosely coupled architectures             <ul style="list-style-type: none"> <li>- Degrees of Service Orientation</li> </ul> </li> <li>• Traditional Web Services based vs. RESTful architectures             <ul style="list-style-type: none"> <li>- Characteristics of traditional Web Services based architectures</li> <li>- Why do we need WSDL?</li> <li>- Why do we need SOAP?</li> <li>- Characteristics of RESTful architectures</li> <li>- The uniform interface</li> <li>- The concept of resources</li> </ul> </li> <li>• High-level application architecture</li> <li>• The client tier             <ul style="list-style-type: none"> <li>- How clients relate to services in a “Web Oriented Architecture”</li> <li>- Format considerations for the data exchange</li> </ul> </li> <li>• Services vs. Components and Data             <ul style="list-style-type: none"> <li>- Service Component Architecture (SCA)</li> <li>- Service Data Objects (SDO)</li> </ul> </li> </ul> <p><b>3. Service Oriented Analysis and Modeling</b></p> <ul style="list-style-type: none"> <li>• Overview of a Service Oriented Software Development Lifecycle</li> </ul>	<ul style="list-style-type: none"> <li>- Component vs. Service Oriented development</li> <li>• Extending a Object-Oriented software development methodology for SOA             <ul style="list-style-type: none"> <li>- Business Modeling Activities</li> <li>- Requirements Activities</li> <li>- Analysis &amp; Design Activities</li> <li>- Mining existing systems</li> <li>- Verifying service definitions against SOA principles</li> <li>- Implementation Activities</li> <li>- Test and Deployment Activities</li> <li>- Project Management Activities</li> <li>- New roles &amp; responsibilities</li> </ul> </li> <li>• Top-down vs. bottom-up approach</li> <li>• The service layer model             <ul style="list-style-type: none"> <li>- Orchestration services layer</li> <li>- Application services layer</li> <li>- Infrastructure services layer</li> </ul> </li> </ul> <p><b>4. Analysis and Modeling - Customer Case Study Part I</b></p> <ul style="list-style-type: none"> <li>• Customer overview</li> <li>• B2B Integration Strategy</li> <li>• Business Process Walk-Through</li> <li>• Defining Project Scope</li> <li>• Business Modeling</li> <li>• Definition of Services &amp; Layering</li> <li>• Verify SOA Principles</li> </ul> <p><b>5. Service Oriented Design - Case Study Part II</b></p> <ul style="list-style-type: none"> <li>• Guiding principles for service design</li> <li>• Putting it all together: a customer Case Study – Part II             <ul style="list-style-type: none"> <li>- Designing conceptual service interfaces</li> <li>- Encapsulation of existing Business logic</li> <li>- Designing the Schemas</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Schema Componentization &amp; Type Reuse</li> <li>- Designing concrete service interfaces</li> <li>- Designing the components</li> <li>- Composing Business processes</li> <li>- Detailed B2B Gateway Logical Architecture</li> <li>- Conclusions</li> </ul> <p><b>6. Conclusions</b></p> <ul style="list-style-type: none"> <li>• Summary of lessons learned             <ul style="list-style-type: none"> <li>- Summary of architecture choices</li> <li>- Where to process – on the Client or the Server?</li> <li>- Layers are good for decoupling and reusability</li> <li>- Service development needs a methodology</li> <li>- Case Study highlights</li> </ul> </li> <li>• Challenges             <ul style="list-style-type: none"> <li>- Composite applications</li> <li>- Asynchronous service interaction</li> </ul> </li> <li>• SOA today</li> <li>• SOA future outlook</li> </ul>
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## INFORMATION

<p><b>PARTICIPATION FEE</b></p> <p><b>SOA</b> <b>Architecture, Governance,</b> <b>Standards and Technologies</b> € 1500</p> <p><b>Modeling, Designing and</b> <b>Implementing SOA Applications</b> € 1200</p> <p><b>Special price for the delegates</b> <b>who attend both seminars</b> € 2500</p> <p>The fee includes all seminar documentation, luncheon and coffee breaks.</p> <p><b>VENUE</b></p> <p>Roma, Visconti Palace Hotel Via Federico Cesi, 37</p>	<p><b>SEMINAR TIMETABLE</b></p> <p>9.30 am - 1.00 pm 2.00 pm - 5.00 pm</p> <p><b>HOW TO REGISTER</b></p> <p>You must send the registration form with the receipt of the payment to: TECHNOLOGY TRANSFER S.r.l. Piazza Cavour, 3 - 00193 Rome (Italy) Fax +39-06-6871102</p> <p><b>within</b> <b>November 3, 2008</b></p> <p><b>PAYMENT</b></p> <p>Wire transfer to: Technology Transfer S.r.l. Banca Intesa Sanpaolo S.p.A. Agenzia 6787 di Roma Iban Code: IT 34 Y 03069 05039 048890270110</p>	<p><b>GENERAL CONDITIONS</b></p> <p><b>GROUP DISCOUNT</b> If a company registers 5 participants to the same seminar, it will pay only for 4. Those who benefit of this discount are not entitled to other discounts for the same seminar.</p> <p><b>EARLY REGISTRATION</b> The participants who will register 30 days before the seminar are entitled to a 5% discount.</p> <p><b>CANCELLATION POLICY</b> A full refund is given for any cancellation received more than 15 days before the seminar starts. Cancellations less than 15 days prior the event are liable for 50% of the fee. Cancellations less than one week prior to the event date will be liable for the full fee.</p> <p><b>CANCELLATION LIABILITY</b> In the case of cancellation of an event for any reason, Technology Transfer's liability is limited to the return of the registration fee only.</p>
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### MAX DOLGICER

**SOA**  
**ARCHITECTURE, GOVERNANCE,**  
**STANDARDS AND TECHNOLOGIES**

Rome November 17-19, 2008  
Visconti Palace Hotel - Via Federico Cesi, 37  
Registration fee: € 1500

**MODELING, DESIGNING**  
**AND IMPLEMENTING SOA**  
**APPLICATIONS**

Rome November 20-21, 2008  
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Registration fee: € 1200

**BOTH SEMINARS**

**Special price for the delegates**  
**who attend both seminars: € 2500**

If anyone registered is unable to attend, or in case  
of cancellation of the seminar, the general conditions  
mentioned before are applicable.

first name .....

surname .....

job title .....

organisation .....

address .....

postcode .....

city .....

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Stamp and signature

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