SOA - Service Oriented Architecture for Designers and Developers

A Service Oriented Methodology
- o Introduction to a SOA adoption roadmap
- o Service lifecycle
- o Different analysis approaches
- o Service oriented analysis
- o Service oriented design
- o Introduction to service oriented patterns

Advantages of SOA
- o Traditional EAI Approach
- o Problems with traditional EAI approach
- o Enter Service Oriented Architecture (SOA)
- o Build the Services
- o We can easily change the Process
- o Change flow using Legacy approach
- o Replacing an application
- o Other advantages
- o Business advantages
- o Adoption stages

Defining a Service in WSDL
- o Sample WSDL Document Structure
- o One-way
- o Request-Response
- o Solicit-Response
- o Syntax
- o SOAP Binding Example
- o WSDL SOAP Binding Extensions

Simple Object Access Protocol (SOAP)
- o Objectives
- o SOAP Overview
- o Why do you need SOAP?
- o SOAP In Protocol Stack
- o Header Attributes
- o SOAP Body
- o SOAP Fault
- o Document/Literal Style
- o Document/Literal Wrapped Style
- o Details of the Wrapped Style
- o Connecting to a Webservice

Service Oriented Analysis & Design
- o Objectives
- o Stages of SOAD
- o Identifying services
- o Producing service specifications
- o Functional areas of the business.
- o Services belonging to these functional areas
- o Functionalities belonging to these services
- o Documenting service hierarchy
- o Best practices
- o Analyzing the case study requirements

Enterprise Service Bus (ESB)
- o Objectives
- o Service invocation
- o Legacy system Integration
- o Web services to the Rescue
- o The role of ESB in SOA
- o Security and ESB
- o Configuring a simple ESB solution

Business Process Implementation
- o Business Process Diagram
- o Challenges in Process Implementation
- o BPEL4WS
- o Partnership
- o Example: a Buy-Sell partnership
- o Modeling partnerships in BPEL
- o Simple activities
- o Invoke activity
- o Structured activities
- o Lifecycle of Process Development
- o Testing correlation examples
- o Implementing a simple process

Messaging Architecture
- o Why we need messaging
- o How to use messaging in a SOA?
- o SOAP over JMS details.
- o Modeling services well suited for messaging.
- o Correlation and example usage
- o How to use correlation in SOA.
- o How to implement publish subscribe in SOA?
- o Sample scenarios

Layered Architecture
- o The layers pattern.
- o Classic three-tier architecture.
- o Connecting to the domain layer.
- o Linking to the user interface.
- o Using packages to decompose a system.
- o Avoiding mutual dependencies.
- o MVC pattern with services
- o Application service layer
- o Business service layer
- o Orchestration service layer

Transaction Management
- o The ACID properties.
- o Local vs. distributed transactions.
- o New challenges with transactions in SOA.
- o Transactions from a specific service call.
- o Transactions in a long running business process.
- o What is compensation?
- o Exercise: implementing compensation

Software Platform for SOA
- o Software Tools for SOA
- o The Need for a Tool
- o SOA development Life Cycle
- o Example: Oracle SOA Suite/BEA
- o Example: Microsoft BizTalk Server 2010
- o Using Enterprise Architect features
- o Key refactoring features for SOA
- o Web Services Support
- o Runtime Products for SOA

Conclusions
- o New implementation paradigms
- o The benefits of employing SOA
- o Review of common business goals
- o The risks associated with the SOA approach
- o Evaluating tradeoff strategies

Genuine Belgium
www.genuine.eu
Tel. +32 (0)15.76.00.65

Genuine UK
www.genuine.uk.com
Tel. +44 (0) 7907.568.105

Genuine France
www.genuine.fr
Tel. +33 675.670.751