



# **B2B Web Services Testing Management View**

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# Presentation Contents

- ◆ The Problem
- ◆ The Solution
- ◆ Concepts & Terminology
- ◆ Challenges/Considerations
- ◆ Opportunities

# The Problem

- ◆ Bi-Directional Data Delivery Mechanism
- ◆ Real-Time
- ◆ High Speed Delivery
- ◆ Protected Information
- ◆ Reusable Solution



# The Solution

- ◆ Business to Business (B2B)
- ◆ Electronic Data Interchange (EDI)
- ◆ Web Services
- ◆ Signed & Encrypted



# Business to Business (B2B)

- ◆ Electronic Data Transfer
- ◆ Between Businesses (vs. to Consumers)



# Electronic Data Interchange (EDI)

- ◆ Structured Transmission of Data
- ◆ Electronic Means
- ◆ Between Computer Systems



# Web Service

The World Wide Web Consortium (W3C) defines a web service as "*a software system designed to support interoperable machine-to-machine interaction over a network*".



# Other Concepts/Terminology

- ◆ ebXML
- ◆ XML Schema (XSD)
- ◆ WSDL
- ◆ SOAP
- ◆ Encryption (i.e. X.509)





# Testing Challenges/Consideration

- ◆ No GUI
- ◆ Testing Tools
  - ◆ Various Specialist Tools
  - ◆ Be Flexible/Adaptable
  - ◆ Restrictions
- ◆ Stubs & Drivers
  - ◆ Misaligned Milestones
  - ◆ Collaborate with Developers



# Testing Challenges/Consideration

- ◆ Planning/Approach
  - ◆ Can Be “Costly”
  - ◆ Multi-Dimensional Testing
    - ◆ Comms & Message Protocols
    - ◆ Process
    - ◆ Content & Business Mappings
  - ◆ Existing & New Technologies



# Testing Challenges/Consideration

- ◆ Scheduling
  - ◆ Stubs & Drivers Take Time
  - ◆ Training Factor (Tools, Concepts etc...)
  - ◆ Test Environments
- ◆ Test Environment
  - ◆ Inward & Outward Facing
  - ◆ Investment vs. Throw Away
  - ◆ As Project Deliverable



# Testing Challenges/Consideration

- ◆ Security
  - ◆ Many Services/Many Security Holes
  - ◆ Security Policies
  - ◆ Remember the Test Environments
- ◆ Performance Testing
  - ◆ As Functional Testing
  - ◆ Accurate NFR
  - ◆ Regression/Maintenance Testing



# Testing Challenges/Consideration

- ◆ Multiple Point of Failure
  - ◆ Quick Debugging
  - ◆ Integrated Log Tracking
  - ◆ Tracking in Production
- ◆ External Developer/Partner Interaction
  - ◆ Test Environment (Full/Stubbed)
  - ◆ Beta Testing (Yours vs. Theirs)
  - ◆ Interoperability



# Testing Opportunities

- ◆ Tester/Developer/BA Collaboration
- ◆ Cross Skilling (Technical & Testing)
- ◆ Driver for Test Automation
- ◆ Multiple Testing Types
- ◆ Have Some Fun!



# Summary

- ◆ Many Management & Technical Challenges
- ◆ Opportunities for Different Testing
- ◆ Opportunities for Team Work
- ◆ Opportunities for Automation
- ◆ Opportunities for Skill Development

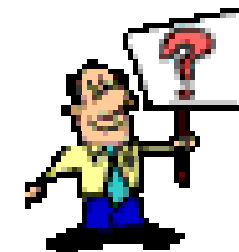
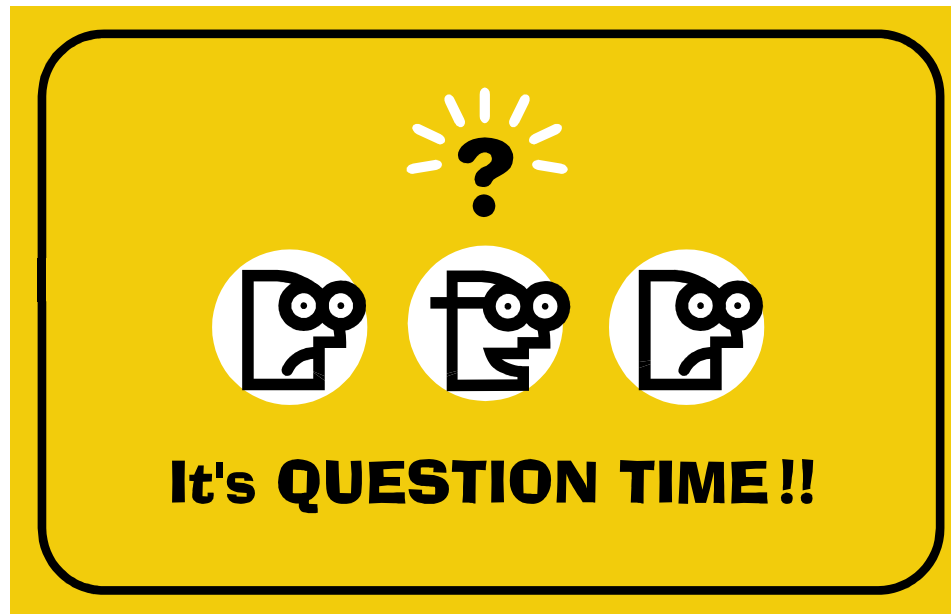
# Tools (Ours)

- ◆ SOAPUI (*Invoke Web Services*)
- ◆ XMLSpy (*Schema Validation*)
- ◆ OpenJMS (*JMSQueue Message Injection*)
- ◆ Hermes (*View JMSQueue Message*)
- ◆ OpenSSL (*Generate Certificates*)





# Comments and Questions





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