Open Standards + Profiles = Interoperability

Presented by
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Open Forum for Standards Developers
June 20, 2007
Overview

Agenda
- WS-I and Web services
- Web Services Interoperability Organization
- International Reach
- Challenges to achieving Global Recognition
- New Organization starting out

Additional Information
- Web services standards set
- WS-I deliverables
- Why are Profiles necessary?
- Progress to date
- Work in progress
- Stay in touch with WS-I
WS-I and Web services

- **The Web services adoption and support cycle**
  - Vendors will need to deliver more and better support as adoption increases
  - As more common services become available the pace of adoption will accelerate
  - Web services succeed in direct proportion to the **technologies that support them**

- **Web services must interoperate to be effective**
  - An enterprise typically consists of tools and solutions from multiple providers
  - Customers want and need quality, modularity, evolve-ability, etc.
  - **Interoperability is a critical requirement to make Web services work**

- **Interoperability is more than Open standards**
  - Standards Development Organizations (OASIS / W3C) build standalone standards
  - Products use groups of standards
  - Interoperability places new requirements on standards
  - **WS-I compliments the work done by OASIS, W3C, etc.**
Web Services Interoperability Organization

• An open industry effort
  ▶ Advancing Web services interoperability

• Broad participation
  ▶ 180+ companies
    ➢ Software Vendors, Consultants, Industry Organizations, etc.

• Establish best practices for achieving interoperability
  ▶ Based on existing open standards
International Reach

- **Global Membership**
  - BT Group, Deutsche Telecom, Ericsson, France Telecom, Fujitsu, Hitachi, Kantega, Microfocus, NEC, Nokia, SAP, Software AG, etc.

- **WS-I Board representation**
  - President and chairman of the board – SAP
  - Board members – World’s largest technology companies invested in Web Services (BEA, Fujitsu, HP, IBM, Intel, Microsoft, Oracle, Sun Microsystems, WebMethods)

- **PAS submission to ISO**
  - WS-I Basic Profile 1.1
    - Approval anticipated 2H07
  - WS-I Basic Security Profile 1.0 to be submitted

- **Collaboration with the EU**
  - Leverage Web Services to achieve Enterprise Interoperability across EU
Challenges to achieving Global Recognition

- **Global Recognition**
  - Broad adoption for WS-I deliverables in vendor products
  - Interoperability as a key success factor for Web Services
  - Customers request WS-I compliant technologies
  - Analyst organizations recognize value of deliverables

- **Challenges**
  - Speed of adoption determined by broad consensus across technology vendors on the WS-I board
    - Alignment of product roadmaps takes time
  - Balance user and vendor interests

- **Outreach**
  - Presence at key conferences
    - User
    - Analyst (Gartner / Burton Catalyst)
  - Update key analyst firms – Worldwide
  - Press releases
    - Supporting new deliverables
    - Achievements
  - Interop events
New Organization starting out

- **Critical requirements**
  - Proposed deliverables provide high value to target audiences
  - Organization fully focused on a set of deliverables that fosters the goal of interoperability
  - Core membership
    - Customers
    - Vendors
    - Services Providers
    - Collaborating Standards Organizations
  - Adapt to change
  - Active participation by membership
    - Building of deliverables
    - Promotion of deliverables
  - Clear outreach plan / execution capability
  - Money
    - To run the organization
Additional Information about WS-I
The Web Services Standards Set

<table>
<thead>
<tr>
<th>Additional Capabilities</th>
<th>Management</th>
<th>Portals</th>
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<tbody>
<tr>
<td>Business Process Orchestration</td>
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The Web services standards set: WS-I progress to date

- Additional Capabilities
  - Management
  - Portals
- Business Process Orchestration
  - Composition/Orchestration
- Composable Service Elements
  - Security
  - Reliable Messaging
  - Transactionality
- Messaging
  - Endpoint Identification, Publish/Subscribe
- Description
  - XML Schema, WSDL, UDDI, SOAP with Attachments
- Invocation
  - XML, SOAP
- Transports
  - HTTP, HTTPS, Others
WS-I Deliverables

• Profiles
  ▶ Selected set of specifications based on customer requirements
  ▶ Guidelines and conventions for using a defined set of specifications to ensure interoperability

• Sample applications
  ▶ Sample code and applications support multiple environments
  ▶ Demonstrate interoperability for completed Profiles

• Test tools and supporting materials
  ▶ Supporting documentation
  ▶ Test profile implementations for conformance
### Why are Profiles necessary?

<table>
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<tr>
<th>WS-I Profile Provides Interoperability Guidance</th>
<th>Example - Reliable Secure Profile (RSP)</th>
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<tr>
<td><strong>Eliminates ambiguity by tightening requirements (MAY, SHOULD → MUST)</strong></td>
<td><strong>Issue 37</strong></td>
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<td><strong>WS-RM</strong>: Receiver SHOULD ignore unrecognized extensions</td>
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<td></td>
<td><strong>RSP</strong>: Receiver MUST ignore unrecognized extension</td>
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<td><strong>Avoids difference in interpretations by clarifying semantics</strong></td>
<td><strong>Issue 30</strong></td>
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<td>Define the semantics of a “one-way” message</td>
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<td><strong>Fill the gap created by composing different specifications together</strong></td>
<td><strong>Issue 16</strong></td>
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<td><strong>WS-RM</strong>: Defines protocol elements – headers and body</td>
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<td><strong>WS-S</strong>: Defines how to secure headers and/or body</td>
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<tr>
<td></td>
<td><strong>RSP</strong>: Requires securing both WS-RM headers and body</td>
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<td><strong>Issue 29</strong></td>
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<td><strong>RSP headers</strong>: Requires that WS-RM should not mess up WS-A</td>
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Progress to Date

• **Final material**
  - Basic Profile 1.0 and 1.1
  - Simple SOAP Binding Profile 1.0
  - Attachments Profile 1.0
  - Security Challenges, Threats and Countermeasures 1.0
  - REL and SAML Token Profiles
  - Basic Security Profile 1.0

• **Work in Process**
  - Basic Security Profile 1.1
  - Basic Profile 1.2 & 2.0
  - Reliable Secure Profile 1.0
Work in Progress

• Basic Profile 1.2
  ▶ W3C WS-Addressing
  ▶ SOAP 1.1 Binding for MTOM
    ➢ Target completion – 2H07

• Basic Profile 2.0
  ▶ Replace SOAP 1.1 with SOAP 1.2
  ▶ WSDL 1.1 Binding for SOAP 1.2
    ➢ Target completion --- 1H08
Work in Progress (con’t)

• Basic Security Profile 1.1
  ▶ Replace WS-Security1.0 with WS-Security1.1
    ➢ Target completion – 2H07

• Reliable Secure Profile 1.0
  ▶ OASIS WS-Reliable Messaging 1.1
  ▶ OASIS WS-Secure Conversation 1.3
  ▶ Composes with BP1.2 or BP2.0 and BSP1.0
    ➢ Target completion --- 1H08
Stay in touch with WS-I

- Visit WS-I at [www.ws-i.org](http://www.ws-i.org)
  - Deliverables available for free download
- Become a member
  - User requirements identify future profiles
- **Open Standards => Profiles => Interoperability**