

Promoting e-Business and Web Services Standards to SMEs in Japan, and Asia

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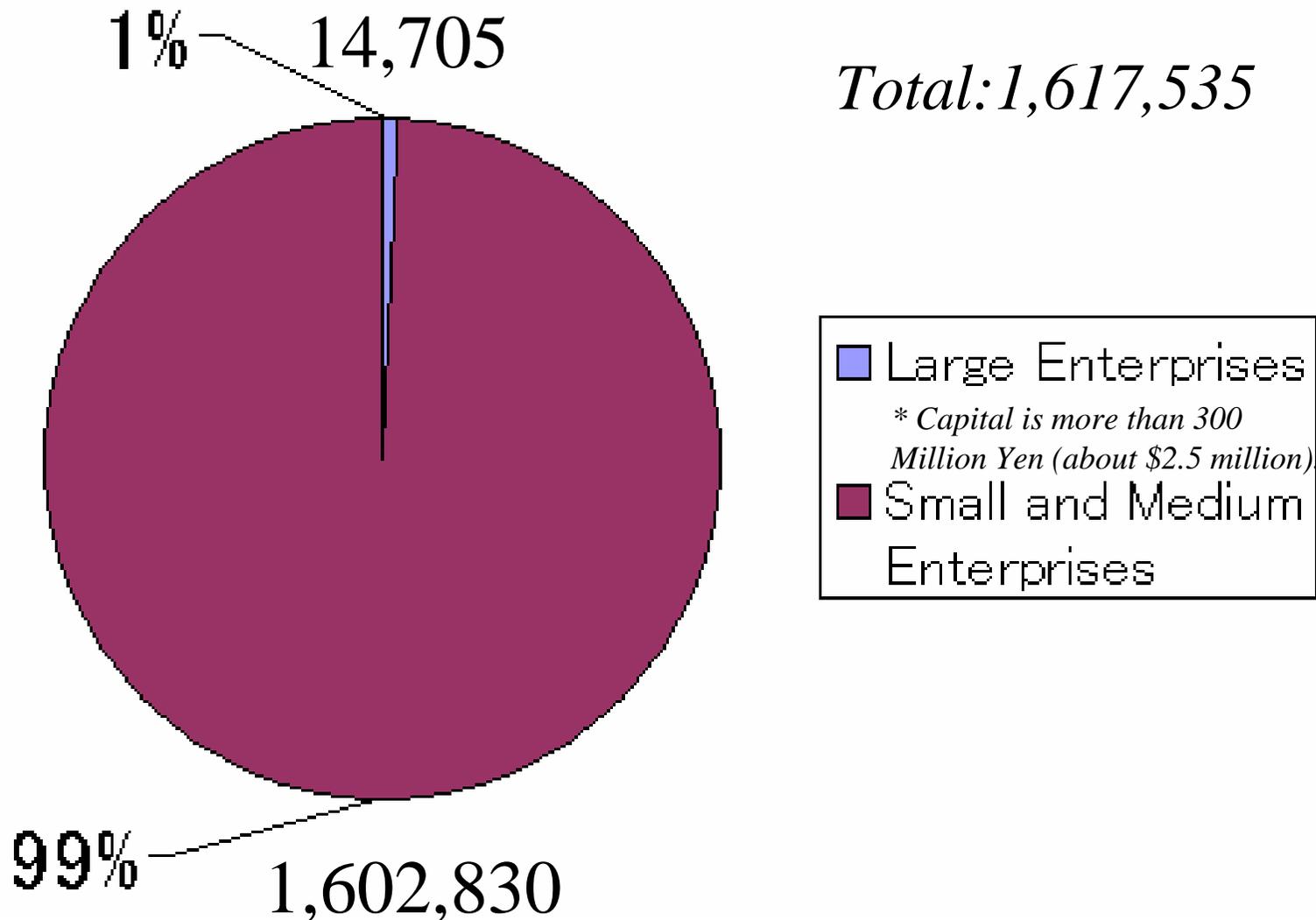
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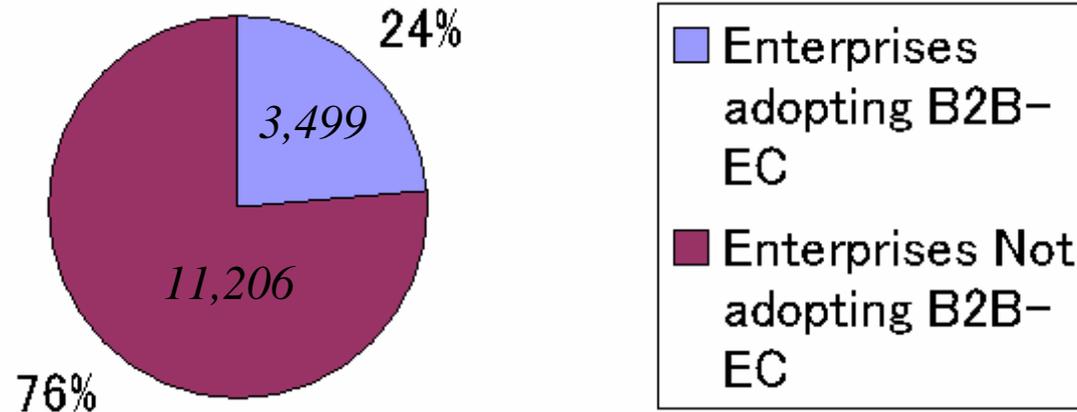
- Promoting Web Services standards by Interoperability testing in Asia

Overview: 99% of Japanese Enterprises are SMEs

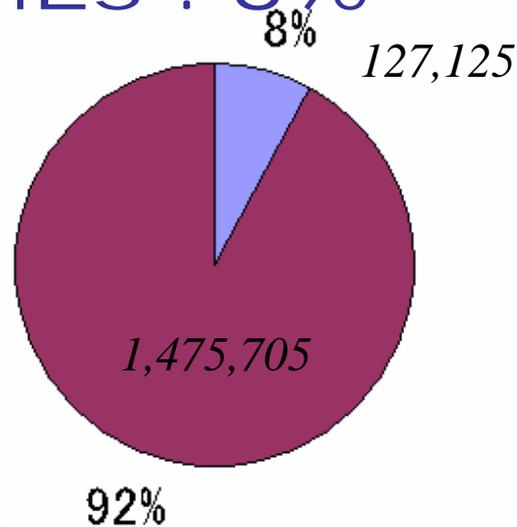


B2B-EC adoption rates

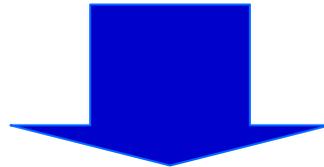
1) in Large Enterprises : 24%



2) in SMEs : 8%



The Goal of the Japanese Government :
Making B2B-EC adoption rate more than 60%. (More than 50% in SMEs)



The Key Issue is to increase adoption rate for SMEs.

Government agency is coordinating industries to promote B2B-EC.

Overview of Industries that government agency is coordinating

- **Retail Industry**

- Vertical Standard - “**Japan Chain Stores Association(JCA) Protocol**” in use since 1980s (adoption >90%).
- DSRI (The Distribution Systems Research Institute) has defined **Pull Messaging extension for “SOAP-RPC”**..

- **Manufacturing Industry**

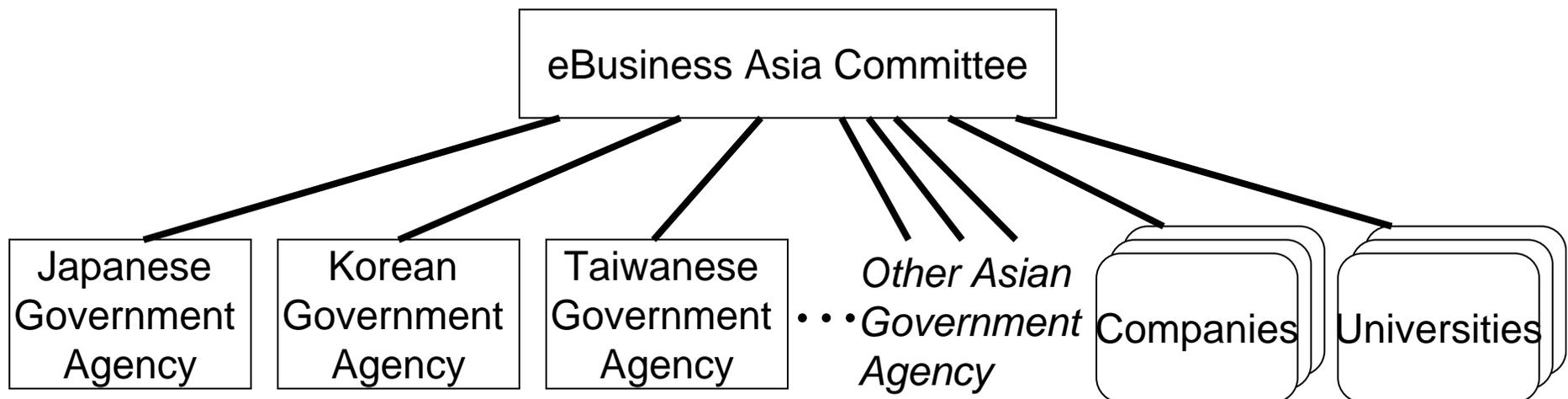
- JEITA ECALGA project : Parts Procurement System with ebXML (December 2003 ~)

- **COXEC (Common XML/EDI Practice Promotion Council)**

- EDI service with ASP model for SMEs.
- “Common XML/EDI Framework” (December 2005).

Asian government agencies are sponsoring Interoperability testing

- **eBusiness Asia Committee (eAC)**



- eAC has issued certification for 20 products/implementations that has passed interoperability test for ebMS2.0.
- planning to execute next interoperability tests for standards elected by its members (some WS-*, likely ebMS3.0)

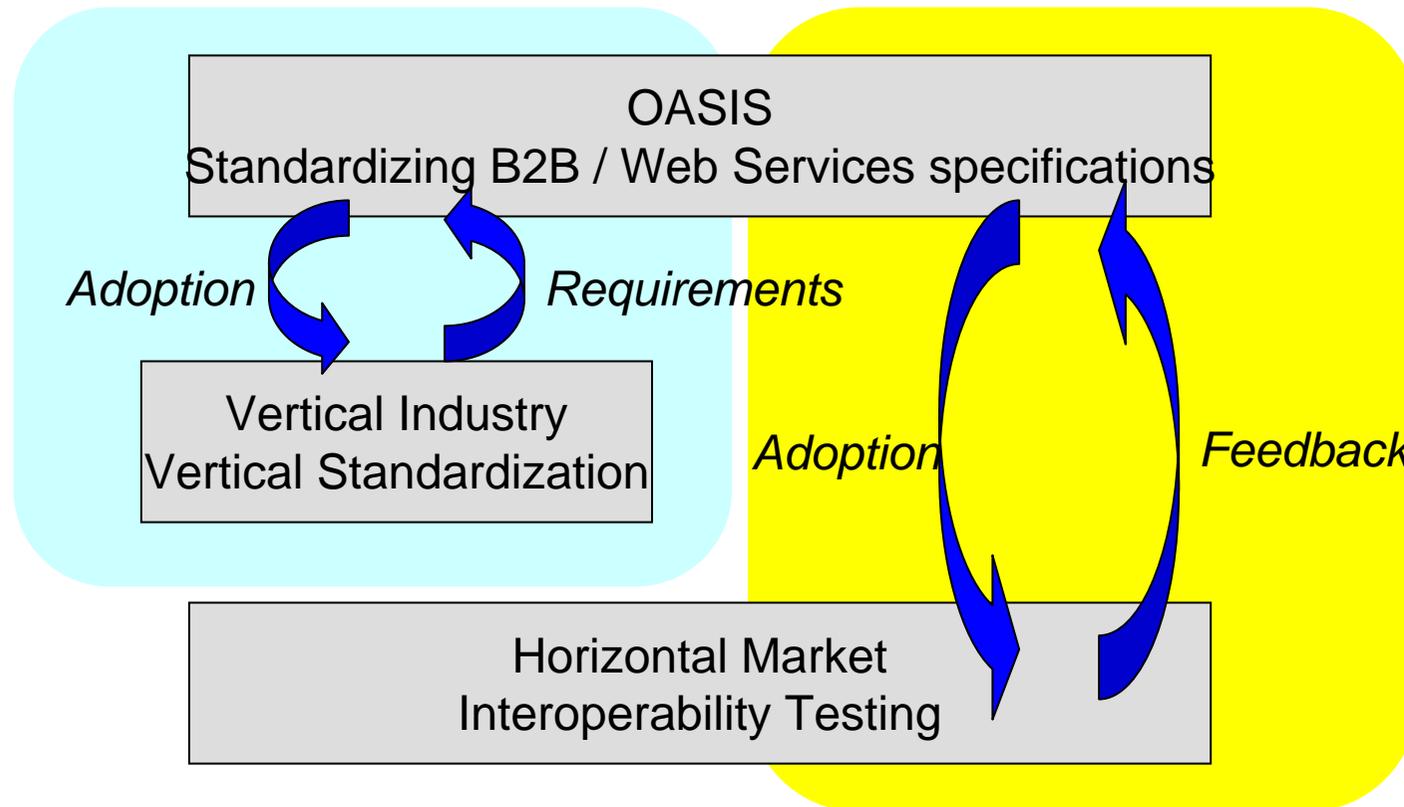
Activities to promote B2B and Web Services Standards

Activity 1

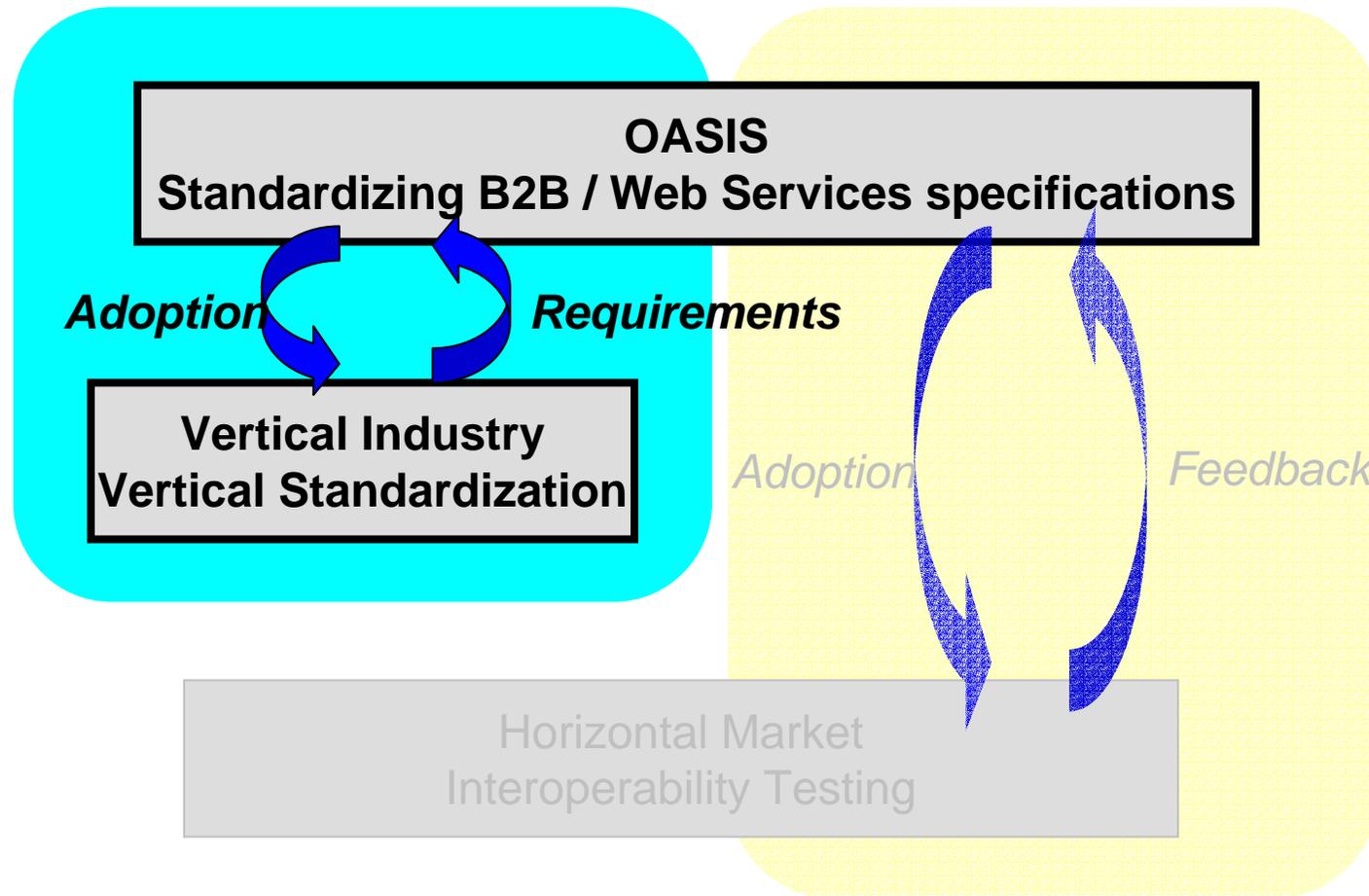
Promoting B2B standard to Vertical organizations

Activity 2

Promoting Web Services standard by Interoperability testing



Promoting B2B standard to Vertical: The key is adopting Industry Requirements into a specification



Requirements to Promote B2B in SMEs in Japan

- **Easy to adopt**

Light-weight system, Support **non-real time processing, no 24x7**

A single B2B system for all trading partner.

Legacy Web-EDI is affordable, but requires different systems for each trading partner.

- **Easy to use**

As easy to use as **FAX**.

Single interface should allow to exchange with multiple trading partners.

Legacy Web EDI systems requires manual data input for each trading partner.

Expensive in terms of human resources.

- **Messaging data in client system should be reused in other systems**

Legacy Web EDI systems don't allow to reuse data, since all data is stored in server.

A Major Feature: Pull Messaging in Client/Server System

- **Client/Server system**
Affordable, easy-to-maintain light-weight Client for SMEs.
- **Standardizing a Pull messaging specification**
ebXML : ebMS2.0 -> ebMS3.0
- **With Pull, Receiver retrieves EDI docs from Sender.**
Legacy EDI friendly.
 - No 24X7..
 - No global IP address.
 - Works with dial-up connections.
- **Pull messaging meets requirements from SMEs**

Requirements from Industry Organizations to Pull messaging

- Requirements from DSRI, JEITA, COXEC activities
 - 1) Simple authentication for client.
 - 2) Non-accessible Receiver (→ Pulling).
 - E.g., Firewall, no 24x7, no global IP address, no server
 - 3) Prioritized/Categorized Messaging.
 - Message transfer controlled based on priorities.
 - 4) Reliable Messaging (e.g., At-Least-Once, Server recovery) - in the infrastructure level.

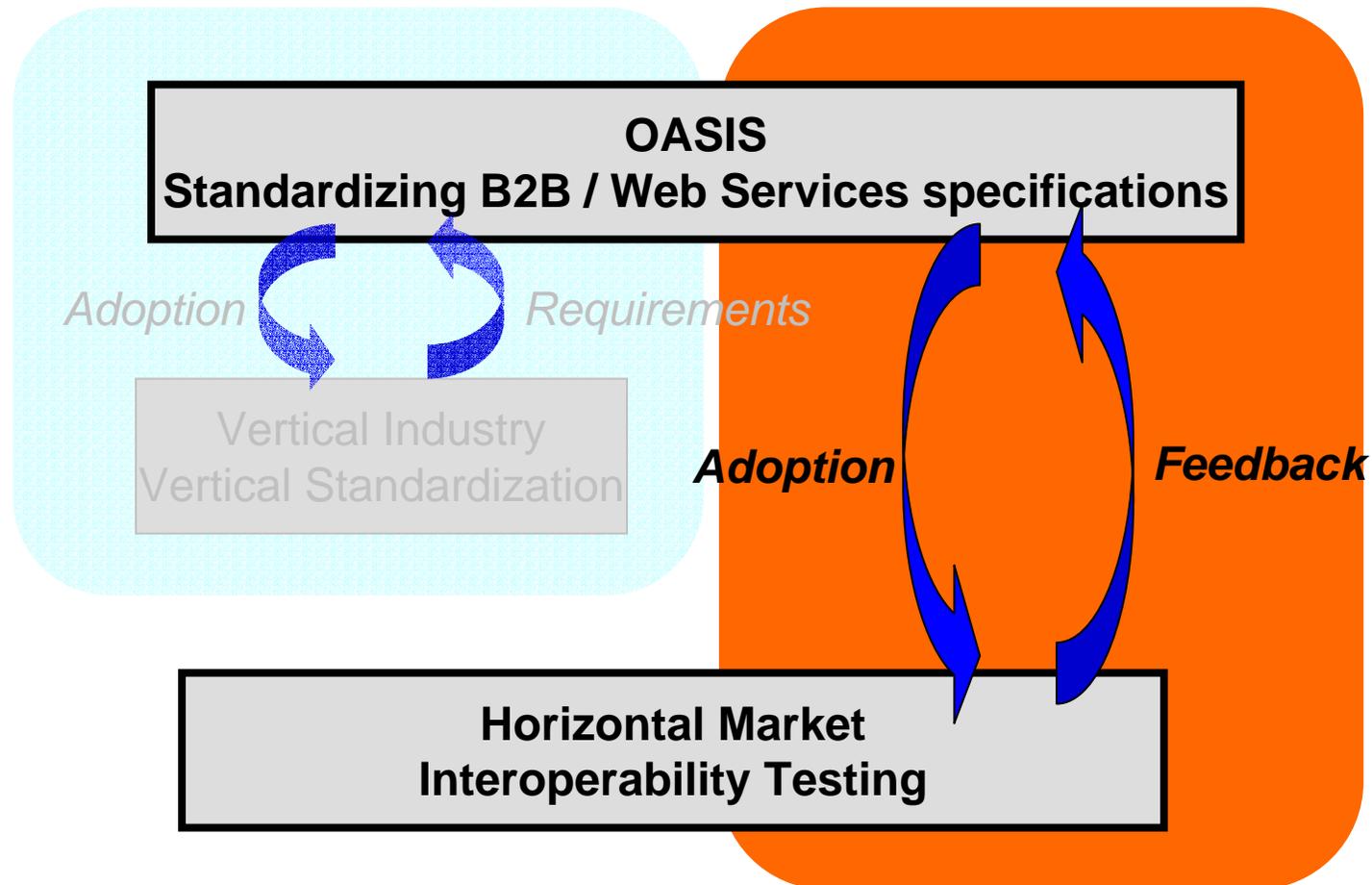


These are proposed to ebMS3.0 standardization

Industries have adopted standard specifications

- JEITA and COXEC have adopted and implemented ebMS3.0.
 - ebMS3.0 is based on Web Services specs.
I.e., ebMS3.0 = SOAP + WS-Reliability/RM + WS-Security + Pull messaging + ...
 - The spec meets their requirements.
- DSRI is defining their own pull messaging extension for SOAP-RPC.
 - However, ebMS3.0 may be re-considered.

Promoting Web services standards by Interoperability testing



Interoperability testing in eBusiness Asia Committee (eAC)

- eAC Interoperability Task Group is planning interoperability test to promote Web Services and B2B Standards.
- Candidates are:
 - ebXML Messaging Services 3.0
 - WS-Reliability / WS-RM
 - WS-Security
 - And other ebXML and Web Services technologies
- The first technology to target for interoperability test in ITG is WS-Reliability / RM, since it is critical to B2B.

Requirements for Interoperability tests

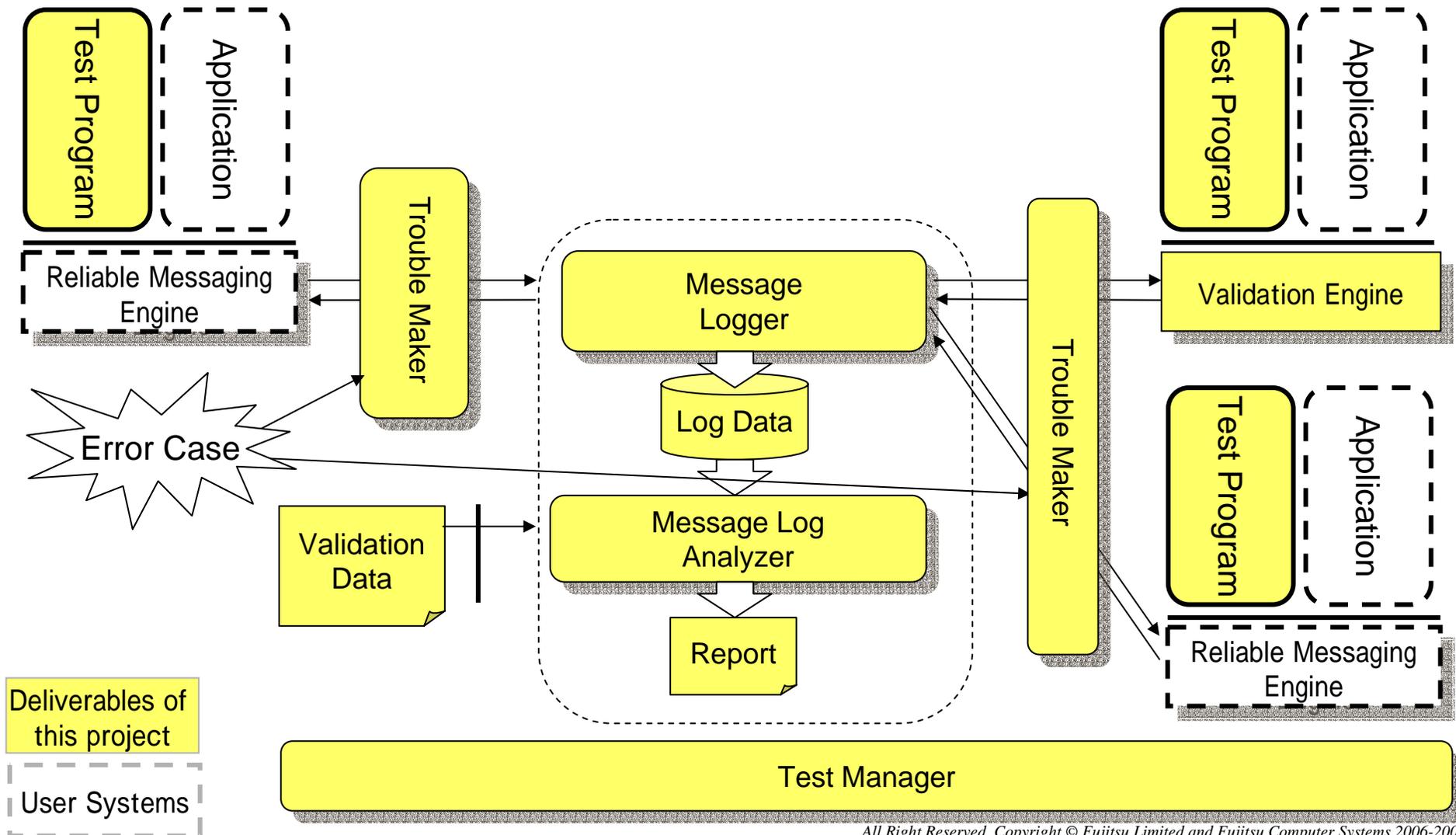
- Leverage the existing testing process/technologies.
E.g., OASIS IIC, ebXML Asia, and others.
- Easy, immediate verification of test items
E.g., It should allow to validate correctness of test items.
- Testing and its validation should be easy.
E.g., Many testing process should be automated.
- Testing process should be easy to extend and easy to maintain.
E.g., Testing should be independent from protocol binding.

Testing Tool for Reliable Messaging was developed

- Developed at Digital Information Equipment Interoperability Platform Project at NEDO/INTAP in Japan
- Goal: to ensure interoperability of Reliable Messaging for Web services protocol (used in ebMS V3).
- Target specification: OASIS WS-Reliability1.1. WS-RM will also be supported, once standardized.
- Deliverables from the project:
 - Profile
 - Conformance/Interoperability test tools
- Leveraging existing achievements from OASIS IIC, ECOM, ebXML Asia and WS-I
 - E.g., ebXML Message Service Deployment Guide, Test Suites, CPA Templates, WS-I profiles
- **The test tool is offered freely to promote interoperable reliable messaging.**

Reference Material

Architecture of Testing tool



Reference Material

Test Categories

1. Message Format Tests

- Validating a message format exchanged on the network
 - Conforming to OASIS WS-Reliability1.1 specification

2. Binding Tests

- Validating a binding of WS-Reliability messages and underlying protocol

3. Protocol Sequence Tests

- Guaranteed delivery,
- Duplicate elimination, and
- Message ordering

Test Patterns

- Conformance test for reliable messaging engine
- Interoperability test between two reliable messaging engines
- Interoperability test between two applications

Reference Material

Snapshot of Test Report

Test Assertions Document

Assertion Document Information

Name: WS-R
Version: 1.1
Description: WS-Reliability1.1 TestAssertionDocument

Specification Information

Specification Name: WS-R Specification
Specification Version: 1.1
Specification Location: <http://ws-r.org>

Format Test Results

Test No. AA0001

TestType	request
TestOption	required
prereqList	Nothing

- **Context:**
Request Message includes WS-Reliability Request element.
- **Test Description:**
Validate whether Request element includes mustUnderstand attribute.
- **Failure Message:**
mustUnderstand attribute not found.
- **Failure Detail Description:**

■ The GUI outputs validation result of message format

- Output with each combination of request and response
- Display of test item and its test result with each message

Next Interoperability Testing

- eBusiness Asia Committee is planning to start Interoperability testing in August to October, 2007
 - Reliable Messaging (WS-Rel*)
 - ebMS3.0
 - And others
- Testing at no charge.

Conclusion

- The Japanese government plays a key role in promote B2B standards in SMEs.
 - Does not dictate, but coordinates work of Industry Consortiums, supports testing
- Requirements from Vertical Organizations / SMEs must be taken into account in OASIS standards.
- Web Services standards (WS-*) will be accepted with assurance of Interoperability among multiple implementations.

Testing Procedure, Testing Tools, Conformance and Interoperability testing

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Contact me for

- ebXML MS3.0 interoperability test,
- WS-Reliability/RM interoperability test.

Thank you.


FUJITSU

THE POSSIBILITIES ARE INFINITE