Managing Business Processes Over A Reliable Infrastructure

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Presentation Outline

• What is ebXML BPSS?
  – BPSS and the ebXML Architecture
  – Current Status and Plans

• BPSS and a Reliable Infrastructure
  – Transactions and Quality of Service
  – BSI Process Execution

• Business Collaboration Using a Reliable Infrastructure
  – Case Study

• Summary and Questions
BPSS and the ebXML Architecture

- BPSS facilitates shared collaboration between partners
  - Choreography
  - State alignment
  - Partner roles
  - Conditions and constraints
  - Expectations on the infrastructure

- Defines the BSI conceptual model
  - Defines BSI role and functionality
ebBP Current Status and Plans

• v2.0 well underway - New and improved functions
  - Explicit and extendable business transaction patterns
  - Conditional changes on process characteristics (late binding)
  - Abstract integration using interface definition language (i.e. WSDL)
  - Improved packaging and reusability
  - Flexible role bindings
  - Draft schema in final stages; next is technical spec.

• v3.0 potential plans
  - Business entities, validation, and late binding
  - Additional multi-party support (role and context)
BPSS and A Reliable Infrastructure

● Business transaction activities
  – Present sufficient info for messaging service to exchange messages.
  – Aid in business collaboration composition.
    ● For roles and partners
    ● With state, transitions and guards
    ● Bolstered by Quality of Service expectations

● Quality of Service (QoS)
  – Business focused
    ● Interaction predictability, non-repudiation, document security
    ● Reliability, authorization
ebBP Functional View

- **Business Service Interface**
  - Minimum capabilities
  - Available

- **CPP/CPA**
  - Role per CPP
  - Minimum capabilities
  - Quality of Service
  - Available

- **Messaging Service**
  - Available

- **Process Flow**
  - Process Specification
  - Business Transaction Definitions
  - Transaction Activities
  - Collaboration Activities
  - Other (operations)

- **Message Content**
  - Business document Attachments

- **State Tracking**
  - Available

- **Available Minimum capabilities**
BPSS and A Reliable Infrastructure

- BSI process execution
  - BSI understands business semantics
    - Initiating and accepting business activities and business signals
    - State transitions
    - Quality of Service (QoS) aspects
      - Provides interfaces to participants' systems.
      - Prepares business transaction payload and provides it to the messaging service.

- BSI operational requirements
  - Exists behind partner firewalls.
  - Available and maintains active state.
BPSS and A Reliable Infrastructure

- Provide an automated interface to business systems.
  - Able to recognize and monitor processes.

- Fits behind a reliable infrastructure.
  - Doesn't specify how transactional semantics implemented.

- BSI implements a role in collaboration.
  - Detection of transaction open/close
  - Transfer of control
  - Detection of failures, timeouts, and exceptions
Business Collaboration Using a Reliable Infrastructure [1]

• Case Study: Auto supply chain
  – Large auto manufacturer uses many small production suppliers.
  – Goals:
    • Automate purchase decisions.
    • Achieve confidence in infrastructure.
      – Non-repudiation, security, persistence, reliability
    • Enable delegation of underlying functions to other systems where required.
      – Ensure quality measures achieved.
Business Collaboration Using a Reliable Infrastructure [2]

• Case Study: Auto supply chain
  – As Buyer, Corporate HQ uses warehouse and forecast data to drive buying decisions.
  – Supplier receives purchase requests.
    • Supplier acts as Distributor.
    • Supplier may act as Buyer for verification of payment history before product/item delivery.
    • Supplier notifies Corporate HQ of delivery intent.
    • Supplier, as Distributor, delivers product
  – Corporate HQ or designee Warehouse, as Buyer, receives product.
Automate replenishment decision

Check for payment history

Corporate HQ

Warehouse A

Warehouse B

Third-party flow (optional)
v2.0 Role bindings and pattern extensibility

v3.0 More multi-party support – role and context
Business Collaboration Using a Reliable Infrastructure [5]
BSI Technical View

- Client's Firewall
- BSI Agent Client 1
- BSI Agent Service Provider
- Client's ERP
- Purchasing
- BSI Agent Client m
- Provider's IT System
- Communications
- n-1,2,...m
- Manufacturing
- BSI Agent Service Provider
- Firewall of Service provider
- Client's ERP
- Purchasing
Summary

• Business process is more than a process description.

• Provides guidelines for directing underlying infrastructure.

• Transforms the business semantics into composable business process flows to marry business-technical capabilities.

• Stay tuned for ebBP v2.0 this summer.
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and the OASIS ebBP Team!

http://oasis-open.org/committees/ebxml-bp