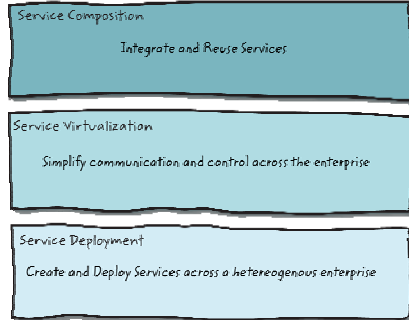**Slide 1**

JBoss World 2006 LAS VEGAS

TIBCO BusinessWorks and JBoss Transaction Service

Rourke McNamara
Senior Product Manager,
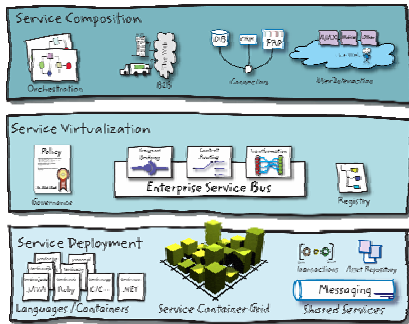TIBCO BusinessWorks

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Slide 2

TIBCO's SOA Framework

Service Composition
Integrate and Reuse Services

Service Virtualization
Simplify communication and control across the enterprise

Service Deployment
Create and Deploy Services across a hetereogenous enterprise

Slide 3

TIBCO's SOA Framework

Slide 4

TIBCO BusinessWorks

Slide 5
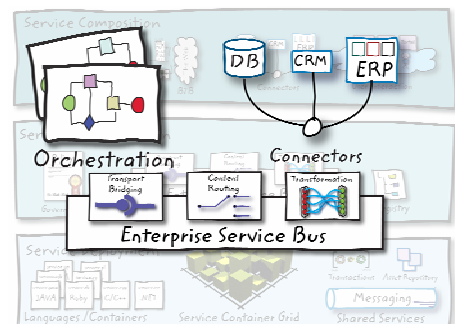
TIBCO BusinessWorks

TIBCO BusinessWorks delivers a comprehensive integration platform capable of supporting virtually any integration scenario or IT asset

- Accelerate event-driven, real-time Business Integration with no coding required
- Orchestrate and assemble reusable business services into flexible 'composite' services/applications
- Deploy SOA to enable rapid adoption of advanced technologies (including TIBCO BPM and Business Optimization)

Functional components of SOA and Business Integration:
- ✓ **Services Construction**
  - Create new services
  - Wrap & expose legacy assets
- ✓ **Services Orchestration**
  - Model
  - Assemble
  - Deploy
  - Build composite service/apps
- ✓ **Services Backbone & ESB**
  - Connect
  - Transport (multi-protocol messaging)
  - Mediate
  - Route & deliver
  - Event notification
  - Exception handling
- ✓ **Services Lifecycle Management & Assurance**
  - Registry
  - Repository
  - Metadata management
  - Security
  - Policy
- ✓ **User Interaction**
  - Portal services
  - Rich clients
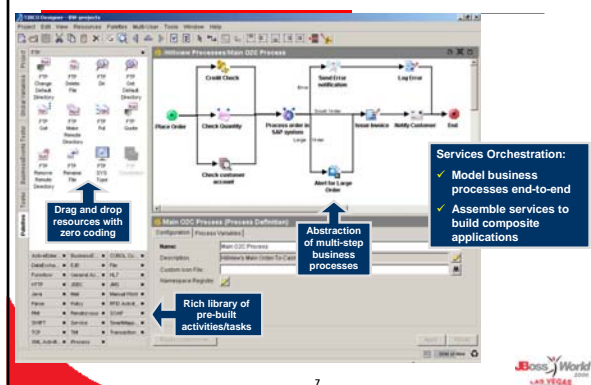

Slide 6

How is BW Different

- Model Driven, not a code generator
- Scalable, fault tolerant, able to support a zero downtime environment
- 3rd generation product – rock solid
- Rich library of activities and palettes

- *Transactions!*

## Service Construction/Orchestration

Drag and drop resources with zero coding

Abstraction of multi-step business processes

Rich library of pre-built activities/tasks

Services Orchestration:
- ✓ Model business processes end-to-end
- ✓ Assemble services to build composite applications

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Transactions in BW

- Participants of a transaction are: application, transaction manager and one or more resource managers.
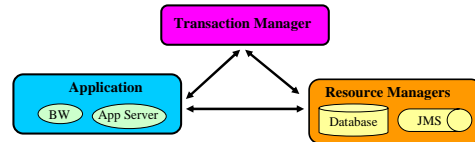
- Transaction Manager uses a two-phase protocol to ensure that all resource managers agree on the final outcome of the transaction.
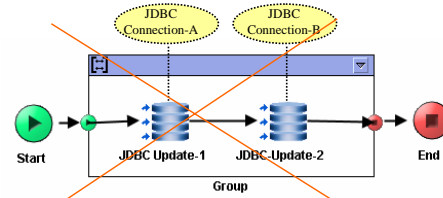
8

Before JBoss Transaction Service

- BW 5.1 Transaction Features:
  - ✓ Transaction support only for JDBC activities.
  - ✓ Transaction demarcation is provided using the BW Transaction group activity.
  - ✓ Transaction is terminated at the end of the transaction group activity.


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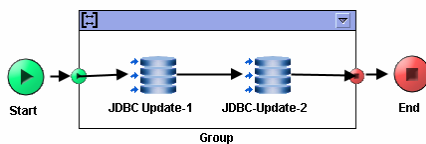
Before JBoss Transaction Service

- BW 5.1 Transaction Limitations:
  - ✓ No transaction manager. Uses database native transaction support.
  - ✓ No transaction support for other XA Resources (JMS, Checkpoint..).
 - ✓ No atomic transaction support for JDBC activities that use different database connections.

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BusinessWorks 5.2/5.3 Transactions

- BW 5.2/5.3 Transaction Features:
  - ✓ Transaction support for JDBC, JMS and EJB activities.
  - ✓ Transaction support for checkpoint.
  - ✓ Support for multiple JDBC and JMS resources under a single transaction.
  - ✓ Transactions are coordinated using a Transaction Manager.
  - ✓ Transaction demarcation will be provided using the BW Transaction group activity.
  - ✓ Transaction is implicitly started at the beginning and terminated at the end of the group.

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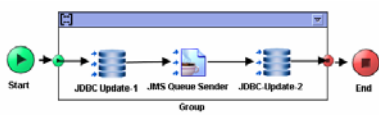
Easily Configured

- Transaction type is specified in the BW Transaction group.

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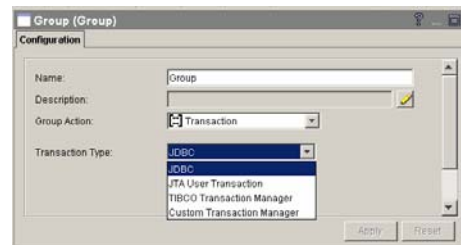
Transaction Palate

- The resources required for configuring the transaction group will be contained in the palette "Transaction":

  - ✓ Custom TransactionManager Configuration: a shared resource that contains the details of a Custom transaction manager.
  - ✓ JTA UserTransaction Configuration: a shared resource that contains the details of the application server that provides the JTA support.
  - ✓ TIBCO TransactionManager Configuration: a shared resource that contains the details of the TIBCO transaction manager.
  - ✓ Transaction State: activity that can be used inside a transaction group to obtain status or modify the outcome of the transaction.

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Limitations of JTA

- Uses the Transaction Manager provided by the Application Server.
- JTA UserTransaction API is used to interact with the application server and provide transaction for JDBC, JMS & EJB activities.
- BusinessWorks JDBC activities must be configured to use the data source from the application server.
- BusinessWorks JMS activities must be configured to use the connection factory from the application server.

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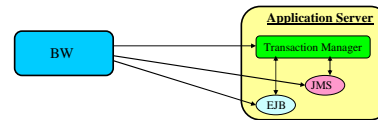
XA Advantages

- ✓ New BW transaction model hides the complexity of interaction of the application, XA resource manger, transaction manger and provides the user with a zero coding mechanism to perform multiple operations as an atomic unit.

- ✓ Local transaction manager (can even run in the same JVM)

- ✓ Platform and language neutral industry-standard

- ✓ No Extra Network Traffic

- ✓ Example: shipment order
  - Receive a JMS message for shipment order.
  - Update shipment database.
  - Update billing database.
  - Perform Credit Check
  - Send JMS message for delivery request.
  - Finally user can commit or abort all operations.

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Example

- Shipment order example using BW 5.2 and JBoss Transaction Service
- Transaction Group: JMS Queue Receiver activity is also included in the transaction.
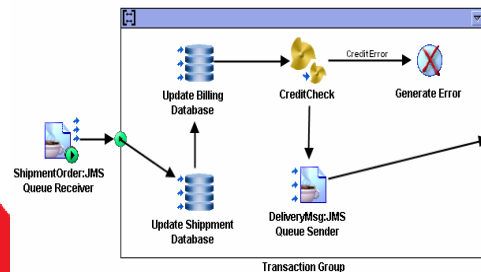
Competitive Advantage for TIBCO

- Only process tool with XA among leading vendors
- Only orchestration or construction tool among leading vendors with XA support

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Why JBoss Transaction Service

- Proven
- Performant
- Support from awesome, responsive people who have been doing this forever
- Strategic, forward looking technology
- Flexible licensing

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3

Where we're going...

- WS-T
- BPEL
- Loosely coupled transactions

SOA Related Resources

- **TIBCO SOA Resource Center**
  - ✓ Contains library of technical whitepapers & recorded webinars
  - ✓ On TIBCO.com at http://www.tibco.com/software/soa/

Questions?