



XML Messaging and Process Automation

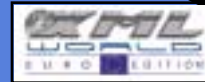
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Bart B. Oostlander

Software Architect E-Business Technologies



Agenda



- Application Development
- The Molecular Economy
- Business Messaging
- EAI in a Process Architecture
- Observations



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Application Development



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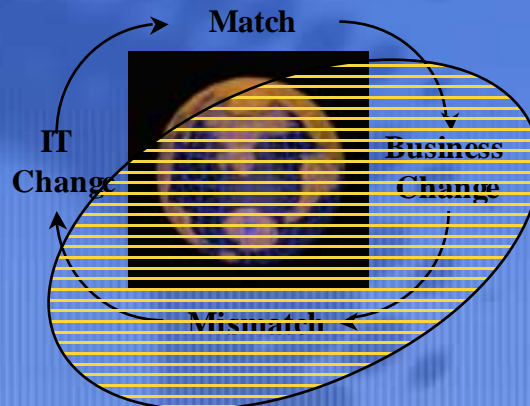


AD's Continuing Mission

- **Relate technology to business domain**
 - Object-Orientation ⇒ Component Orientation
 - Business Components
- **Match implementation with business logic**
- **Cope with continuous change**
- **Develop at increasing speeds**

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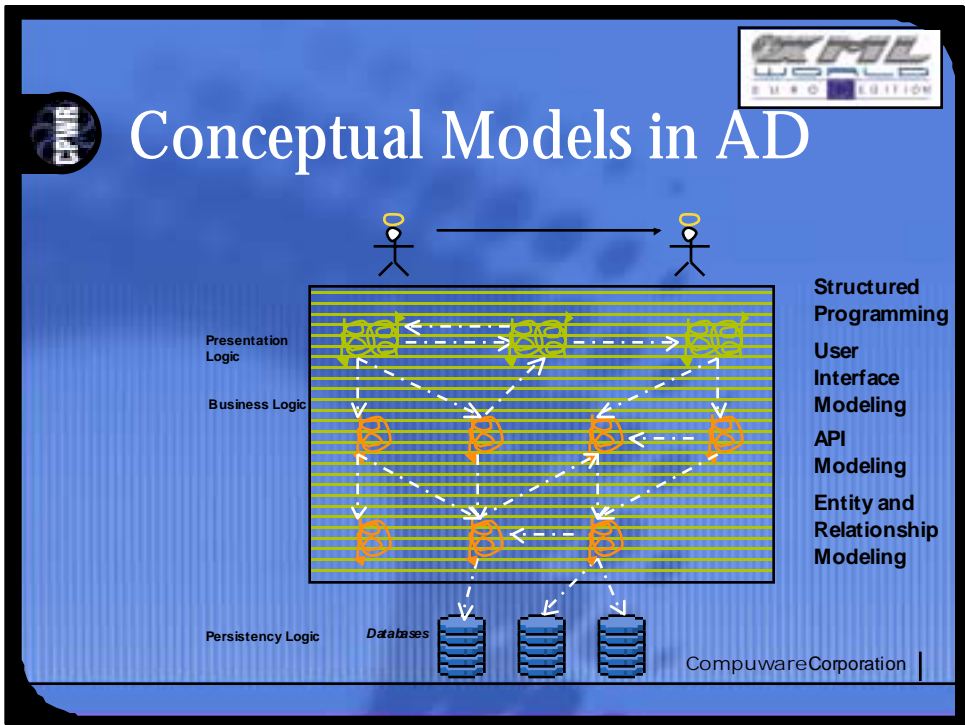
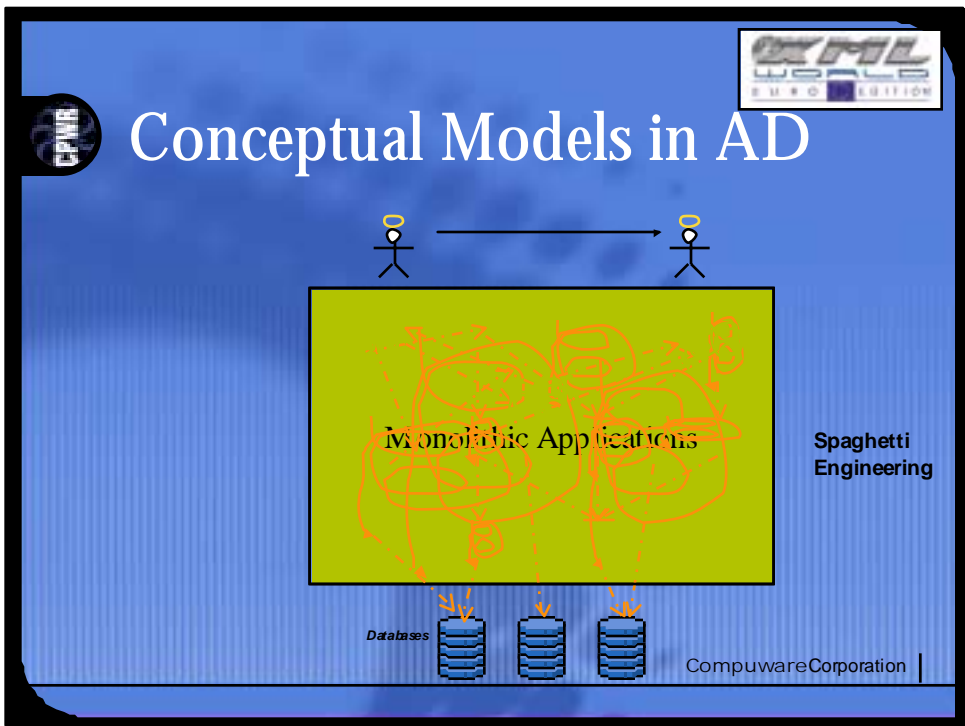
IT Logic vs. Business Logic

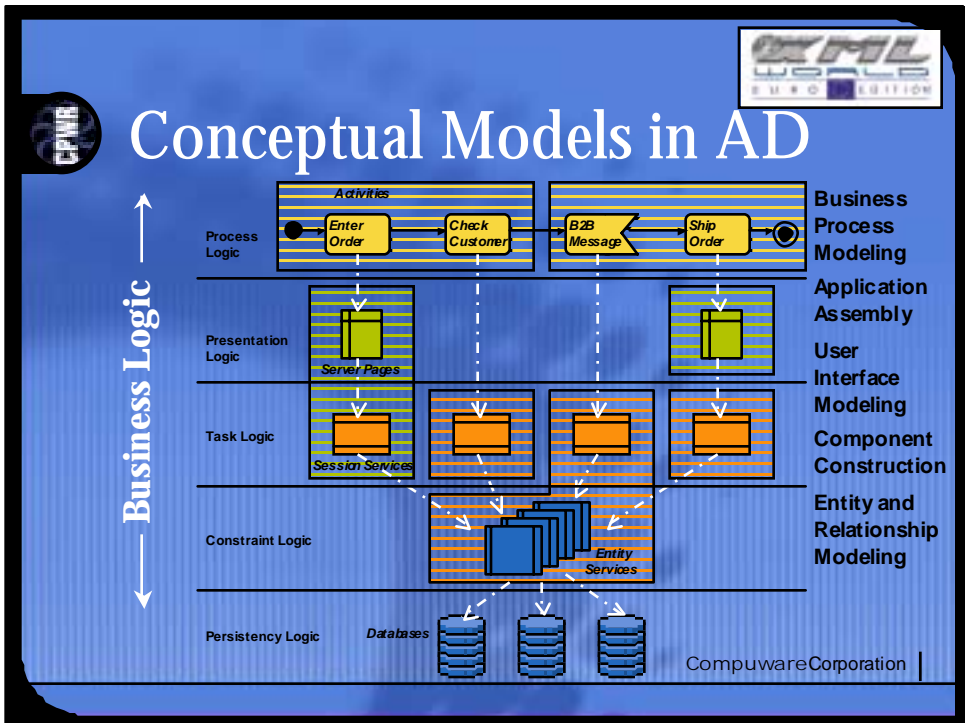
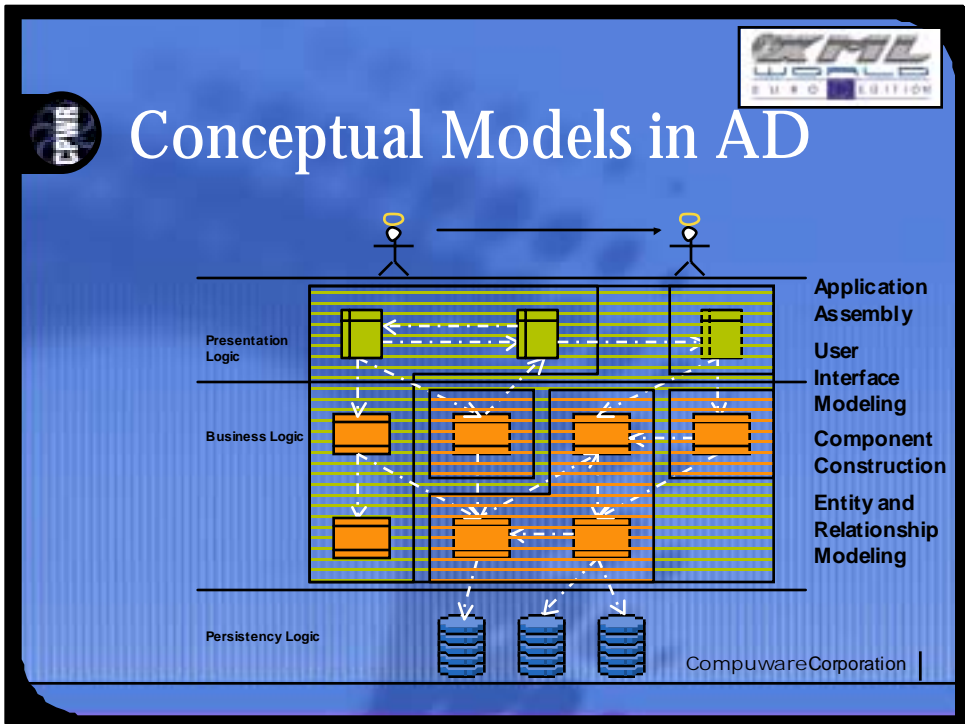


⇒ The gap remains

Where is the Business Logic?

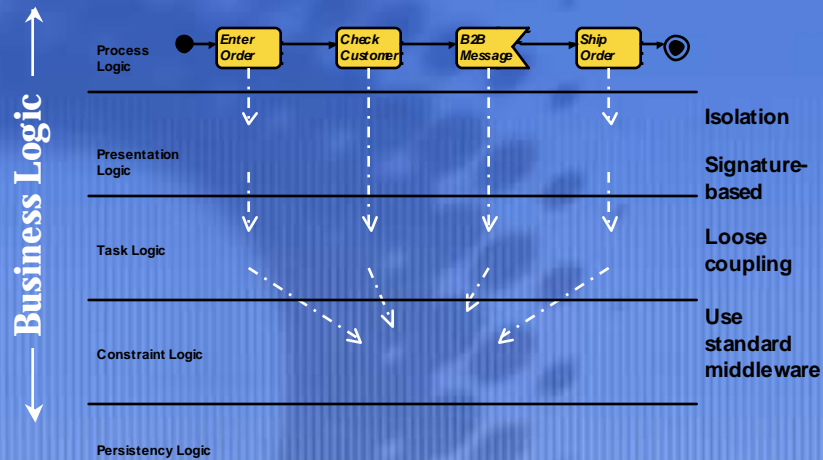
- What the hell are Business Rules?
- Are all Business Rules created equal?
- Can you separate code from Business Rules?







Conceptual Models in AD



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UNIFACE's Conceptual Model

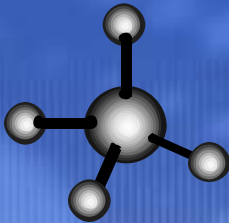
- Let Processes Control IT Architecture
 - ⇒ Isolate the layers
- Let the Process replace the Application
 - ⇒ Don't do AD through CBD
 - ⇒ ~~Don't do AD~~
 - ⇒ Do BPA and CBD! Use UML
- Allow a Manager to Change Processes
 - ⇒ At runtime

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CPAIA

CPAL
WORLD
EURO EDITION

The Molecular Economy



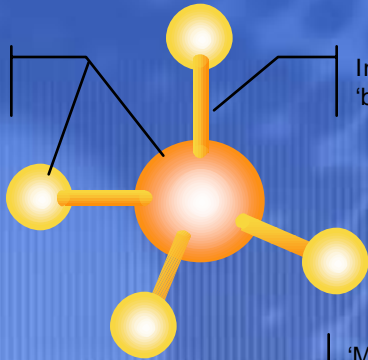
Vision

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CPAL
WORLD
EURO EDITION

Molecular Processes



'Atomic' modules

Integration 'bonds'

'Molecular' process

Source: eAI Journal - May 2000

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CPAIA

CPAL
WORLD
EMERGENT EDITION

The Molecular Enterprise

Process A Process B

Process C

Source: eAI Journal - May 2000 CompuwareCorporation

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Process Polymerization

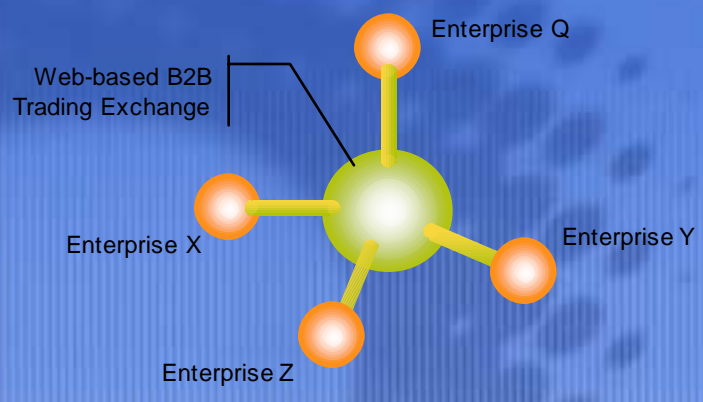
Enterprise X Enterprise Q

Enterprise Y Enterprise Z

Source: eAI Journal - May 2000 CompuwareCorporation



The Molecular Market

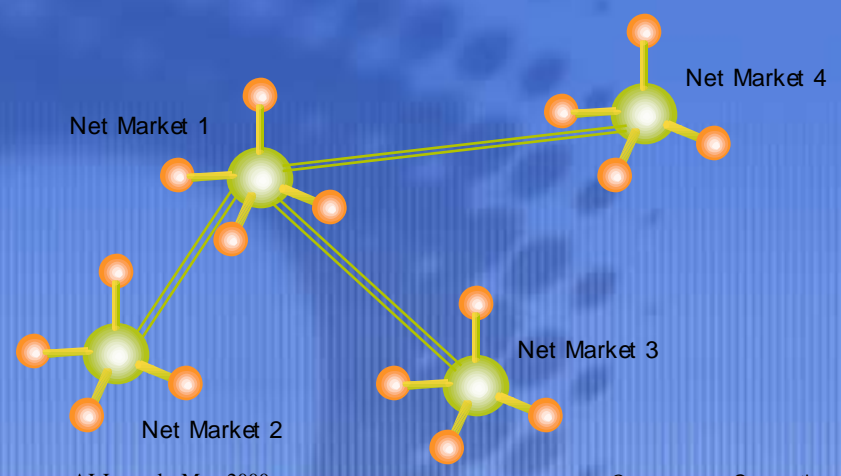


Source: eAI Journal - May 2000

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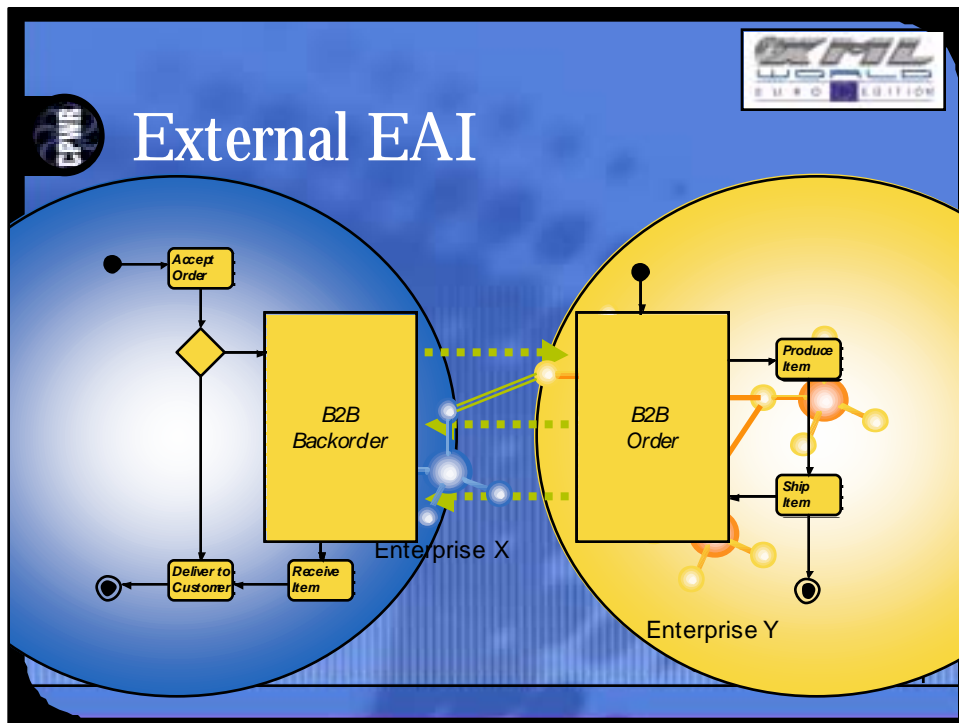
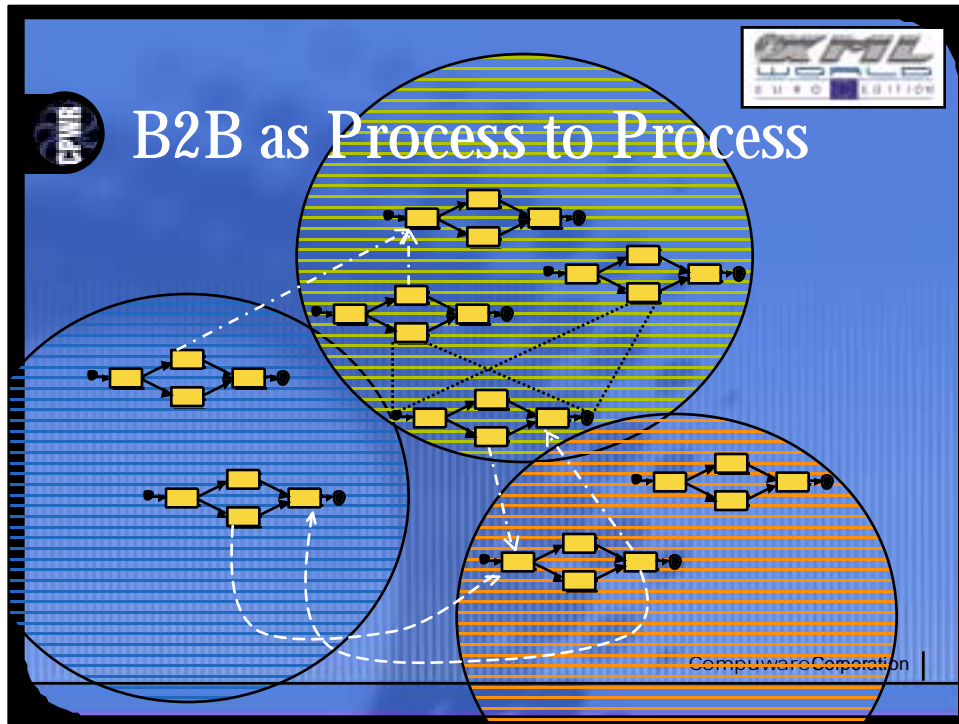


Polymerization of Markets



Source: eAI Journal - May 2000

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Molecular EAI: Reality Check

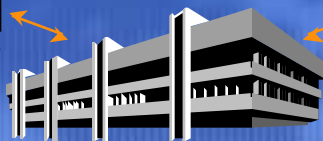
- Business models?
- Cultural issues?
- Security?
- Manageability?
- Scalability?
- Supplier enablement?
- Globalization?



Business Messaging



Employees



Customers



Suppliers



Partners



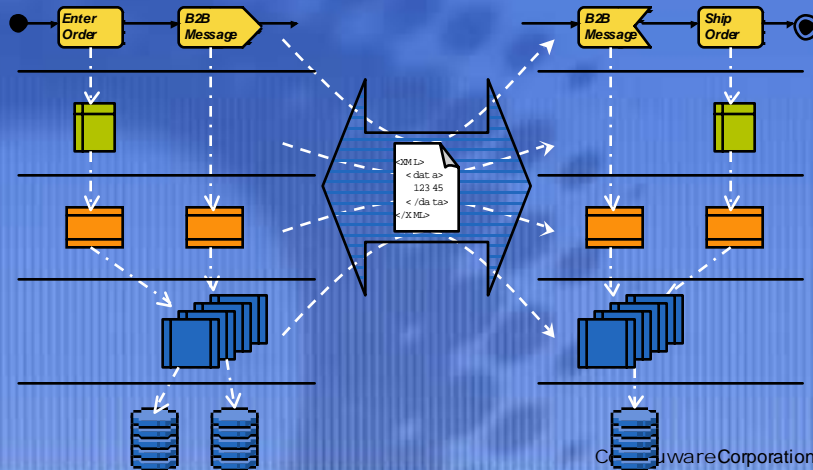
XML Messaging Levels

- **Business to Consumer**
 - Server-to-Browser

- **Business to Business**
 - **Enterprise-to-Enterprise** *ebXML, C1, etc.*
 - ⇒ Commercial Transaction
 - **Component-to-Component** **SOAP**
 - ⇒ Technical Invocation
 - **Process-to-Process** **BizTalk**
 - ⇒ Business Synchronization



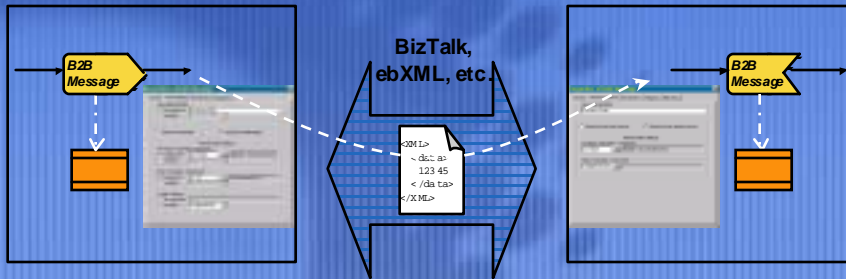
XML Messaging Levels





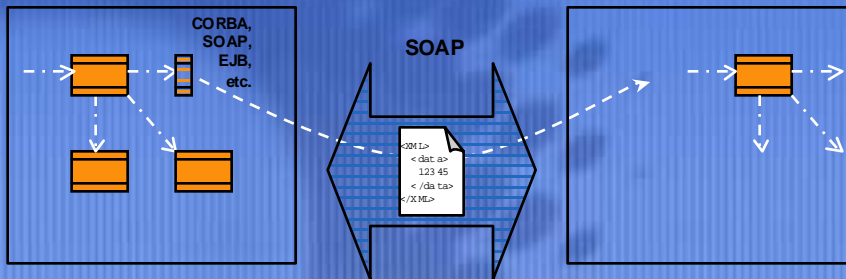
XML Messaging in AD

- Supported by Development Environment
- Specific support on process level,



XML Messaging in AD

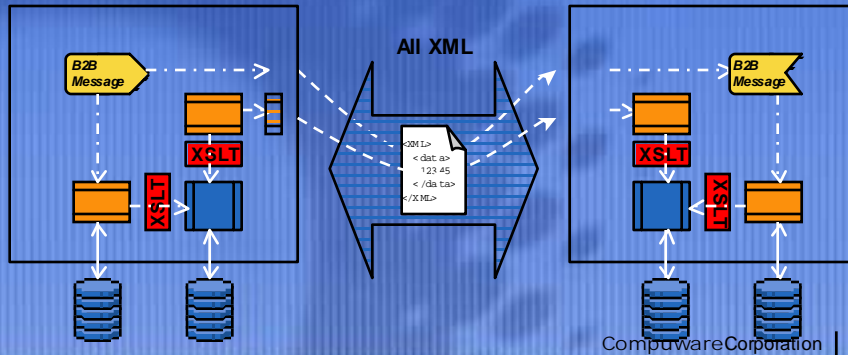
- Supported by Development Environment
- ...on component invocation level,





XML Messaging in AD

- Supported by Development Environment
- ...and on data transformation level



XML Messaging in AD

- Support in Development Environment
 - ...as seen in previous slides, plus:
 - Graphical XSLT Editor
 - Templates for Translation Components
 - Support in Deployment Environment
 - Middleware
 - Brokering
 - Transformation
- } B2B Broker Architecture



XML Messaging at Runtime

- **Connectivity with Middleware**
 - HTTP
 - FTP
 - SMTP
 - MQSeries
- **Message Brokering**
- **Message Transformation**



XML Messaging at Runtime

- **Connectivity with Middleware**
- **Message Brokering**
 - Component APIs (invocation)
 - Business Processes (matching)
 - Translation Components (envelopes, body)
- **Message Transformation**



XML Messaging at Runtime

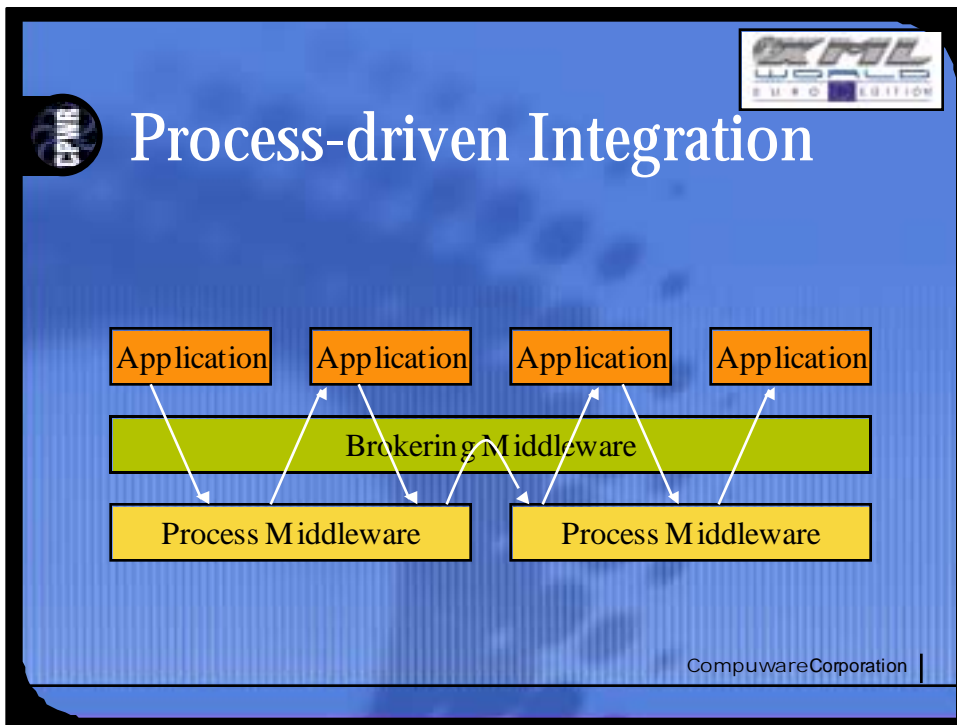
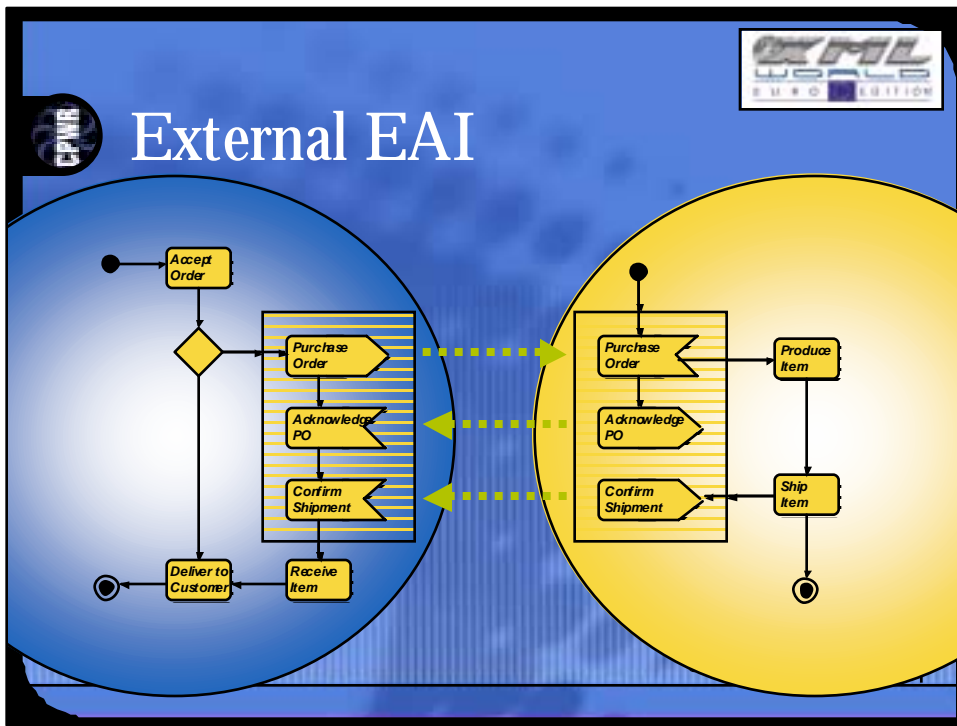
- **Connectivity with Middleware**
- **Message Brokering**
- **Message Transformation**
 - XML to/from relational databases:
XMLLoad, XMLSave
 - XML to XML: XMLTransform

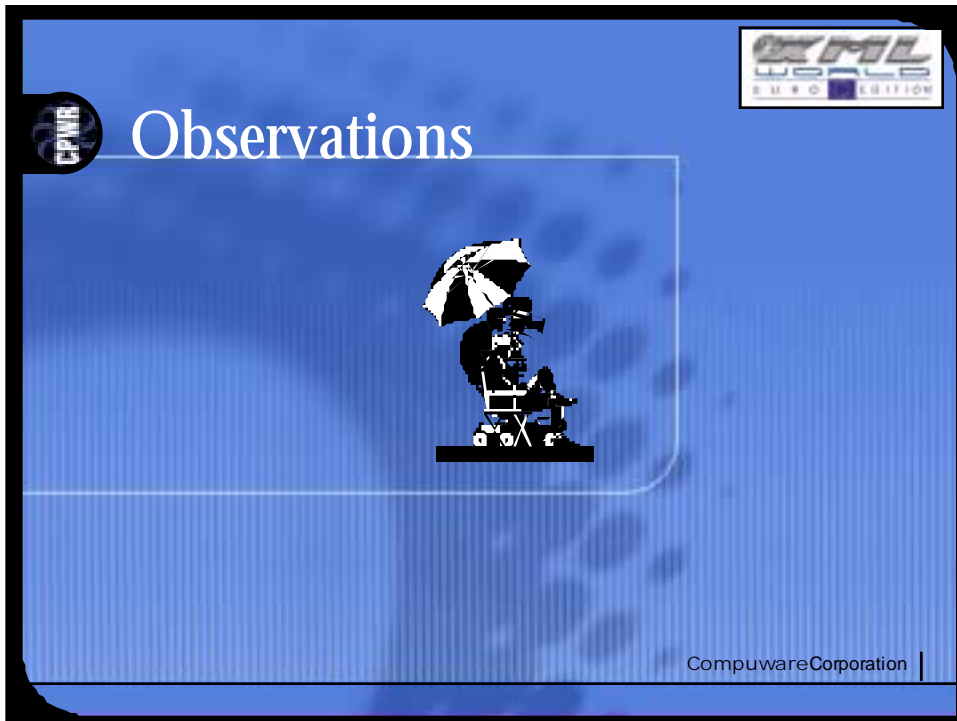
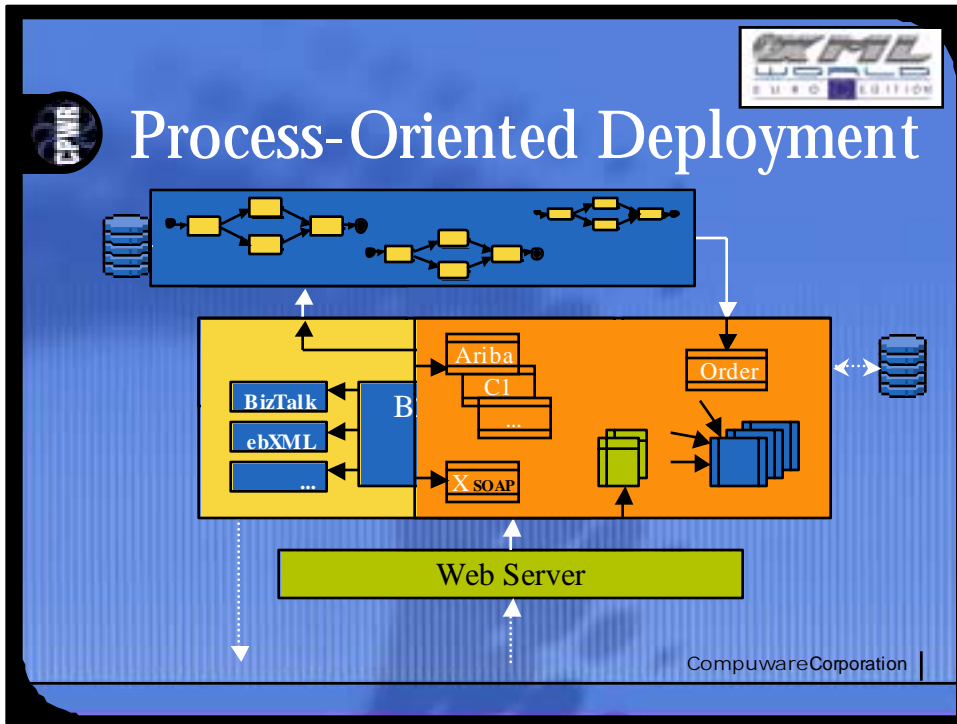


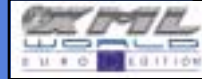
EAI in a Process Architecture



Resolution







Process-oriented Development

- Speedier development process
- Clear and generic split of responsibilities
- Modifications shielded from other layers
- XML messaging handled at correct levels
- Intricacies of XML messaging shielded
- Easier application integration

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Process-oriented Deployment

- Task lists and assignment rules restrict execution
- XML Business messages directly control process execution
- Enforced dependencies increase robustness and transaction security
- Performance monitoring and logging

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IT Logic vs. Business Logic

- Specific business logic in specific places
- Changed processes immediately active
- Hot-swappable components
- Closing the gap...

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