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Tech·Ed

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Great Dad!! (from my 2 yr old)

CON309

Advanced Microsoft BizTalk 2006 R2 Concepts

Session Objectives – Our journey together

Provide guidance around Orchestration Design

What can R2 do for you – Check list of New features

Massive benefit of WCF integration

Show why WF is on the radar in BTS solutions

Demos, demos.....demos.....

Make Your Mark.



Session Agenda

Review Orchestration Advanced Topics

What's new in R2?

WCF in Pure Messaging, Publishing and Consuming Services

Integrating Windows Workflow Foundation

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Review Orchestration Advanced Topics

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Orchestration Guiding Principles

- Design easily understandable business processes
- Build for the future
- Build processes that can be easily unit tested
- Use available features of BizTalk Server to simplify development

- Keep the “abilities” in mind
 - Reusability
 - Maintainability
 - Supportability

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Why are the "abilities" Important?

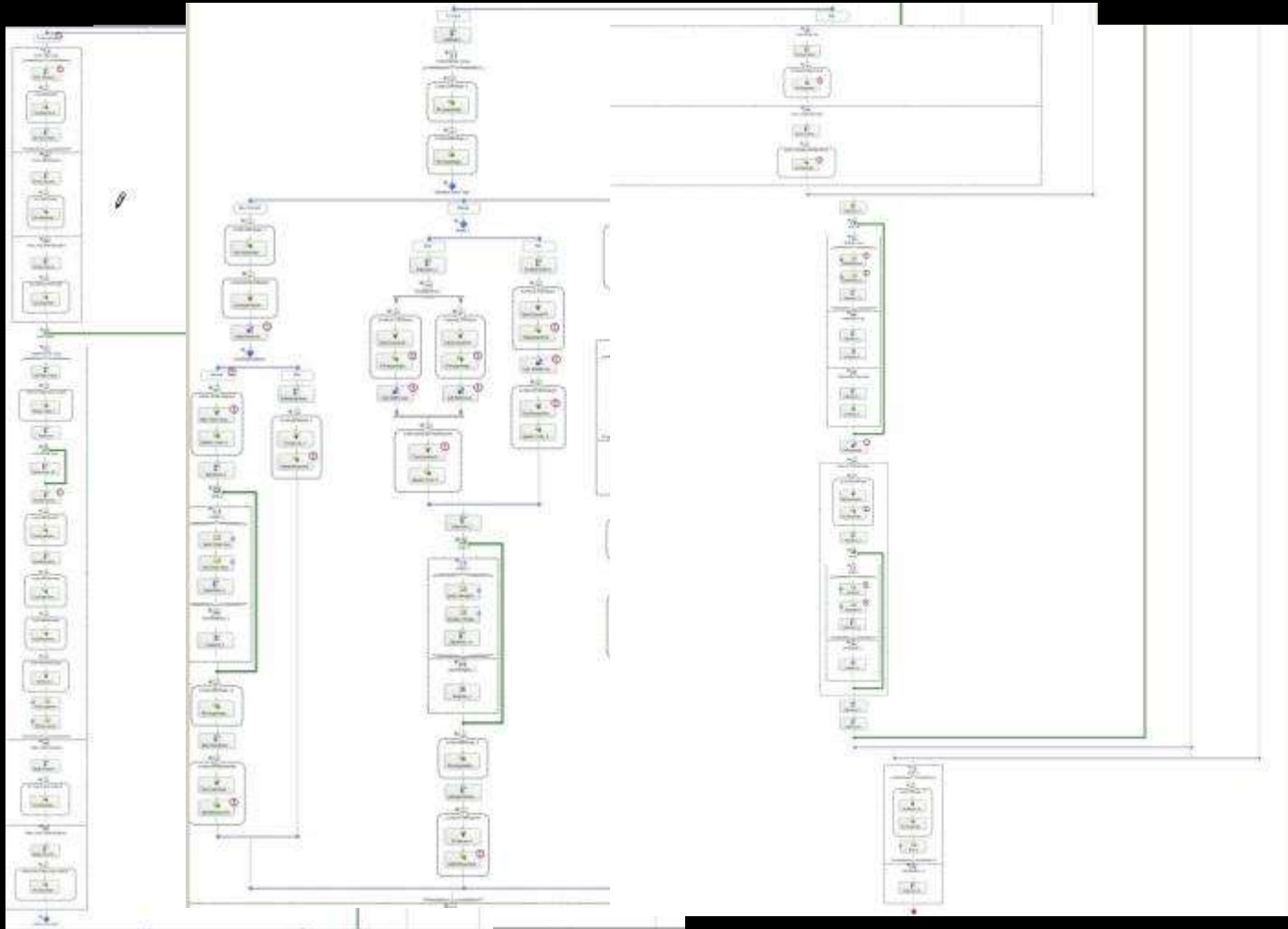
- Reusability
 - Building shared Orchestrations to accomplish specific tasks
 - Return a generic response and use the Rules Engine to evaluate
- Maintainability
 - Clean and simple process flow
 - Selecting and following a naming standard
- Supportability
 - Detailed error messages for easy Administration
 - Avoid suspended non-resumable at all costs

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Typical Client Scenario – The Monster

- Can you understand this?



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Untyped Messages

- What is it?
 - Using messages as XmlDocument rather than a defined schema
- How does it make my life easier?
 - Need to accept multiple different types of messages for the same process
 - Reduces redundant Orchestrations
 - Easily routable using direct binding and correlation sets
- Pitfalls?
 - Typically routing is done by Receive Port Filters
 - No access to distinguished fields or MessageDataPropertyBase (default)

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Dynamic Transforms

- What is it?
 - Selecting the map at runtime and dynamically creating the transform object without a Transform shape
- How does it make my life easier?
 - Allows for schemaless Orchestrations to support multiple types of messages
 - Allows for vendor specific mapping
- Pitfalls?
 - Best to map on the Send and Receive ports
 - Possible to yield no output message
 - Possible performance impacts under high load
 - Use a caching service

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Other Useful Tips

- Promoted properties as MessageContextBase
- Multi-Message mapping
 - Only available Inside an Orchestration
 - Watch for Namespace issues – use code instead
- Direct port binding
 - Watch out for endless loops
- Helper .NET components
 - Passing **Xlang Messages** as streams
 - Doing simple tasks using static methods
 - Robust schema validation returning multiple errors

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What's NEW in R2?

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Quick Check list

1. Core Messaging/Orchestration System stays the same.
2. Better WS Support – 7 adapters supporting WS
3. Enhanced BAM support for WF and WCF
4. New! WCF LOB Adapter SDK
5. Enhanced adapters – Host, WSS....
6. ESB guidance
7. RFID! RFID!.....
8. EDI/AS2 totally rewritten –5000+ EDI schemas supported
9. ESSO improvements.
10. BTS06 R2 uses Windows Updates for updates ☺

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DEMO

RFID Services Demo

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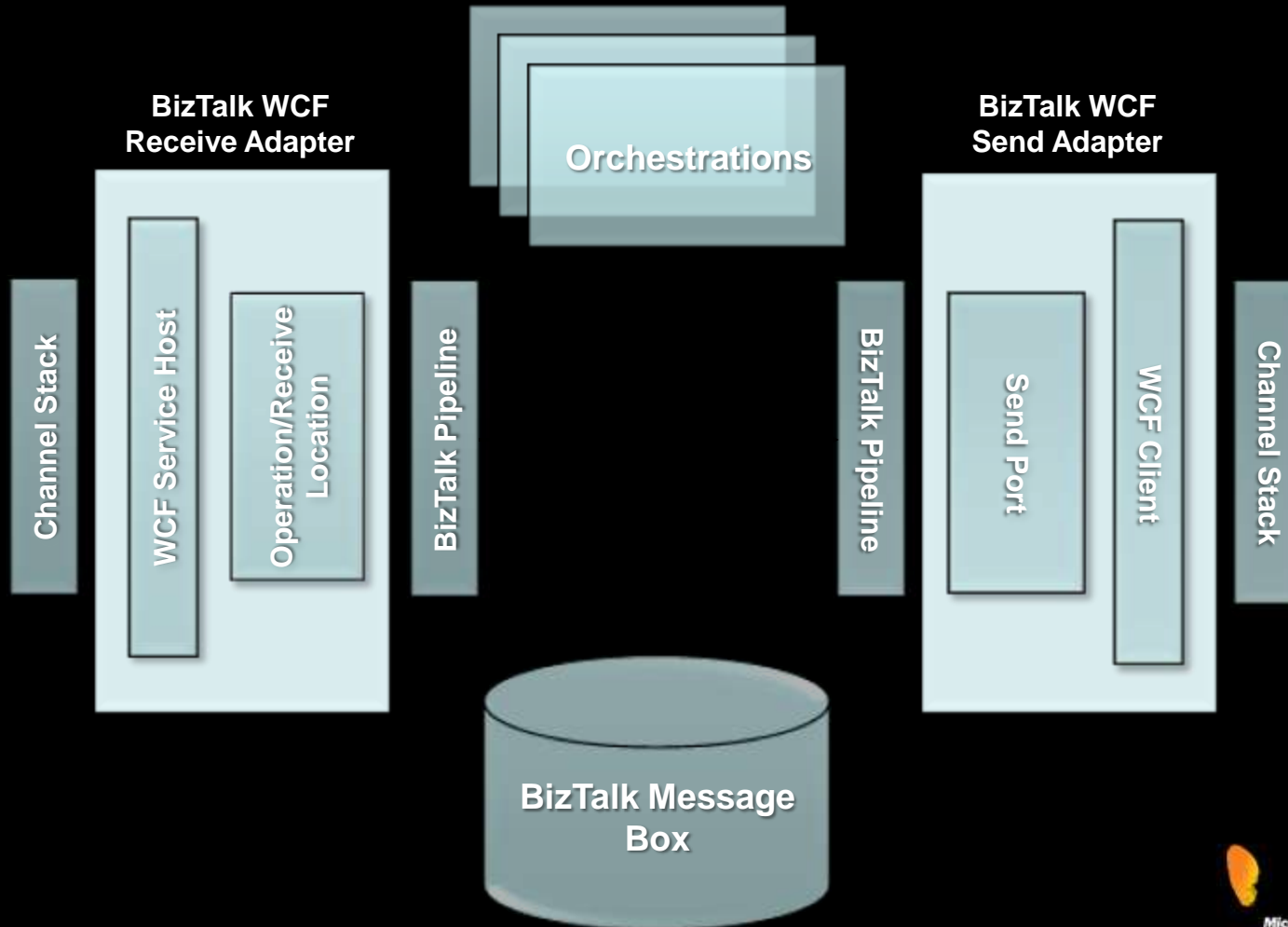
WCF Publishing and Consuming Services

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BizTalk Server 2006 R2

WCF Adapter



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WCF and BizTalk Messaging

- Can you use WCF or Web Services in BizTalk without an Orchestration?
- Using WCF in pure messaging requires knowing the schema
 - Use a directory service
 - All addresses point to BizTalk
 - Routing done based on message type or other properties
- Set up a Solicit-Response Send Port with a filter to a Request-Response Receive Port
- Use pass-through pipelines unless otherwise required

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BizTalk WCF Routing Benefits

- Using BizTalk as a WCF routing engine allows for...
 - Centralized control of WCF End Points
 - BizTalk's Pub-Sub Architecture allows for routing of data to other interested parties
 - Near real-time traffic monitoring that utilises your existing BizTalk infrastructure and support team
 - Easy and streamlined change process
 - Quick response to down destinations and security changes

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DEMO

WCF Publishing and Consuming
Services

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Integrating Windows Workflow Foundation

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BizTalk and WF

- BizTalk coupled with WF – very powerful
- WF Workflows can be hosted within BizTalk
- ‘BizTalk Server Extensions for WF’ makes this possible (** work in progress **)

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DEMO

Wrapping up WF Workflows in BizTalk

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Recap – What Did We Learn?

- Build Orchestrations that use Advanced Concepts to achieve a solution that increases your
 - Reusability
 - Maintainability
 - Supportability
- Use BizTalk as a WCF Routing Engine to provide more flexibility
- RFID services are seen as another endpoint to BizTalk
- WF Hosting within BizTalk is possible.

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Resources

Demos from this Session

<http://blogs.breezetraining.com.au/mickb/>

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<http://www.microsoft.com/communities/default.mspix>

Microsoft Learning and Certification

<http://www.microsoft.com/learning/default.mspix>

Microsoft Developer Network (MSDN) & TechNet

<http://microsoft.com/msdn>

<http://microsoft.com/technet>

Trial Software and Virtual Labs

<http://www.microsoft.com/technet/downloads/trials/default.mspix>

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Resources

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Microsoft Developer Network (MSDN) & TechNet

<http://microsoft.com/msdn>

<http://microsoft.com/technet>

Trial Software and Virtual Labs

<http://www.microsoft.com/technet/downloads/trials/default.aspx>

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Evaluation Forms



Questions



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