


ZapThink Presentation for Energy Client: SOA Case Studies

Ronald Schmelzer and Jason Bloomberg
Senior Analysts
ZapThink, LLC

Take Credit Code: ENCASE

zapthink


Copyright © 2005, ZapThink, LLC



Customer Proof Point

Verizon

Large regional telecommunications provider formed thru the merger of Bell Atlantic and GTE



Challenge	Solution	Results/Benefits
<ul style="list-style-type: none"> Eliminated redundant systems inherited from the merger of Bell Atlantic and GTE On average, each transaction had been developed five to 25 times; one was deployed 45 different times 	<ul style="list-style-type: none"> IT Workbench SOA project, operational in 2004 Thousands of developers, .NET and Java Focused on 250 business transactions – incl. verifying customer credit histories & looking up customer info 57 Service-oriented applications with 200 transactions 	<ul style="list-style-type: none"> 2.5 million to 3 million Web Services transactions a day Helped Verizon slash its IT budget by 50 percent Included managing and securing the Services, charging for reuse and monitoring the performance of Service-enabled transactions

Copyright © 2005, ZapThink, LLC



Customer Proof Point

The Defense Finance & Accounting Service (DFAS)

US Federal Government agency responsible for all Department of Defense accounting



Challenge

- Very large, complex organization that handles accounting for Army, Navy, Air Force & Marines
- Process \$1 Billion dollars of payments per day
- Challenge of how to bring together DoD finances

Solution

- Reduced hardware costs by streamlining operations
- Achieved "semantic alignment" across organizations
- Collated and rolled up information in the face of enormous complexity
- Focused on information architecture in the context of SOA

Results/Benefits

- SOA effective in environments of extreme complexity
- Information architecture essential to resolve semantic issues in complex environments
- SOA appropriate in environments where there are many stakeholders with many needs

Copyright © 2005, ZapThink, LLC

Aeroplan Case Study



Copyright © 2005, ZapThink, LLC



Aeroplan's Business

- Leading loyalty program in Canada, wholly owned subsidiary of Air Canada
- Aeroplan generates revenue through
 - mileage accumulation by selling miles
 - mileage redemption by arbitraging rewards value vs. mileage costs
 - Aeroplan can only recognize revenue when members redeem miles
- Member of 14 airline Star Alliance

Copyright © 2005, ZapThink, LLC



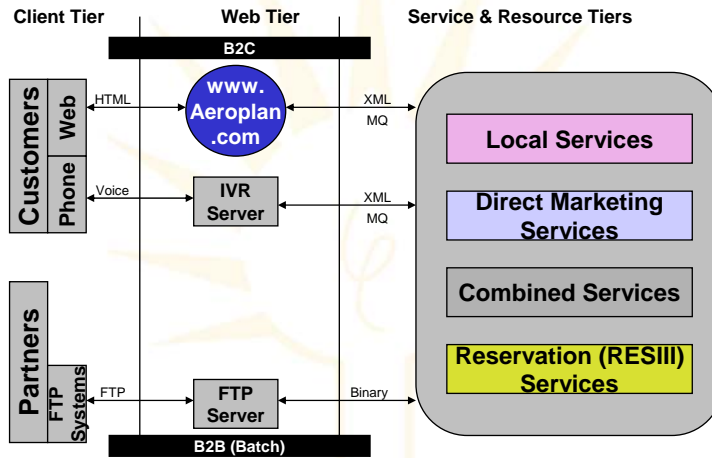
Aeroplan and Real-time Miles eCommerce

- CEO mandate: create new reward redemption opportunities for members
 - First to market with rewards eCommerce
 - Engage third-party companies to supply new rewards
- Add a new B2B (real-time) channel
 - Make rewards available to members in real-time through the Web channel
 - Protect members' privacy & prevent fraud
 - Add new redemption & accumulation partners seamlessly
- XML Web services were the most flexible and extensible architecture for this initiative.
 - XML-enabled mainframe with XML over MQ Series

Copyright © 2005, ZapThink, LLC



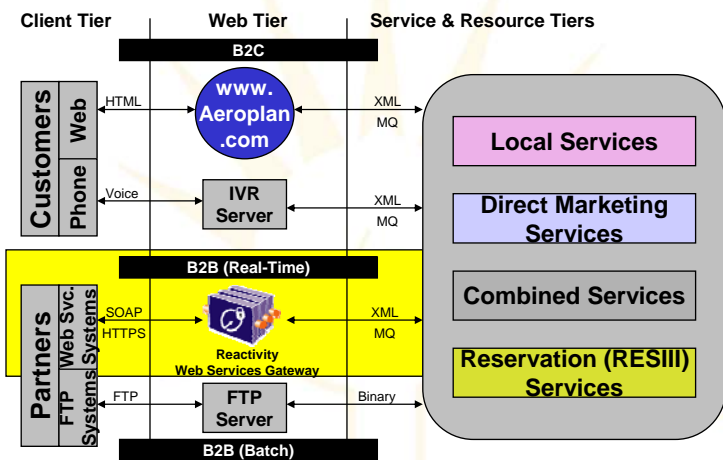
Current Electronic Channels



Copyright © 2005, ZapThink, LLC



Adding a New B2B (Real-Time) Channel



Copyright © 2005, ZapThink, LLC

Enables Aeroplan to pursue new reward redemption opportunities with 3rd party partners.



zapthink

Technical Requirements

- Provisioning
 - Expose Aeroplan XML services to partners as WEB services
 - Manage protocol conversions and bridge non-homogeneous systems
 - Develop and troubleshoot collaboratively with partners
- Security
 - Keep security separate from business logic
 - Secure message exchange and enforce partner access control
 - Protect against threats, fraud & standards proliferation
 - Filter message content based on partner requirements
- Operations
 - Minimize development and implementation costs
 - Minimize impact on and use of enterprise systems
 - Visibility into transactions & monitoring impossible

Development of Services shared with their Customers!

Copyright © 2005, ZapThink, LLC



zapthink

Why this approach?

- Best fit with existing technology
 - No modifications to back end systems
 - Easiest integration
- Fastest time to market
 - Reactivity rapidly responsive to Aeroplan requirements
- Highest confidence around confidentiality
 - WSS protects our customers' information
- Why Reactivity?
 - The Reactivity Web Services Gateway addressed security, ops & provisioning concerns best & fastest
 - The company showed aggressiveness & interest in solving our problems instead of just selling technology

Copyright © 2005, ZapThink, LLC



zapthink

Meeting the Requirements

- Provisioning
 - Zero impact to Aeroplan's existing systems
 - Mediates partners sending SOAP/HTTPS to Aeroplan's XML over MQ
 - Dramatically reduced WS development costs and debugging time
- Security
 - Configuring and enforcing security independent of business logic
 - Secure and auditable message exchange
 - Protected against threats, fraud & standards proliferation
 - Filtering message content based on partner requirements
- Operational Scale
 - Proactively identifying debugging and production issues prior to crises
 - Managing with existing IT operations staff

Copyright © 2005, ZapThink, LLC



zapthink

Takeaways

- **Provisioning + Security + Operations in a scalable appliance architecture = Rapid Time to Market**
- **Aeroplan went from POC to Production in 38 days start to finish**
- **Aeroplan launched first real-time miles-based e-commerce**
 - Addition of a new partner/redemption offer in hours
 - Enabling Aeroplan to grow its non-air redemption by more than 500% from 2004 to 2007
 - Saving Aeroplan money on communication and integration costs
- **What's next for Aeroplan**
 - Connect more redemption partners
 - Extend to mileage accumulation partners

Copyright © 2005, ZapThink, LLC



Merrill Lynch Case Study

Copyright © 2005, ZapThink, LLC

zapthink



zapthink

Merrill Lynch Case Study



Merrill Lynch

- Have over 23,000 live CICS (Customer Information Control System) applications
- Have thousands of systems, other applications, and person-years of custom development in place
- Wanted to leverage legacy investments across enterprise

Copyright © 2005, ZapThink, LLC



The Solution



- Established "XML for Merrill Lynch" initiative they call X4ML
- Expose CICS transactions as Web Services
- Build UDDI-based registry first
- Dealt with semantic issues resulting from centralized Services – hundreds of "getCustomerInformation" Services example

Copyright © 2005, ZapThink, LLC



Results



- Increased response times by 10 to 20 times
- Increased throughput by 10 times
- Reduced the percentage of cost for infrastructure and integration from 90% to 65%
- Reduced the time to get data off of mainframe from 3-4 months to a matter of minutes
- Key advantages of Web Services are language and transport independence

Copyright © 2005, ZapThink, LLC



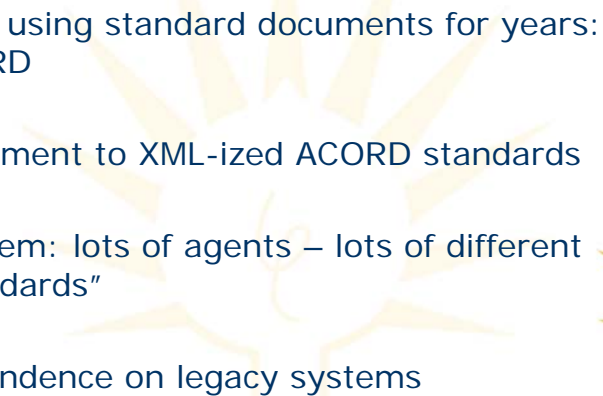
The Hartford Case Study

Copyright © 2005, ZapThink, LLC

zapthink



Case Study: Hartford

- Been using standard documents for years: ACORD
 - Movement to XML-ized ACORD standards
 - Problem: lots of agents – lots of different “standards”
 - Dependence on legacy systems
- 

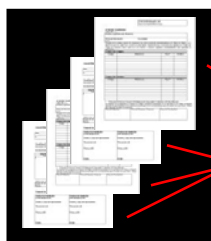
Copyright © 2005, ZapThink, LLC



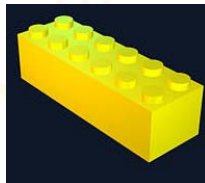
zapthink

Case Study: The Hartford

- SO Business Application for insurance agents
- Services handle multiple versions of insurance forms
- SOA handles multiple versions of Services



ACORD Documents



Web Service Interface

Copyright © 2005, ZapThink, LLC



Underlying Applications



zapthink

Lessons Learned

- Registries can be key to making an SOA work in practice
- SOA != request/response. Document modes of interaction can be more helpful
- Think in terms of abstracted, composite, loosely coupled, asynchronous Services
- Mainframes and legacy system enablement is a key part of the SOA value proposition

Copyright © 2005, ZapThink, LLC

Thank You!



ZapThink is an industry analysis firm focused exclusively on XML, Web Services, and Service-Oriented Architecture.



Jason Bloomberg
jbloomberg@zapthink.com



Ronald Schmelzer
rschmelzer@zapthink.com

Copyright © 2005, ZapThink, LLC



Photos © Lisa Polucci