Thou Shall Integrate by the Sweat of thy Brow...

SPA2008 – 19th March 2008
Rob James, HSBC
Eoin Woods, BGI
Timetable

- 13:00 – 13:10: Introductions
- 13:10 – 13:40: Session Overview
- 13:40 – 14:00: Exercise Setup and Preparation
- 14:00 – 15:30: Simulation Exercise (inc. break)
- 15:30 – 15:45: Review Experience
- 15:45 – 16:00: Present and Discuss Experiences
Timetable

- 00:00 – 00:10: Introductions
- 00:10 – 00:45: Session Overview
- 00:45 – 01:00: Exercise Setup and Preparation
- 01:00 – 02:30: Simulation Exercise (inc. break)
- 02:30 – 02:40: Briefly Review Experience
- 02:40 – 03:00: Present/Discuss Experiences
Introductions

- Rob James
  - Data Architect at HSBC CIBM
  - Data, enterprise and integration architecture

- Eoin Woods
  - Software Architect at Barclays Global Investors
  - Software (and some enterprise) architecture
  - Previous EA work mainly integration design and refereeing
Session Objectives

- Examine the dynamics of the system integration process
- Run a guided simulation to allow exploration of the process
- Allow reflection and sharing of experience
  - consolidate what we’ve learned
  - allow lessons to be drawn
  - identify open questions
Session Overview

- This is a simulation not a workshop, meaning:
  - Session takes the form of a guided exercise not a fixed set of tasks
  - We define the problem but provide minimal instructions and guidance
  - Time for reflection at the end to draw out insights

- We will form teams and “integrate” some systems, working in different ways
Simulation Overview

- One hour, one problem to solve
  - Expense management system and purchase order management system need to send payments
  - Both use a common payment processing system
- Work in groups to “integrate” the three systems
  - Each group simulates a particular scenario
- The “coding” task is to produce integration mapping tables for inter-system messages
Simulation Rules

- Front and Back Office teams will be separated & no direct contact is allowed between them
  - Can pass hand written documents
  - Meet to discuss problems (not create deliverables)
  - Instant messenger / email
  - Phone
- You must follow the constraints of the scenario we assign to your group (next slide)
Simulation Scenarios

- “Just Do It”
  - Minimise cross-team coordination required
  - Integrate the systems on a case-by-case basis

- “Central Standard Based Approach”
  - We will provide a common schema for inter-system messages
  - The teams map their systems’ interfaces to the common schema to integrate the systems
Integration Problem

Domain is payment processing systems ...

- An Expense Claim Handling System
  - used to manage employee expense claims
- An Invoice Management System
  - used to manage payments to suppliers
- A Payment Processing System
  - used by the other two to send payments to employees or suppliers
Simulation Problem to Solve

Expense Claim Handling System

Invoice Management System

Payment Processing System

payment requests

payments to employees & suppliers

£ $ € ¥

"Front Office"

"Back Office"
Simulation Inputs

- Brief descriptions of the systems and their existing interfaces
- Example XML messages for each system
- Specifications of the required integration messages
- Brief descriptions of the two scenarios
- Proposed common integration schema for the standards-based scenario
Simulation Outputs

- Mapping tables (e.g. spreadsheets) showing how the systems are integrated
- Any data formats you’ve added
- Any other work products you needed to produce
- The experience of trying to integrate systems across teams
Timetable

- 13:00 – 13:10: Introductions
- 13:10 – 13:40: Session Overview
- 13:40 – 14:00: Exercise Setup and Preparation
- 14:00 – 15:30: Simulation Exercise (inc. break)
- 15:30 – 15:45: Review Experience
- 15:45 – 16:00: Present and Discuss Experiences
Simulation Setup and Preparation

- Divide into 2 groups of about 6 people
  - We’ll give each group a scenario to follow
- In each group split into 3 teams
  - One for each system
- Front Office and Back Office teams move to their own work areas
- Read the materials specific to your system
- Each team should review what it plans to do
  - Ask us questions if anything isn’t clear
Timetable

- 13:00 – 13:10: Introductions
- 13:10 – 13:40: Session Overview
- 13:40 – 14:00: Exercise Setup and Preparation
- 14:00 – 15:30: Simulation Exercise (inc. break)
- 15:30 – 15:45: Review Experience
- 15:45 – 16:00: Present and Discuss Experiences
Simulation Exercise

- 90 minutes total
  - ~60 minutes exercise
  - ~30 minutes break time whenever you want it
  - Remember to follow your scenario and the rules

- Ends at 15:30
  - No over runs please!
Timetable

- 13:00 – 13:10: Introductions
- 13:10 – 13:40: Session Overview
- 13:40 – 14:00: Exercise Setup and Preparation
- 14:00 – 15:30: Simulation Exercise (inc. break)
- 15:30 – 15:45: Review Experience
- 15:45 – 16:00: Present and Discuss Experiences
Review and Presentation

- Gather your groups together
- 10 minute review of the exercise
  - What went well?
  - What went badly?
  - What would you change or do differently?
- Capture 3 lessons that you’ve learned to present to the whole group
Summary and Review

- We’ve found integration to be a hard problem because:
  - Everyone makes assumptions based on incomplete information
  - Communicating is hard due to distribution and lack of common language
  - Designing neutral bridges is difficult and expensive
- What have our lessons today revealed?
Comments and Questions?