Attendees

- Grant Hyland
- Alex Bacon
- Leo Wiggins
- Andrew Gillies
- Tony Grainger
- Jarrah Van Rijswijk
- Joel Webb
- Kerry Enman
- Gary Winter
- Bernie Catney
- Paul Griffin
- Derek Klerck
- Tracy Rowell
- Tony Gray
- Stephen Bugg
- Steven Smalley
- Rodney Foley
- Derek Rowlands
- Vlasti Broucek
- Glen Barwick
- Richard O’Connell
- Brett Wilson

Notes

Introduction - Grant and Alex

- Alex has the mandate to make sense of the integration around the university
- There are over 70 different systems around the university all getting feeds from various systems.
- The existing integration is performed via 'Keystone' - a combination of an MDM (master data management) database and perl scripts to extract data to the MDM from disparate systems and then load it back into systems requiring that data.

TIBCO Capabilities - Brett Wilson

- TIBCO uses common standards - XML and SOAP
- TIBCO uses an IDE for easy build and debugging
- By combining multiple services into a composite service TIBCO is able to provide a single point service e.g. for student information
- TIBCO can (optionally) use message queues that are (optionally) persisted into a database. Persisting into a database allows recovery of inflight processes but adds a performance penalty and a degree of complexity to disaster recovery compared to stateless services.
- TIBCO can connect to various sources through adapters. UTAS has the database and file adapters.
- TIBCO is configuration based rather than code based meaning that implementation and testing is faster and there will be fewer bugs.
- TIBCO can convert batch files into a series of events - or just transport them holus-bolus
- TIBCO supports 3 integration types:
  - Fire and forget
  - Request/Response
  - Broadcast
- Each integration type can work both synchronously and asynchronously

Business Problems - Alex Bacon

- At the moment the LMS is loaded overnight from Enrolment - meaning that students cannot access Mylo for a day after enrolling.
• Student Onboarding is currently slow - the data is copied between systems overnight resulting in delays between applying for university and being able to enrol. Although it will always be complex for some processes such as onboarding international students who require Medicare. Also it would be good to progressively add privileges to students as they progress through the enrolment process and enrol on new courses.
• Employee Onboarding is currently managed in an adhoc manner through notes on an incident form. Putting proper workflow behind it will assist in speeding up and standardising the process.
• Triggers for access to resources (LMS, Library, ID Cards) need to be quicker rather than the current overnight process and based on the enrolment.
• SLIMS is an ideal time to use TIBCO to rebuild the integration to the PINK areas of the Stephen Bugg's diagram.
• There is only a one way feed to the Alumni system (RaisersEdge) with no two way integration back to update student's details in USRS.
• RMDB needs a bidirectional link to USRS.
• At the moment many of the business processes discover a problem because of incidents raised to the support desk. There is no proactive monitoring of errors.
• Overriding problem is timing of batch approach - the introduction of event driven processes will relieve much of these issues in theory.
• Batch sometimes necessary for COTS due to technical limitations with the COTS product. Integration project probably heading for a balance between SOA and batch. TIBCO software can handle batch.
• Need to work around limitations of COTS products e.g. to display error messages - so may need to generate an email if an integration flow fails rather than report back to the COTS product.
• Business Process drives the architecture so EDA is sometimes not possible e.g. for timesheets.
• Timetable for integration project for next 12-18 months is to incrementally bring the technology onboard.
• TIBCO has two approaches to replacing the current data replication scenarios:
  ◦ Real time replication - creating events for new and updated data elements.
  ◦ Altering the target system to use data directly from the primary source system via services.
• Need to manage who is accessing the data, why and how. Some sensitive data may need to have monitored access with audit logging. Security can be handled by tokens passed to services.
• Need to delineate between StudentOne and TIBCO responsibilities - where are processes defined, where are business rules defined e.g. defining when a student is enrolled and defining their state.
• State visibility is important at the customer service level - would be good to see the record state, activity logs and reasons for any issues.
• TIBCO Cross referencing tool (SmartMapper) allows IDs between different systems to be joined.
• It would be possible using TIBCO to attach additional attributes to records in other systems and transparently return those attributes with service requests to obtain the records. This would allow some other systems to avoid replicating USRS data by storing the extra information about the student they need against the record in USRS. This may be the case of the Information Sciences faculty for example.

EAI Patterns

• Mixture of SOA (Service Orientated Architecture) and EDA (Event Driven Architecture) for most processes.
• Two basic types of process:
  ◦ Synchronous - client calls service with request and awaits response.
  ◦ Asynchronous - client sends a request to the service and response arrives later. Client does not wait for response.
• TIBCO technical adapter used to pull data from a source system, transform it to a common format (CDM - Common Data Model) and expose it in a standard way e.g. as a web service.
• With multistep processes it is good to design your services to be idempotent.
• Message queues can be persistent for fault tolerance.

Vision/Outcomes

• Looking across design and support for:
  ◦ Reusability
  ◦ Robustness
  ◦ Consistency of implementation
  ◦ Monitoring
• Looking for adoption of a standard tool to drive towards Enterprise Architecture - meaning Governance, Standards and Guidelines.
• Want to increase:
- Confidence in the processes
- Customer satisfaction levels e.g. decreasing time to complete

- Business Objectives:
  - Reliability with monitoring
  - Timeliness of processes
  - Agility for change
  - Accuracy/Integrity of Data

- Data Security
- Data Governance (not part of this project - but part of Enterprise Architecture)
- Single System of References

**Recording of meetings**

- [file://s:\\IT Resources\\MIS\\Integration\\Workshop_20-Apr-2010](file://s:\\IT Resources\\MIS\\Integration\\Workshop_20-Apr-2010)

**Meeting presentation and invitation attachments**

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