



Finance and Real Estate: B2B Integration with Web Services

Business Problem

Figure 1 illustrates a classic business Integration problem relating to loan appraisals in the Title-refinancing industry. As loan requests are received by a mortgage lender, the title of the property being purchased needs to be verified and the property needs to be appraised. The title-search and property-appraisals are performed by partner companies which are independent businesses, and responses are then sent back to the mortgage lender who then processes the loan.

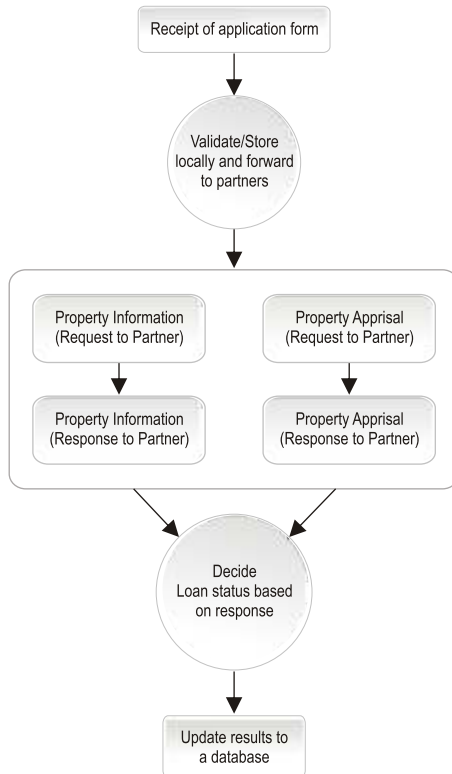


Figure 1 - Loan Appraisal Process

SOA Solution

Figure 2 illustrates the event-driven business process for the Property Appraisal process of figure 1, where requests are sent to multiple partner companies for retrieving specific portions of Property details. The responses are aggregated and updated to a back-end database. In the solution illustrated below, data is exchanged between the enterprise and partners via Https calls and WebService calls.

The nodes in figure 2 represent Fiorano business-components running as independent processes, while the lines between the nodes represent the directional flow of messages (events) when the business process executes.



Figure 2 - Fiorano SOA Solution

Fiorano ESB™ Solution - Flow Description

- 1) Loan documents are received from the WebClient. The requests are typically sent in by loan consultants who underwrite loans. "HTTP Receive" Adapter service receives the loan request.
- 2) The backend DB is updated with the request, which typically creates a new record for the customer and the interested property. The received request is transformed to appropriate database format before it is sent to the DBAdapter.
- 3) Email is sent back to the client in case of failure in receipt of the request.
- 4) The document is securely posted via HTTP(S) to partner applications for doing property verification. The response contains appropriate information about the property.
- 5) Document information is posted via WebService calls to partner applications to retrieve appropriate information about the property.
- 6) The responses from the different partner applications are aggregated.
- 7) The backend DB is updated with the latest status of the loan using the DB Adapter.
- 8) Email is sent to the client on the status of the order.

Implementation of the Fiorano ESB™ SOA solution in the "property appraisal" scenario delivers the following benefits:

- Business data can be sent and received in different protocols like FTP, HTTP(S), SMTP, TCP, etc. In addition, inbuilt support for data transfer in secure mode is available.
- The need for installation of additional software on partner locations is eliminated. Fiorano ESB™ Peer Server provides for fine grained deployment and monitoring control of services.
- Addition and removal of business partners can be done rapidly enabling real-time modifications to business processes.
- Fiorano ESB™ supports services written in different programming languages (C, C#, C++, VB and Java) and helps them communicate with each other across the enterprise framework.
- Business Analysts get the "complete picture" of the business data flow. In addition, they can define business process with sub-flows to handle individual error/exception conditions processes spanning multiple partners and enterprise

Time taken to 'SOA Enable' the Business processes

Fiorano ESB™ solutions are quicker to implement. This is simply because the solutions have in-built capabilities to accommodate complex business scenarios with minimal programming efforts.

In the "loan processing" scenario discussed above, the time schedule for the different implementation activities is listed below.

Activity	Time taken (In Man Days)
Defining the event processes	3
Developing new services	0*
Implementing the event Processes	2
Testing and deployment	3
Total Time	8

* - No new services were built.



Fiorano's business solutions are developed by live mapping of realtime components onto the business process flow. These real-time components represent the actual systems and applications across the enterprise. As a result, Fiorano's SOA solutions closely resemble the actual business process flow diagram. Business analysts can easily get the "bigger picture" with Fiorano's solutions and can rapidly modify business flows based on changing business requirements.

ROI on Fiorano ESB™ SOA Solution

As illustrated in the calculations below, the ROI percentage in the first year is 340%, rising to 988% in three years. The calculations are for a 1 Billion Revenue Business; with \$500 Million/year in expenses and \$100 Million/year in profit. The resource costs have been taken as \$150,000/person/year (base salary, benefits, overhead).

In such B2B scenarios, integration projects are traditionally developed as point-to-point applications using different technologies resulting in a tightly coupled integration

Quantifiable Costs	Description	Cost for 1st Year (in USD)	Total Cost over 3 years (in USD)
Fiorano Software Costs	Fiorano ESB	95,000	95,000
Annual Software Maintenance Costs	3 years software maintenance @ 20%	19,000	57,000
Development/Testing Costs	2 people over 4 days to implement project	3,336	3,336
Services Costs (Consulting)	Fiorano Consulting Services	40,000	40,000
Other Costs	Training Costs	20,000	20,000
	Total	177,336	215,336

Non-Quantifiable Benefits	Description
Value of better business partner relationships	Improved relationship with business partners strengthening business prospects
Increased business visibility and forecasting	Better accountability - Daily analysis of partner transactions
Improved marketing analysis	Improved forecasting and reduced risk in business decisions
Reduced operational risk and enhanced competitive advantage	Able to increase profits with low costs; maximizing confidence to compete effectively in the market place

environment that are:

- »Expensive to manage/maintain and change. Heavily dependent on database systems that required significant amount of coding and manual interventions to complete business processes
- »Inflexible to addition/removal of partner companies. Any change in business process requires code changes
- »Not scalable and low on performance
- »Unable to provide for a business analyst view of the business process

With Fiorano's SOA Solution; business partner integration is done in a very cost-effective and easy manner. New partners/business entities can be added/removed from the enterprise business processes in a single step. Dependency on the backend database is reduced by using ESB as the transport protocol for communication between the enterprise backend systems and partners. New services can be added without having to incur huge IT costs. Business processes can be directly modified by the business analyst optimizing implementation cycles.

Quantifiable Benefits	Description	Benefit for 1st Year (in USD)	Total Benefit over 3 years (in USD)
Eliminated Development Costs	<ul style="list-style-type: none"> • Reduced time to add new business partners by eliminating development costs. • Reallocated highend consultants and mid-level developers=\$300,000/year 	300,000	900,000
Reduced change implementation cycles	<ul style="list-style-type: none"> • Reduced costs and time in implementing modifications to business process flows. • Decreased man days to implement new business flows =\$85,000/year • Increased Productivity of IT personnel=\$46,000/year 	131,000	393,000
Real-time Deployment of new business partners	Decreased costs to integrate new partners=\$350,000 (Assuming 10partners/year)	350,000	350,000
	TOTAL	781,000	2,343,000

ABOUT FIORANO SOFTWARE

Fiorano Software is a leading provider of enterprise class business process integration and messaging infrastructure technology. Fiorano's network-centric solutions set a new paradigm in ROI, performance, interoperability and scalability. Global leaders including Fortune 500 companies such as American Express, Boeing, British Telecom, Lockheed Martin, NASA, POSCO, Qwest Communications, Scottrade, Schlumberger and Vodafone among others have used Fiorano technology to deploy their enterprise nervous systems.

To find out more about how Fiorano can help you meet your enterprise integration objectives, Visit www.fiorano.com or email sales@fiorano.com.

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