



BizTalk Based Enterprise Service Bus



## Application Network®

Cable & Wireless hosting services manages data centers for some of the largest customers, including the B2BeX International Trading Portal of a large financial institution, which is a complex platform integrating two dozen applications in a high availability infrastructure.

There is significant opportunity for C&W to provide a managed web services based Enterprise Application Integration Platform since enterprise requirements for reliability, availability, security and scalability will not be met merely by standards.

Xavor's Application Network™ framework, an implementation of Enterprise Service Bus (ESB), is an SLA-based managed service framework. Enterprises can easily leverage the benefits of standards-based Web Services powered by robust EAI-based BPM technologies to eliminate the lengthy, costly and risky "highway building" implementation.

BUSINESS SITUATION	SOLUTION DESCRIPTION	KEY BENEFITS
EAI and BPM are proven technologies typically implemented using proprietary technologies. However these proprietary implementations have traditionally been very costly and risky due to the complexities involved in providing reliability, security and scalability in a loosely coupled environment.	<p>Xavor provides the framework for Enterprise customers for integrating systems, processes and applications in a flexible, secure, reliable and scalable manner.</p> <p>This killer application, Application Network™ can be provided as a SLA-based managed service platform so enterprises can easily leverage the benefits of standards-based Web Services powered by robust EAI-based BPM technologies.</p>	<ul style="list-style-type: none"> <li>§ Reduced cost of integration services and custom APIs to wire application together</li> <li>§ High-reuse of common utility services to support the end-to-end process orchestration</li> <li>§ Flexible integration and replacement of third-party packages and applications to keep up with the changing business needs.</li> </ul>

## Company Overview

Cable & Wireless is a leading international telecommunications company, with customers in 80 countries. For 130 years it has constantly reinvented itself to embrace the latest technological advances to serve its customers' needs.

Cable & Wireless offers IP, voice and data services to business customers, and to residential customers in some markets, as well as services to other telecoms carriers, mobile operators and providers of content, applications and internet services.

In 2003 Cable & Wireless integrated its global and regional divisions to create a group of national telecoms companies. These companies are closely bound by a common strategy, shared marketing, technical and regulatory skills and established relationships both with each other and with national operators across the world.

## Business Situation

The integration of application and processes continues to be a high priority task for enterprises. As businesses are leveraging Internet for operational efficiencies and cost reduction through self-service and online process collaboration, the integration needs continue to become even more critical not only for large enterprises, but also medium and smaller businesses.

Although Internet communication standards (XML Web Services) provide a standard "language" for integration but the issues of reliability, scalability, security and manageability still have to be architected and implemented by each business. Most analysts agree that for an integration model to successfully support loosely coupled architecture, it will have to be messaging-based (EAI) and process-driven (BPM). However, implementing enterprise-wide EAI-based BPM using standards-based XML Web Services is very complex undertaking. Even one slice of this complexity, EAI, has typically been multi-million dollar engagements lasting 1 or more years which are not practical in current times.

There is significant opportunity in providing a managed web services based Enterprise Application Integration Platform since enterprise requirements for reliability, availability, security and scalability will not be met by merely standards. Also, Communications standards are immature and require additional infrastructural support to enable secure and reliable connections. There is a significant need for reliable applications integration and C&W needs to position itself with enterprises to avail this opportunity, starting with the "here and now" EAI & BPM needs and challenges.

The loosely coupled architecture of XML-based Web services is the centerpiece of Microsoft's .NET platform. This is a tremendous vision, and it offers greater simplicity and flexibility than other distributed architectures that use dedicated message queues, middleware buses, or application connectors. But in today's early incarnation of Web services, what's missing is the high availability that the message queues and legacy middleware systems offered.

This has created an opportunity to create a new breed of managed software services that are application-aware and network-centric and allow enterprises to outsource the evolving maturity of standards-based internet technologies under SLAs to their trusted service provider.

Companies with reliable network and hosting infrastructure are in a great position to offer managed service solutions by making .NET platform reliable, secure and scalable for enterprises.

The easy of use (like plugging into the modern IP network) for integration needs will drive the ROI along with the savings of capital and operating cost typical associated with complex integration plumbing.

## Solution Description

The Application Network™ is an EAI-based BPM platform for Web Services envisioned by Xavor Corporation. Managed by Cable & Wireless, and based on Microsoft

.NET technologies, it is a collection of services that allows enterprises to coordinate and manage their enterprise business processes globally, including with their customers and partners.

Just like no modern enterprise can function without a robust IP Network, it will be critical for companies to have a BPM platform that is EAI aware so that all business solutions can rely on certain rich set of utility (common) capabilities.

Application Network is the next-generation approach for solving the application integration problems that customers have. It is a giant leap forward in solving the business process integration problem. The offering will enable customers to integrate many-to-many applications in a rapid and flexible manner. In addition, the pre-built components of the Application Network will significantly reduce the costs and complexity of application integration.

This case study briefly explains the design of the Application Network™ POC to demonstrate a prospective customer about the speed and flexibility to implement and change a specific business scenario into a part of the Application Network™.

The vision for Application Network includes:

- § To enable enterprises to cut process and system integration cost and complexities by outsourcing integration of applications and processes using the proven IP Network utility model
- § To provide Architecture Patterns and reusable components to large Enterprise to reduce the risk and complexities of large Enterprise Application Integration (EAI) based Business Process Management (BPM) projects that leverage XML Web Services standards

Why .NET for building the Application Network:

- § Most of the technologies needed are already integrated into .NET Platform out-of-the-box
- § Fastest implementation of Web Services standards such as WS-Security

§ Powerful and flexible VS.NET development environment

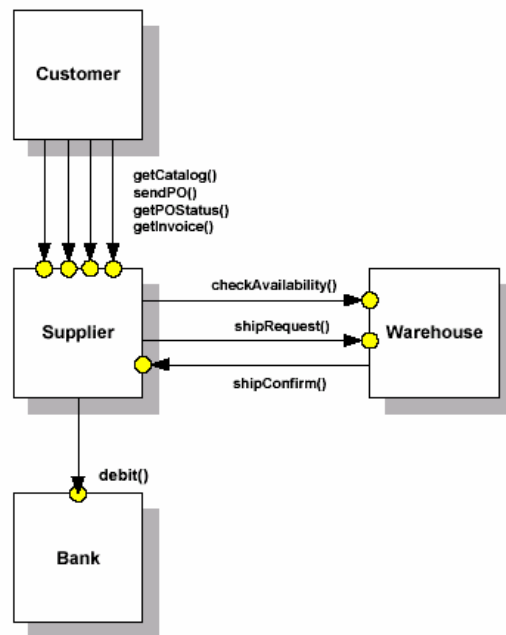
Tools and Technologies being used:

- MS Visual Studio.NET 2002
- Microsoft BizTalk Server 2002
- Microsoft BizTalk Adapter for Web Services
- Microsoft SQL Server 2000
- Microsoft UDDI
- Microsoft Windows 2000 Server

Implementation of Application Network:

The scenario implemented is that of a simple "Purchasing Network". Suppliers make catalogs available to their customers, and customers generate purchase orders to the suppliers.

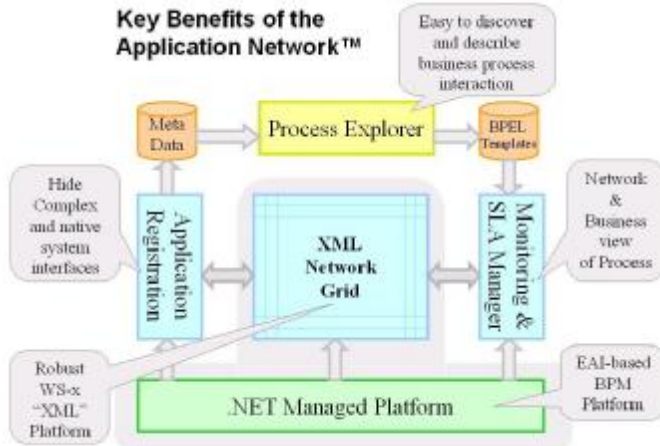
Suppliers in turn check the current credit balance of the customers and send shipment requests to their warehouse.



### Key Benefits

The benefits of Business process integration can affect every area of the company, from supply chain, to customer service, to order management, to executive visibility. Below are some key benefits that Application Network can deliver.

### Benefits during solution implementation



- § Reduced cost of integration services and custom APIs to wire application together to meet requirements.
- § High re-use of common utility services to support the end-to-end process orchestration.
- § Easy to configure and customize a cross-application business process in a consistent manner. The design and flow control of a process will be highly reusable since it will be independent of the implementation details.
- § Flexible integration and replacement of third-party packages and applications to keep up with the changing business needs.
- § Since the BPM platform will only talk through well-defined interfaces it will be able to control and manage the process life-cycle security in a more robust manner.

### Benefits during Operations

- § Fast isolation of problems by helping to tie known problems with a physical IT architecture directly to business processes.
- § Clear accountability model between vendors and partners based on the layered BPM Platform architecture and a managed service model.

- § Upgrades of the BPM Platform will be independent of application package upgrades giving more flexibility to leverage new technologies and business features and yet maintain end-to-end robustness at the platform level.
- § High-availability and scalability earlier to achieve since BPM platform will have a well-defined mission and purpose to facilitate cross application integration of processes and take responsibility to ensure end-to-end execution under platform-level SLAs. By having separate SLAs for the BPM Platform the business applications that plug into the platform can offer more consistent and predictable interaction.

### Benefits for CIO/Enterprise Customers

- § No capital expenditure on building the EAI/Web Services infrastructure (Avoid uncertain, risky and lengthy implementations)
- § Reduce operating costs by leveraging existing IP Network / Hosting investment for Web Services and Application Integration related HA, Security, Performance and QoS
- § Faster and cheaper solution to market by cutting down recurring "integration wiring" and leveraging of utility application services such as audit-trail, data transformation, Billing, BI, Event mgt, BAM

### Benefits to C&W

- § Enhanced and differentiated value proposition to CIO that addresses their top issue (application integration)
- § Enable C&W to provide high value, facilities based solutions & services
- § Continue to build on strengths in IP networks and managed network services (e.g. hosting, CDN). Application Network™ requires managed IP networks.