

# mBlox builds a service-oriented architecture with Prolifics and IBM



## Overview

### ■ The Challenge

With the increasing maturity and standardisation of the mobile messaging market, mBlox wanted to simplify its IT platform to deliver greater efficiencies, accelerate speed-to-market, and reduce the costs of change. Replacing its custom-developed billing system with an off-the-shelf solution and integrating it across the enterprise was a first priority.

### ■ The Solution

Working with Prolifics ([www.prolifics.com](http://www.prolifics.com)), mBlox built a service-oriented architecture around a new ACE\*COMM billing system, Business Objects reporting tools, and Microsoft Dynamics GP accounting software. The services are orchestrated by IBM WebSphere Process Server and surfaced through an IBM WebSphere Portal server front-end. The solution was created using a suite of IBM Rational requirements management and software development tools.

### ■ The Benefits

Billing runs that used to take up to 10 days can now be completed within just 36 hours. Process-driven service-oriented architecture enables rapid development of new applications by reusing and orchestrating existing components, allowing mBlox to set up services for new mobile carriers within half a day. mBlox is currently trialling functionalities that will enable clients to access billing information and reporting tools through the portal, with a view to launching this capability in a future phase.



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mBlox is the world’s largest mobile transaction network, enabling businesses to deliver mobile services and content around the world. Specializing in global operator connectivity and mobile billing, mBlox maintains connections to more than 500 mobile operators in over 180 countries through its carrier-grade network. With offices in the UK, US and Singapore, the company employs around 300 people.

“The basic proposition of our business is that we provide an interface between content providers and the mobile carrier networks, enabling SMS and multimedia content to be delivered to the right consumers and correctly billed,” explains Tarren Kelly, Vice President of Strategic Programmes at mBlox. “Different mobile carriers have different messaging standards, and most content providers lack the in-depth technical knowledge required to access all the mobile networks. We remove that complexity and allow them to focus on their core business of content generation.”

When mBlox was founded, in 1999, the mobile messaging market was in its infancy, and there were few universally accepted standards for network access protocols. As a result, mBlox was forced to build interfaces more or less from scratch to interact with each individual carrier – resulting in a complex infrastructure.

In recent years, mobile messaging has matured and a certain amount of technological convergence has taken place among the carriers. As a result, mBlox took advantage of an opportunity to reengineer and consolidate its interfacing and billing platforms - thereby reducing complexity, cutting development costs and accelerating the creation of new services.

“We recognized that replacing our home-grown systems with a more standardised set of applications and uniting them in a service-oriented architecture (or SOA) would significantly simplify our systems – allowing us to grow our business more easily,” says Tarren Kelly. “Creating an interface for a new mobile carrier would be much simpler, because we could reuse existing software components instead of developing a system from the ground up – helping us get to market much more quickly.”

### **Choosing the right partner**

mBlox sent a request for proposals to a number of vendors, detailing the company’s plan for a service-oriented architecture built around a core new billing system, and integrating with Business Objects reporting tools and Microsoft Dynamics GP accounting software.

Following an in-depth evaluation, ACE\*COMM was selected to provide the billing solution, while Prolifics would provide requirements management,

architectural design and systems integration services, leveraging IBM Rational and WebSphere software.

“IBM had recommended the Prolifics team, and we initially chose to work with them for a relatively small project,” explains Tarren Kelly. “We were very impressed with Prolifics’ professional culture and expertise in systems architecture design and integration, so we asked them to take a leading role in the SOA project.”

### **Designing a service-oriented architecture**

Prolifics deployed a suite of tools including IBM Rational Requisite Pro, Rational Software Architect and WebSphere Business Modeler to help establish project management and Agile development methodologies for the project.

A key part of Prolifics’ contribution was to create ‘design patterns’ – rules, structures and documentation to ensure that all development work followed standardised best-practice models. Using the Rational toolset to manage the requirements and documentation made it easier for the development teams to create a governance framework and ensure a unified process for both front- and back-end design.

“This was a complex and business-critical project, so it was vital to get a solid understanding of requirements and capabilities before we started,”

says Tarren Kelly. “The Prolifics team were very strong in terms of analysing the scope of the project and helping us gain a holistic view. They helped us establish key processes that were critical to the success of the programme – ensuring the quality of the solution and contributing to the efficiency of a multi-supplier, distributed team.

“Once we had created a plan for the programme, the IBM Rational and WebSphere tools made it simple by creating a framework to keep everything on track. They have been so effective that we are planning to utilize their services on other projects within the business.”

### **Harnessing automation with WebSphere Process Server**

Prolifics implemented IBM WebSphere Process Server to capture a number of key business processes for mBlox, creating automated workflows to orchestrate the various services involved. This has helped to reduce the need for human intervention in moving data between the billing, accounting and reporting systems – increasing speed and reducing manual workload, and allowing employees to focus on higher-value tasks.

“Previously, some of our billing processes involved exporting data from the operational support systems and performing labour-intensive tasks,” says Tarren Kelly. “This was

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very time-consuming, and monthly billing could take up to ten days to complete. With WebSphere Process Server, the billing processes are fully automated – so we can perform a full billing run within just 36 hours.”

### **WebSphere Portal Server – exceeding expectations**

Prolifics also deployed IBM WebSphere Portal Server as a front-end for the new architecture, providing user-friendly access to the billing, reporting and accounting systems via a simple Web browser. The portal provides a common look and feel for all the services in mBlox’s architecture, helping users view data and complete tasks quickly and effectively.

“WebSphere Portal has proven to be such a powerful tool for our internal users that we are now planning to extend access to our clients as well,” says Tarren Kelly. “We are currently running a beta trial for a number of clients in the US which allows them to view reports, contracts and billing data – helping them react more quickly and manage their campaigns more effectively.”

### **Accelerating speed-to-market with SOA**

Tarren Kelly concludes: “Prolifics has helped us design and deploy a new architecture that is meeting or exceeding our expectations across the board. Service orientation gives us a

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standardised, flexible platform that can quickly and easily be extended when we need to work with a new carrier or expand into a new market.

“Interfaces that used to take ten days to build with the old platform can now be assembled from existing components within half a day – helping us get to market ahead of the competition. Also, by increasing business process automation, we have been able to reduce operational costs and boost the speed of billing significantly.

“This is the largest strategic programme that mBlox has ever undertaken, and it was crucial to realise the benefits within a very aggressive timescale. Despite numerous scope changes and other challenges, Prolifics has helped us keep the programme on course, and we expect to see a full return on investment in the near future.”



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