

**Client:** Provider of Technology Solutions to Transportation and SCM Industries  
**Location:** USA

## Client Description

The client provides innovative solutions for the transportation industry and operates one of the largest outdoor wireless networks in the world for this purpose. Their integrated product suite focusing on accelerating terminal operations productivity is used by one third of all U.S. pacific coast terminals.

## Business Need

The client has a product suite to improve operational efficiencies of terminal facilities. The suite had a non-scalable architecture which prevented it from being deployed in different terminals having completely diverse systems. To enhance the scope so that the suite could easily integrate with the various terminal systems like TOS, biometric scanners, gate pass dispensers and collectors at different terminals, it was decided to re-engineer the product and define flexible interfaces which would allow for simpler integration.

The idea was to enable the product suite to provide centralized remote processing of gate transactions for intermodal facilities and thereby improve productivity, operator safety and terminal facility security.

## Solution Offered

Being a complex product suite involving integration with various software and hardware systems like gate consoles, gate pass dispensers etc., the client was looking for a vendor with high technical capability and flexibility in managing a product lifecycle with dynamic requirements, which they found in Blue Star Infotech.

Blue Star Infotech initially setup a separate lab for the client, which involved various hardware and software systems present in a typical terminal gate. This involved setting up physical gate-pass dispensers, gate pass collectors, gate pedestals, an overhead camera and software simulators to replicate the actual environment for which the product suite would be re-engineered. This helped the Blue Star Infotech team understand the various integration points and complexities of the entire system.

Blue Star Infotech's team then proceeded with re-engineering of the suite in conjunction with the client's team. The existing suite was in VB and to overcome the limitations, .NET was chosen as the new target platform. While a follow-the-sun approach to development was followed, the highly evolving

requirements were addressed by ensuring that there was a daily overlap of few hours where architectural and design issues were thrashed out. For example, to reduce the idle time at the terminal gates, it was decided to move logic from the business layer to the gate pedestals placed at the terminal gates.

The entire focus was on keeping the suite flexible and highly customizable so as to be able to integrate with the disparate systems across different terminals. An Open Standard Architecture was followed to provide easy integration with terminal operating systems through protocols like TCP/IP and XML. The various integration points which had to be taken care of involved biometric scanners, cameras, VOIP, OCR conversion, TOS system etc. In addition the real-time monitoring through a web interface was added to allow simplicity of use.

## TECHNOLOGY

- Platform: Windows
- .NET 2.0: Windows and Console application, C#, ASP.NET, VB.NET, Remoting, Web Services
- XML, MSMQ, SQL Server, Oracle 9i
- Protocols: TCP/IP, Various hardware specific protocols

## Benefits to the Client

- By setting up a separate lab with specialized software and hardware, Blue Star Infotech has been able to help in reducing the re-engineering time by simulating actual terminal operations
- The client has been able to reduce the size of his team involved in the re-engineering effort and engage them more productively in other focus areas
- In addition to enhancing the core product suite, Blue Star Infotech is now working on terminal specific prototypes that are being used by the client as demonstrations for its target audience. This has helped the client concentrate on product sales

### For more information about Blue Star Infotech:

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