



Beijing Traffic Manages Traffic for the 2008 Olympic Games with IONA

Customer Information

Customer:	Beijing Traffic
Headquarters:	Beijing, China
Industry:	Government
Solution:	IONA Orbix

Customer Overview

CS&S Delineate is a specialist software development and system integration company focusing on ITS (Intelligent Transportation Systems) and enterprise and industrial automation. CS&S Delineate specializes in business-to-business and technology markets, and they worked with Beijing Traffic to prepare for the 2008 Olympics.

Beijing is a metropolis that is 16,800 square kilometers in size, and contains 11 million inhabitants. Car ownership in Beijing has reached 1,898,000, with over 2,947,000 drivers. Furthermore, there are currently over 11 million non-motorized vehicles, and a great deal of transit vehicles running in Beijing. There will be about 18,000 buses and 650 bus lanes by 2008, which will carry 4.5 billion passengers each year.

Public transportation is expected to constitute 60% of commuter traffic, and its share of total traffic volume is estimated to rise from the current 26% to over 40%. In order to efficiently manage the planned road infrastructure and estimated increase in traffic volume by 2008, as well as the traffic generated during the 2008 Olympic Games, Beijing developed an Intelligent Transportation Systems (ITS).

Beijing Traffic choose to work with IONA to solve this daunting challenge because of IONA's proven track record of working with large, missions-critical applications, and because of their technology-neutral and standards-based approach to integration making it possible to easily connect diverse systems.

"The amount of traffic in Beijing is growing steadily every year. We need to build our infrastructure to keep up with the growth in volume. Part of the infrastructure development is a system that allows the BTMB to manage and control the flow of traffic. Orbix has been a major contributor to the success of the first phase of the project, and more importantly, it gives us the stable platform on which to develop the remaining system."

Mr. Thomas Brizendine
Chairman
CS&S Delineate



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Challenge

The ITS required a state-of-the-art computerized traffic monitoring, accident reporting, and dispatch system. The ITS includes a basic framework that gathers and collates traffic data from Beijing's major ring-roads and traffic arteries. This data is then cleaned, integrated, analyzed, distributed, and stored. The overall goal of the ITS is to present Beijing Traffic with real-time, objective traffic status information for its major roads and traffic arteries. It was critical to establish a basic framework where further projects can proceed in an integrated fashion.

"Obviously the 2008 Olympic Games is a major driver of the project, but we want to develop a framework that will allow us to manage our traffic for many years to come. The volume of traffic is growing significantly every year, and we needed a way to analyze the growth and manage the impact it will have on our city's infrastructure," said Mr. Brizendine.

Solution

The project collects, processes, analyzes, displays, and stores real-time traffic status information from a variety of independent systems. The information relates to Beijing's main roads and arteries, for control and analysis purposes. It is sent to a number of different end-users within Beijing Traffic. This project also includes the basic framework to integrate new applications as Beijing Traffic continues to build its full ITS in advance of the 2008 Beijing Summer Olympics.

The Beijing Traffic system is built using IONA's Orbix. The IONA platform provides the CORBA-compliant functionality required for transparent, system-wide data transport and integration between the various sub-systems within Beijing Traffic. All real-time and near real-time systems are online, and integrate data from several static data sources. The traffic control systems are also integrated, giving Beijing Traffic real-time tools to manage all traffic in Beijing. This information is available to other city organizations such as fire, emergency response, and planning.

Results

With Orbix controlling the information flow, Beijing Traffic adjusts traffic control, modifies police deployments, and directs traffic police more accurately. As important as these improvements are, the real benefit of this phase of the project is the establishment of a robust, common integration platform and traffic control strategy. The framework that Orbix provides allows Beijing Traffic to plan a wide range of high-level functionality as it progresses through the next phases of the project in the lead up to the 2008 Olympics.

"Even after just the first phase of the project, we can see real benefits from the ITS. We can already plan and deploy our resources more efficiently to relieve traffic congestion in the city. The biggest advantage, however, is that with Orbix we have a stable platform that we can use to develop the remaining system," said Mr. Brizendine.

Why IONA

CS&S Delineate chose IONA's platform because it is the only enterprise level, fully CORBA-compliant platform available that also provides a solid development environment and complete set of development tools.

"We are completely satisfied with the quality of the IONA product. IONA support has been a big help to us as IONA has built up its presence in China substantially in recent years. The key features that attracted us to IONA are the enterprise-compliant nature of the platform, its notification functionality, and its feature-rich development environment," said Mr. Brizendine.

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