

## Inventory management system with mobile device streamlines time consuming process and reduces required staff.

### ADESA



ADESA, of Carmel, Indiana, is one of the largest vehicle redistribution companies in North America with nearly 11,000 employees and more than 130 facilities.

### Overview

ADESA moves thousands of used vehicles through wholesale auctions each week and provides remarketing services that extend to titling, mechanical services, financing and more. The company needed to implement a new vehicle inventory system.

### Challenge

When vehicles arrived at each auction site, checking them in and out of the inventory system was a time consuming and inefficient two-person process. While one employee worked on the lot and physically inspected each vehicle to retrieve information, another entered the data into a database within the auction facility.

The process resulted in data entry errors as vital vehicle attributes like identification numbers (VIN) and make, model, year and color were communicated via radio from one employee to another. Worse, ADESA suffered the loss of vehicles as some were taken from lots with forged or expired gate passes. ADESA wanted to update the technology of the application and implement an easy-to-use handheld or other wireless device that would allow a vehicle to be checked in with greater efficiency, accuracy and detail.

### Solution

ADESA assembled an internal team to determine the business requirements and design for a new application that integrates with ADESA's finance and transportation systems. Quest was

selected to handle the architectural design and develop the software. A web-based application was developed for the inventory management solution with two interfaces for two sets of users. The first interface accommodates users like managers who typically work at desk inside a facility. The second interface was designed for users working on lots who need access via a wireless connection on a hand-held, mobile device.

The mobile device operates on the Panasonic Toughbook U1, which runs Microsoft Windows XP. It allows one ADESA employee to initiate check-in by entering a VIN. The application prompts the user to enter the appropriate information based on manufacturer, vehicle type and other factors and then print a barcode that can be affixed to the vehicle. To check a vehicle out, an employee scans the barcode and verifies the key characteristics to ensure the right vehicle is leaving the auction. The device also captures the date and time the vehicle leaves the auction.

Because there are times when wireless signals at auction sites are not available for the device to connect to the network, the team had to envision and implement a design that would allow data to be temporarily stored on the device until it could be published to the server. This was accomplished using Microsoft's Disconnected Service Agent and ADO.net sync services.





## Results

The inventory management application is being used at all auction sites. The new application integrates with ADESA's key systems and allowed ADESA to improve upon existing processes and procedures. The handheld computer allows vehicles to be checked in within a 60 second timeframe. What's more, only one employee is needed to handle the process, freeing up at least one additional resource at each site.

## Technology

The mobile application hosts a Windows smart client application written in C# and deployed using Microsoft's ClickOnce technology. The web application was written using the web client software factory. Both applications share a common web service layer built with WCF and an SQL 2008 backend. The design incorporates Microsoft's Disconnected Service Agent and ADO.net sync services for offline application services.

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## About Quest

Quest, an Indiana based company, is a leader in custom software development, software management, IT consulting, support services and government solutions. We satisfy the full range of application needs through comprehensive life cycle services, connecting information, systems, people and processes. Our expertise has resulted in successful mission-critical applications that align business software with business strategy.

Quest's status as a Microsoft Gold Certified Partner, successful projects and satisfied clients attest to our ability to provide unique solutions to complex business problems.

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