Mobile Technology

MedSpeed

MedSpeed is a privately held healthcare transportation company headquartered in Illinois with satellite offices in 6 other states. The company's primary service is the pickup and delivery of medical specimens. About 75% of its employees use a portable Windows mobile device running custom software to perform their daily responsibilities. The old system used a proprietary synchronization application to exchange data with a SQL Server database that was located at the home office. Because the synchronization required a physical network connection, the drivers could only communicate with the central database two times a day (at the beginning of their route and at the end). This limitation made it difficult for the system to accommodate changes to a driver's route once it was initially established (a common occurrence given the current workflow). In addition, there was no central way to administer the data from each of the offices given each one had its own database server. MedSpeed was also using a Visual Basic windows application that allowed administrators and dispatchers to route packages, create reports, handle payroll, print barcode labels and do general maintenance to the data. Like the database, each office was running an independent instance of the application.

The Bantix proposed solution was to create a centralized database in SQL Server 2005. The handheld application was rewritten in C# using the .NET Compact Framework, Microsoft SQL Server 2005 Compact Edition 3.1 database and Windows Mobile 5.1. The SQL Server Compact Edition Merge Replication feature handles the synchronization of the data between the handheld devices and the central database. A C# ASP.NET web application was also written to replace the old Visual Basic windows application. The web application took advantage of AJAX and JavaScript technologies to ensure that the web interface provided the responsiveness that the users were accustomed to with the old Windows interface. Both the handheld and the web application were built using Visual Studio 2005.

The solution gave the dispatchers real-time access to the route data which in turn facilitated more effective route updates during the day. Additionally, dispatchers could monitor the routes to see if drivers were falling behind or if packages were not dropped off in time. The centralization of the database and the web application facilitated easier maintenance, application deployments, cross-office access to routes and data as well as other cost savings. Bantix also added functionality to the scanner application that would allow for third party label scanning. This, in turn, allowed MedSpeed customers to utilize their own barcode labels. Because the new system was implemented as a web application, it was natural to give Medspeed's clients direct access to the new system thus allowing them to print their own barcode labels, maintain profile data, track packages, and print reports.