

NUWAY

# What if your P&D application accelerated your productivity?

TST Overland Express found a new way to leverage real-time data and enhance customer service and efficiencies.

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Case Study

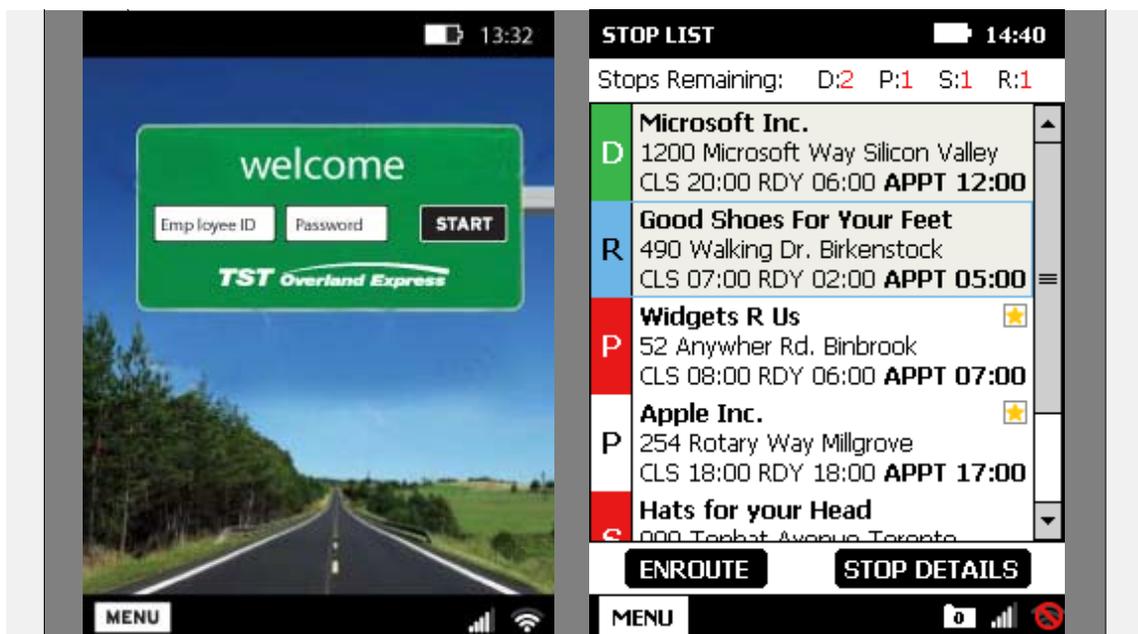
**TOOLS USED**

.NET Compact Framework 2.0  
SQL Server 2005  
Windows Mobile 6.5  
SQL Server Compact Edition 3.5

As Canada's leading provider of time sensitive less-than-truckload (LTL) transportation services, TST Overland Express depends on accurate, real-time information for both its dispatch and its customer service activities. A collaborative design process with the Nuway team resulted in an engaging Pickup and Delivery (P&D) application available on four different devices that not only offers real-time and highly accurate data for dispatch and customer service to better serve customers – but also the opportunity to leverage that data to drive productivity improvements internally.

“TST Overland Express existing P&D application, running on Palm O/S, could no longer support the additional functionality required to support spot/retrieve, signature capture, multiple routes per day, as well as break and lunch times,” explains Jonathan Malda who wrote the software with Jon Jagt. “The User Interface (UI) also needed to be dramatically overhauled to be made more intuitive,” Malda adds.

Not wanting to be tied to a proprietary development tool moving forward, TST Overland looked towards



Application Screenshots: Login and Stop List Screens

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**DOUG SCOTT, VICE PRESIDENT, I.T. LTL**

a custom built application as opposed to a tool-generated application. Developed for both new and existing devices (Intermec CN3 and CN50 as well as Motorola MC75 and MC9090) data from the devices is sent to an SQL Server database. TST wrote and maintain the integration software to move data to and from that database and their mainframe dispatch system.

“Updating routes on the fly was complicated,” says Malda. “The dispatcher needed to be able to update a stop on the fly and have it push to the device, but without losing the data about that stop being recorded by the mobile device. So we hashed out the rules for which the data source would ‘win’ in each circumstance.”

Being on a public cell network, versus a private cell cloud, also meant that the device had to pull messages versus having messages pushed from the server. Malda and Jagt had to tweak the polling interval to get the optimal trade-off between bandwidth usage and timely message delivery.

“Nuway development methodology was very effective,” explains Doug Scott, Vice President, I.T. LTL Sector at TransForce Inc. “We collaborated to create a very thorough functional design document before development. From beginning to end we worked directly with the application developers. We were in constant communication with the developers to answer questions and resolve problems. This type of direct access and collaboration was fantastic.”

With limited screen space available, and the diversity of devices to support, the UI design was extremely important. Nuway provided detailed mockups of all screens so the TST Overland team could visualize the application and process workflow.

Colour coding on the stop list helps the driver quickly see at a glance how the route is progressing. The use of buttons versus menu items allow for more actions to be performed with a single click, streamlining workflow.

Additionally, when a driver logs in and doesn't have a route assigned, a countdown is displayed to check for a new route. Once a route arrives, the device chimes so the driver is notified that a route has been assigned. If a device is idle for a pre-set duration of time, the driver is automatically logged out for added security.

Rolling out the mobile application at each terminal has now eliminated any need for handwritten driver manifests. In addition to all data now being captured on the handheld, a Google Maps application was incorporated to leverage the data collected and display the stops and track them along a Google Map.

“We now have accurate real-time information that is used immediately by dispatch and customer service to better serve our customers,” says Scott. “This same data is also used internally to drive productivity improvements.”