

MOBILE PRODUCTIVITY

Mobile Customer Service at the Bus Stop

With a Windows* 8 app and Intel®-based tablets, a transit innovator uses operational data for customer self-service and savings



Michael A. Mattos
Chief of Facilities and Business Support Services,
Sacramento Regional Transit District

From government agencies to business enterprises, organizations compile mountains of data as they run their operations. Now, innovators like Sacramento Regional Transit District (RT) are taking advantage of a new generation of mobile devices to turn that data into a better customer and citizen experience. RT has launched a touch-enabled Windows 8 app that uses riders' Intel®-based Ultrabooks™, tablets, and other devices to provide up-to-the-minute answers to the perennial question, "Where's my bus?"

"When you're out at the bus stop, the one thing you want to know is, 'When is my bus going to come?'" says Michael A. Mattos, chief of facilities and business support services at RT. "With this app, we can show them."

Mobile Customer Service Drives Ridership and Revenues

RT serves more than 31 million passengers annually over 67 bus routes and 38.6 miles of light rail in a 418-square-mile service area. An innovator on multiple fronts, RT runs buses powered by economical, environmentally friendly compressed natural gas (CNG), and all-electric trains.

The Sacramento Regional Transit District Tracker* Windows 8 app takes RT's innovative spirit into the fast-emerging world of mobile, data-intensive customer self-service and the Internet of Things—and produces a win for the district and its riders.

RT's buses have wireless sensors that gather data every 20 seconds on the location and status of each vehicle. The data feeds into a Microsoft SQL Server* database running on a virtualized environment of Intel® Xeon® processor E5 family-based servers and storage systems. RT's Windows 8 app accesses that data and data from other sources and presents it to riders in a way that's visually rich, fun, and practical. Riders see a live map of all the buses on all routes and, with a tap or pinch, can home in on the ones they're interested in.

"It is a state-of-the-art app that runs on the latest platforms and provides information that is of great benefit to the rider," Mattos says. "It's very visual and interactive, and the graphics with the app and the Intel-based tablets are three or four cuts above anything we've seen anybody else doing."

"We use all this data for managing the business and keeping the buses moving and on time. The tertiary use for the patron gives us more value from that data. Patrons know what's going on, so they're not left at the bus stop with a bag over their head wondering how to get on the system."

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At a Glance

Project

- Deliver a rider-friendly, touch-enabled application that provides mobile customer service for transit system patrons.

Accomplishments

- Created and launched the RT Tracker Windows 8 app, turning wirelessly captured operational data into live, self-service information on bus locations and arrival times.

Key Technologies

- Windows 8 and Visual Studio*
- Clever Devices intelligent transportation systems for telemetry data
- Trapeze* transit management software running on HP ProLiant* blade servers based on the Intel Xeon processor E5 family, HP LeftHand* storage area networks, Microsoft Windows Server* 2008, and VMware ESX*

Lessons Learned

- Think creatively about how you can combine existing data with mobile technologies to improve service, meet customer and citizen expectations, and better fulfill the mission. Ultrabook devices offer new ways to deliver experiences that are both practical and cool.
- Take advantage of the large ecosystem, mature tools, and extensive resources available for Windows 8 and Intel-based mobile platforms. Use mobility, touch, social, visual computing, and other capabilities to provide a compelling and useful experience.

The application's use of touch makes it easy to interact with complex data. "You can see right where your bus is, see if it's on time, and see if there's a different bus that might get you to your destination sooner," says Mattos. "In the event of a service disruption,

you've got information to help you minimize the impact. There's even a social aspect—every station has a Twitter* handle, and you can compare notes with other Twitter users."

The application has the potential to impact RT's bottom line in several ways. "If patrons can find out when the bus is coming, we get fewer phone calls and complaints," Mattos explains. "We can save in the call center, and that's important given the tax pressures that are impacting our budgets."

The app may also help increase revenues. "When we make it convenient and easy for people to get where they're going with as little drama as possible, it makes the patrons who have a choice more likely to choose to ride the system," says Mattos. "That pushes our ridership up, which drives revenues and lets us expand services for everyone. There's also a green impact with fewer cars on the road."

Windows 8 for Touch-Enabled, Data-Intensive Mobile Computing

The RT Tracker Windows 8 app resulted from a collaboration with Kiefer Consulting, a Sacramento-based company and Microsoft Gold Partner that creates a range of custom enterprise applications. Greg Kiefer, who heads the firm, saw the launch of Windows 8 Professional and Intel-based Ultrabooks as both a growth opportunity for his company and a chance to help its customers benefit from mobile computing while maintaining enterprise security and manageability. He obtained funding from the Microsoft Application Acceleration Program (MAAP) and worked closely with RT to brainstorm ideas and design the application.

Kiefer's mobile team designed the app to deliver a responsive experience despite the large data volumes. "You never want to make the user wait, so we download all the route information to the device," he says. "We were confident the Intel processors could handle whatever we asked them to."

The app also runs on Windows 8 ARM-based devices, but Kiefer says it delivers a better experience on Intel-based devices. "The Intel graphics are outstanding, and the experience on the Intel-based devices is significantly faster," he comments.

Growth Ahead

Both Mattos and Kiefer see growth ahead. RT is adding Wi-Fi to its trains, installing hot spots at more train stations, and looking to give customers greater visibility into train operations. Kiefer is working to extend the application to other transit systems and to organizations such as correctional systems that have complex transportation needs. Mattos says he's had a great experience working with Kiefer Consulting, and hopes to see the application expand. He and Kiefer have their eyes on the potential for integrated ticketing and gaming, adding further convenience and giving patrons fun ways to compete while they ride.

"Providing real-time access to data isn't the way of the future—it's the way of today," says Kiefer. "People expect it, and organizations need to be looking for ways to provide it. The Intel-based devices with Windows 8 Pro are a great way to go, because they're consistent with the existing enterprise infrastructure. We're seeing more demand than we expected."



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