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PROJECT HIGHLIGHTS

Portland traffic officers take from five to seven minutes to hand write a ticket on a typical traffic stop, but electronic tickets can cut that time to as little as two minutes.

A major factor in that time savings is the real-time wireless connection from the Recon handheld back to headquarters. The system wirelessly transmits a query to the motor vehicle database for wants, driving status, warrants, stolen property and other information.

MOBILE TICKETING SOFTWARE AND RUGGED TRIMBLE RECON STREAMLINE TRAFFIC CITATION PROCESS IN OREGON

In a mid-size city like Portland, Ore., police officers write about 130,000 tickets a year. The 45 officers working in the traffic division write more than half of that total: that works out to an average of 10-15 tickets a day for each of them.

Until late 2005, officers wrote conventional paper tickets that need to be gathered up and sent over to the courts in a big envelope, then entered manually into the courts' computer systems. Office staff at police headquarters hand collated the tickets for a monthly tally of citations issued, but there was no searchable database to find specific citation information.

That's all changing as Portland moves to electronic ticketing with mobile citation-writing software and a Trimble Recon rugged handheld computer equipped with Bluetooth and GPRS wireless cards.

The new system is designed to save time, both when the ticket is written and when it's processed by the courts. Just as important, it increases accuracy, reduces paperwork, and gives the Bureau aggregate information on citations it can use to deploy officers to areas where accidents and violations occur most frequently.

The Portland Police Bureau worked with the software's developers to design the electronic citation-writing process so that it follows standard police procedures including how and where the citation records need to go.

In creating a workflow for writing tickets electronically, Sinnott said the goal was to automate as much of the process as possible. One

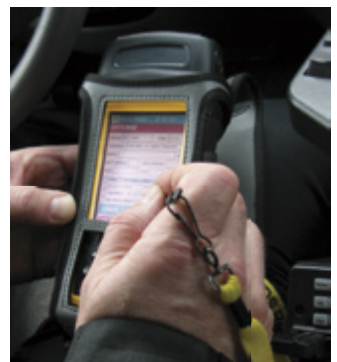
reason was to save time; the less time it takes to complete a traffic stop, the less chance there is of a confrontation with the driver that could threaten the officer's safety.

Automating steps also prevents technical errors, and electronic citations eliminate the handwriting problem common with hand-written tickets. Sinnott said that some citations fail to make it through the courts because of errors, incomplete data and legibility issues.

Real-time information

Portland traffic officers take from five to seven minutes to hand write a ticket on a typical traffic stop, but electronic tickets can cut that time to as little as two minutes, said Mike Clary, a Traffic Division officer who worked with Trimble engineers developing the software.

A major factor in that time savings is the real-time wireless connection from the Recon handheld back to headquarters. When an officer makes a stop, he or she can enter the driver's license and license plate numbers on the handheld. Then the system wirelessly transmits a query to the motor vehicle database for



The Recon's touchscreen is easy to use.

Portland police use technology to write traffic tickets

wants as well as driving status, such as a suspended or revoked license. It can also query other databases such as the National Crime Information Center (NCIC) for warrants, stolen property and other information.

In most cases, it takes about six to 15 seconds to run the query, then the software auto-fills form fields such as the driver's address, height, weight and date of birth, along with vehicle information.

Officers can also use the system to make positive identifications. If a driver does not have his or her license, the officer can enter the driver's name and date of birth, and the system calls up the driver's license photo that the officer can then match with the driver. Sinnott said that saves a driver from having to go to a police station to verify his or her identity. Officers have also used this process to catch drivers giving out false information in order to avoid a ticket or being arrested on an outstanding warrant.

Menus, pick-lists increase speed and accuracy

Once the driver and vehicle information is entered from the database query, the officer enters the location and the charges using simple pick-lists and check boxes. The mobile citation software organizes charges for common violations as well as those for pedestrian violations, equipment violations, parking violations and other categories

Transferring tickets to police and court databases

When the citation is complete, the officer prints a hard copy for the driver using a Bluetooth-enabled mobile printer. The system also

sends the citation data wirelessly from the handheld to servers for both the Police Bureau and the courts. That reduces paperwork, eliminates double data entry, and it makes the citation data readily available.

At the Portland Police Bureau, the citation data goes into a comma-delimited database. Sinnott said the Bureau can search the database for investigative purposes as well as compile statistics that reflect enforcement activity in a specific area or time period.

"We'll be better able to deploy our officers knowing where the most accidents are occurring and what causes those accidents," Sinnott said. "We'll deploy officers to those places and then be able to find out how many citations we're writing for different violations."

Rugged handheld ideal for police work

Compared to a standard car, a police cruiser is beefed up with heavy-duty components that can withstand the hard use that comes with police work. The same goes for the handheld, which is built to handle much rougher use than an ordinary handheld computer can endure. Besides police work, the Recon is used in a number of rugged environments, including the military. It meets military standards for drops, vibration and temperature extremes, and it's sealed against water and dust.

For police work, that means officers can use the device in rain, snow, extreme heat or other adverse weather conditions. Even if they accidentally drop the unit onto pavement or into a puddle, it won't

damage the unit, and they won't lose any data.

The Portland Police Bureau bought 10 rugged handhelds in April, 2004, and Officer Clary said it has proven its reliability and ruggedness. Initially, he was concerned about the durability of the touchscreen, but it has not been an issue. The devices are frequently stored in motorcycle trunks where they're subject to constant vibration, and Clary said he has personally put one of the handhelds through a three-foot drop test—although not on purpose—with no problems.

Besides ruggedness, other features make the device ideal for police work. Portland officers leave their units powered on, and with a 15-hour battery, they can use it throughout their shifts without a recharge. The handheld has a large, color touchscreen that's easy to read in bright sunlight as well as at night.

The device comes with Windows Mobile software, giving police departments access to thousands of other applications. Besides the electronic citation software, the Portland Police Bureau also runs its Computer Automated Dispatch (CAD) system on their handheld units. This gives officers another portal to motor vehicle, NCIC and other local databases when they're not using the citation software. Sinnott said the Bureau has equipped their handhelds so they can do everything the mobile computers installed in patrol cars can do.

"There's a lot of uses for these devices besides writing e-citations," Sinnott said.

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