

Case Study

WhiteTiger® Printer Safeguards L.A. County Sheriffs, Police

Crossroads Software, Inc.



Challenge

Crossroads Software needed a better way to print traffic citations in the field — while protecting police officers. The company’s Handheld Citation and Report Writing system enables officers nationwide to quickly capture a motorist’s data using a handheld computer, or PDA.

Solution

Now, with the Bluetooth®-enabled WhiteTiger thermal printer from Seiko Instruments Inc., officers can transmit that data and print high-resolution citations in record time, with fewer distractions and less risk during traffic stops.

The innovative PDA-based network was designed to help officers better manage the data collection process, using an intuitive Windows® interface with drop-down menus to speed data entry. In addition to the Seiko Instruments printer, it offers a magnetic stripe or bar code reader to auto-matically capture driver’s license information, and features

built-in sound recording capability to monitor an officer’s interaction with the motorist. An optional digital camera and/or a fingerprint input terminal to validate driver identifications can also be installed.

A thermal printer is ideal for this application because thermal printers generally rate highly in performance and reliability (with fewer moving parts than dot matrix printers), and avoid the need to replace toner or a ribbon.

By design, the system accurately represents the forms, citation references, and procedures used in field operations. This design precision avoids the need to retrain officers, enabling them to hit the ground running with the new system.

In earlier implementations of the Crossroads system, the principal output device was a thermal printer connected to the PDA via infrared link. Field experience with these previous designs had shown this

printer connectivity option to be the weak link in the data-gathering system.

“The infrared link provides a line-of-sight connection between the PDA and the printer,” said Kelly Goodspeed, general manager at Crossroads Software. “It is very easy to interrupt this link while transferring the file to the printer. If this occurs, the file is essentially lost, and the whole data set must be re-entered.

“To make matters worse, the infrared link was found to significantly impact the safety of the officer during a stop,” Goodspeed noted. “If the printer was mounted on a motorcycle or in a patrol car, he would have to point the infrared transducer in the PDA at the unit and maintain this position for some seconds. This essentially distracted the officer and left him vulnerable. Carrying the printer in their hands or on their belts was also problematic, as it would be more difficult to draw a weapon or otherwise react to a dangerous situation.

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For its latest release of the Handheld Citation and Report Writing system, the Crossroads engineering team set out to find a better alternative. They identified a number of thermal printers with Bluetooth wireless interfaces that promised a reliable link from the PDA to the printer unit at a distance of up to ten meters. After carefully evaluating seven different Bluetooth thermal

Brian Sylvester indicated, "Interfacing the Seiko Instruments WhiteTiger printer with the PDA was very straight-forward. A standard Bluetooth template was created to map the data stream into the print buffer and properly configure the printer for outputting citations. In all, the new printer link was programmed and tested in less than half a day."

an officer clicks "print," the incident file is immediately trans-ferred to the printer mounted on his motorcycle or squad car. By the time the officer walks back to the vehicle, the incident report or citation is printed out and ready to be presented to the motorist.

"When fully operational, our data collection network will assist officers in documenting a wide variety of incidents, including traffic citations, DUI arrests, collision investigations, and field interviews," Thompson explained. "Training time for using the PDA/printer combo has been very short, with virtually all officers able to input data rapidly after as few as five practice tickets, thanks to pull-down, fill-in-the-blanks menus and Bluetooth printer communications."

"We chose the Seiko Instruments WhiteTiger printer as our preferred output device because it performed more reliably than all the others during our testing regimen. It did not hurt that Seiko Instruments and their distributor, Electro-Alliance, also provided the best application support, answering our inquiries quickly and solving the minor problems that always seem to arise during a project of this nature."

Kelly Goodspeed
General Manager
Crossroads Software

printers, the Seiko Instruments WhiteTiger MPU-L465 became the clear choice as a reliable printer with exceptional print clarity (300 DPI). "This was a very intriguing application to address, and we worked closely with the team at Crossroads Software to develop the optimum printing solution," said Duane Tarolli, president of Electro-Alliance. "The Seiko Instruments Bluetooth portable printer fit the bill perfectly for providing the wireless capabilities required to enhance the safety and productivity of these mobile law enforcement officers." Crossroads lead programmer

The Handheld Citation and Report Writing system was first installed in 2000 for the Washoe County Sheriff's Department in Reno, NV. The system is now being deployed with Seiko Instruments WhiteTiger printers in over 100 vehicles and motorcycles by a consortium of ten West Los Angeles city police departments and the L.A. County Sheriffs Department.

According to the project coordinator, Sgt. Tom Thompson of the Hermosa Beach Police Department, the Seiko Instruments Inc. WhiteTiger printers are operating just as expected. When

The consortium is just completing the final link in their network, which will electronically transfer incident reports directly to the Los Angeles County Superior Court computer system, providing accurate and complete records for the ongoing prosecution of offenders.