

## Prototype Portable LPR System Provides Options

*Install a fixed License Plate Recognition (LPR) system, and your officers never have to spend time sitting in one place waiting for hits, but violators can avoid that one stretch of road. Install a mobile system on a law enforcement agency vehicle, and violators never know where the system might be, but officers may spend hours sitting by a road, waiting for a chance alarm. Install a portable system on a traffic trailer and resolve both issues, but a need for power and connectivity may create a different set of problems.*

However, the Small, Rural, Tribal and Border Regional Center (SRTB-RC) has facilitated an evaluation test of a prototype that may provide a relatively inexpensive potential solution to mobile system challenges.

Tod Depp, program manager with SRTB-RC, says the project's main goal was to find technology suitable for smaller agencies that would combine the ability to maximize reads and minimize manpower with cost- and energy-saving measures.

"Fixed systems are usually not an option for small and rural agencies due to the cost, and they can't spare the manpower to install a mobile system on a car and take an officer off patrol to sit with the LPR for a shift," Depp says. "Our goal was to test a prototype that would be a force multiplier, not a force reducer."

Installing a mobile system on an unmanned traffic trailer — the type known to all motorists by its flashing "Your speed is XX" sign — still requires manpower because of the need to change batteries and work the system through a restart after installing new batteries. SRTB-RC has worked with a vendor to devise a solar panel solution that charges a capacitor-based system. Thus, the portable system functions 24/7 on solar power alone. A WiFi connection through an air card completes the no-maintenance solution.

A driver approaching the trailer sees the "Your speed is XX" warning, and as the vehicle passes the trailer, the two-camera LPR scans the plate. When the agency wants to move the trailer to monitor a different location, any vehicle with a trailer hitch can pull it to a different site, and after a quick check to ensure everything still operates, the system is good to go from its new location.

"We've fine-tuned it so it doesn't draw a lot of power," Depp says. "The results have really been amazing. We worked with an alternate energy company to install a capacitor bank inside a protective steel box mounted to the radar trailer, and we located a type of computer that doesn't use a fan, to further cut down on energy use."

The prototype system runs against a listing of stolen vehicles from the National Crime Information Center database, the Texas Crime Information Center database of stolen vehicles, and the local agency's customized alert list. Alerts go to the dispatch center for review before they reach the field.

"The dispatcher makes sure the make and model match the wanted vehicle," Depp says. "A reader can sometimes misread an 8 and a B, for example, so by dispatch's verification of the alert, it saves unnecessary work in the field."

Although the prototype saves manpower, development costs are approximately \$50,000, making it more expensive than a mobile system. Depp says it is possible that the various vendor partners who provided the components (trailer, solar power, LPR) may one day work together to commercialize the product, but in the meantime, an interested agency could purchase those components and put together its own setup.

### **THE NUMBERS ADD UP TO SUCCESS**

The prototype portable License Plate Recognition system at the Texas law enforcement agency testbed read more than 900,000 plates in its first four months of operation, resulting in 700 alarms and 11 arrests — all this in a municipality of less than 50,000 residents. For example, in March, the system generated two separate alerts related to stolen vehicles, and responding officers made arrests in both incidents.

The majority of alarms turned out to be notifications of registered sex offenders traveling in a nonrestricted area, which did not warrant any type of interdiction.

“This was a proof-of-concept project, to prove it could be done,” Depp says. “It wasn’t to say this is better, it was to say here’s another option if a fixed site is not possible and a mobile system is not practical.”

SRTB-RC is part of the National Law Enforcement and Corrections Technology Center System, a program of the Office of Justice Programs’ National Institute of Justice (NIJ).

*Agencies interested in learning more about the License Plate Recognition trailer setup may contact Tod Depp at (512) 660-7782 or [TDepp@SRTBRC.org](mailto:TDepp@SRTBRC.org). To learn more about LPR systems in general, download License Plate Recognition (LPR) Systems: Function, Performance, and Considerations for Law Enforcement Agencies, a publication produced by the Small, Rural, Tribal and Border Regional Center, from <https://www.justnet.org/pdf/LPR-Report-Lowres.pdf>. For more information about the programs of SRTB-RC, contact NIJ Program Manager Mike O’Shea at (202) 305-7954 or [michael.oshea@usdoj.gov](mailto:michael.oshea@usdoj.gov).*



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