A New Generation of LPR: Application as the Core Technology

By Christopher Perry and Kevin Woznicki

THE RENAISSANCE OF URBANIZATION brings with it side effects and challenges. An increasing number of vehicles is one of its side effects and brings with it new demands to existing infrastructure, particularly those that rely on license plate recognition (LPR) systems such as parking, tolling, and intelligent transportation systems (ITS). As the number of service providers increases, so does the pressure on integrators to deliver smart traffic and parking systems faster and more efficiently.

Unfortunately, LPR technology and hardware do not always mix and therefore cannot always provide the support integrators seek when providing easy-to-integrate, scalable, and cost-effective LPR solutions.

As far as technology providers are concerned, the winners will be those companies who are willing to take a more customer-oriented stance, listen to the actual needs of integrators, and develop products and services implementing best practices from other industries that are still alien to the LPR scene. When defining a new approach toward supplying LPR technology to integrators, it is essential to know what they need.

A recent case of an integrator operating a parking facility in Europe describes this scenario. The parking facility struggled to reach its desired daily occupancy volume and often had many unused parking spaces, leading the operator to rent them out for daily and weekly time periods. This created a need for increased security, resulting in the purchase of a CCTV-PTZ (pan-tilt-zoom) system. The parking facility also wanted a system to automate the entrance and exit of cars in the facility using an LPR system to monitor the inbound and outbound traffic. They already had CCTV cameras installed and were hesitant to purchase additional and potentially redundant equipment. Of course, the facility also needed the new system up and running in a few weeks and on a tight budget. They needed to implement an LPR system that used the existing hardware infrastructure.

The solution was simple: Provide an LPR application that connects to an image source by defining the URL of the stream, reads and analyzes the data stream, optimizes the recognition rate, and provides validated results in a database format that fits the integrator's requirements. This solution reduced the implementation costs while simultaneously providing recognition rates of 97 to 99 percent.

There is a rising market demand to create a truly hardware- and platform-independent analytic, data collection, and parking management system based on LPR technology.

The Future: LPR as SaaS

There is a rising market demand to create a truly hardware- and platform-independent analytic, data collection, and parking management system based on LPR technology. When software is the backbone of these platforms, the development and deployment of video analytics, data collection systems, and business intelligence systems will be accelerated.

What does the future hold for the industry? The push for cost-effective, easy-to-implement LPR solutions that are hardware independent will pave the way for software as a solution (SaaS) and other cloud-based solutions. The successful suppliers will be those who listen to the needs of the customer and are able to adapt and deliver. Technology providers need to turn away from industry norms and deliver future-proof solutions. LPR applications combined with strict service-level agreements will guarantee continuous high-level output—a must for the present and future integrator as this model motivates the provider to deliver continuous outstanding performance and reliability.

CHRISTOPHER PERRY and **KEVIN WOZNICKI** are co-founders of ParkTrans Solutions. Perry can be reached at christopher.perry@parktranssolutions.com and Woznicki can be reached at kevin.woznicki@parktranssolutions.com.