Delivering Tomorrow’s Solutions With Today’s Technology

Homeland security, justice and public safety see new benefits from the latest wireless applications.
Homeland security, justice and public safety agencies all face tough challenges: smaller budgets, staffing reductions and increasing threats on a variety of fronts. Fortunately today’s technologies provide robust capabilities — along with lower costs, faster deployments and increased user acceptance — to address these challenges. They also greatly increase the ability to share information and collaborate among agencies.

Today’s technologies are a giant leap forward over those of even two years ago. Tools like 4G, wireless video and GPS are enabling greater productivity and effectiveness from public safety personnel — at all levels of government. They also improve responders’ safety.

Wireless video surveillance, for example, is greatly improved thanks to better connectivity and smaller, mobile cameras that produce high-definition images. Officers can get a clearer picture going into a potentially dangerous situation because video can be streamed to them directly on mobile devices. Today’s wireless systems can be set up quickly and inexpensively. And they’re commercially available, so they’re easy to purchase. Sprint’s 3G and 4G networks provide a secure and dependable backbone.

“We see a broad use of camera-based solutions in homeland security and federal law enforcement agencies that we work with,” said Bill White, vice president of Federal Programs for Sprint. “The cameras have become very flexible, providing agencies with a great advantage.”

Greater Productivity
Machine-to-machine (M2M) processes are also improving efficiency and productivity. With M2M, data can be sent directly from one device to another, without the need for human engagement. So a license plate reader, for example, can capture license plate numbers, run them through a database, and alert an officer of outstanding

RESULTS HAVE BEEN SO POSITIVE THAT THE AGENCY IS USING WIRELESS VIDEO FOR BOTH SPECIAL OPERATIONS AND DAY-TO-DAY ACTIVITIES.

Also, with push-to-talk services from Sprint constantly improving, the agency is able to more easily connect with a variety of other agencies, using off-the-shelf devices. Today’s commercial networks and devices make interoperability much easier to achieve, and the faster speeds allow sharing of larger volumes of data. The trend toward converged voice, video and data through mobile devices is helping the agency connect its agents with more information than ever before. The result is more efficient operations and a higher level of safety for citizens.

BETTER, FASTER INFORMATION ACCESS
A large federal agency solves several problems with stronger communications.

A federal law enforcement agency wanted to get a better handle on what was happening in a high-crime area. It also wanted to provide better mobility and access to information for its agents. In addition, the agency needed to have greater interoperability, so it could work more closely with state and local agencies on task forces and other operations.

Sprint networks allowed the agency to improve its capabilities in all of these areas. Sprint and its wireless video surveillance partners provided high-definition video cameras that can be remotely panned, tilted and zoomed. The wireless cameras can be placed strategically, blended in with their surroundings, and can be easily moved when needed elsewhere. Because they’re usually not noticed by criminals, these cameras often capture illegal activity in progress, allowing officers to respond more quickly. And the video evidence is easily recorded and saved.

The high-resolution images provide more definitive evidence than previous generations of cameras. And Sprint’s network technologies allow video to be pushed out to numerous mobile devices, so agents can have more information and an improved operating picture.

The systems are working on both 3G and 4G networks, and the agency saves money because it’s using commercial, off-the-shelf products. The camera systems are much faster to purchase and set up than older systems.

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Sprint opened its Machine-to-Machine (M2M) Collaboration Center in late 2010, to develop hardware, software, technologies and techniques that will make M2M an even more powerful public safety aid in the future.

M2M technologies can be embedded in numerous devices, allowing those devices to communicate with one another without the need for human involvement. But there are complexities that must be addressed. The Collaboration Center brings engineers and equipment together in one place, to identify those issues and find solutions.

Located in Silicon Valley, Calif., the Collaboration Center is a place where subject-matter experts from more than 30 companies can share knowledge and collaborate to produce the best possible results for both public safety personnel and citizens. The central site for collaboration brings new technologies to market more quickly — putting tools in the hands of public safety personnel faster than in the past.

The collaborative approach also gets products to market in a more cost-effective way, with numerous companies working from the same platform and planning ahead to integrate their tools with those of other companies.

Sprint has supported public safety for many years, and is clearly planning for the future of M2M. “There’s a whole gamut of products and services across various industries that interact,” said Wayne Ward, vice president of Emerging Solutions for Sprint. “We see an entire ecosystem of health-care providers, hospitals, ambulance, fire, homeland security, police departments — all interconnected in the same ecosystem. There are many M2M and embedded solutions specific to the public sector. The Collaboration Center lets us work together to streamline delivery of cost-effective, innovative solutions.”

For more information, visit www.sprint.com/m2m.

CASE STUDY

Maximizing Productivity, Saving Costs
San Jose Police Department leverages technology to provide better service for citizens.

San Jose is the third largest city in California. Located south of San Francisco Bay in Silicon Valley, the city is home to more than 1 million residents. To help protect and serve those residents, the San Jose Police Department leverages new technologies — tools that improve officer efficiency and performance.

With Sprint and its partners Feeney Wireless and Sierra Wireless, the department is creating a mobile office environment in its vehicles — so officers can send data to the main office in real time — while also having instant access to public safety databases and other information. Wireless connectivity will allow officers to submit e-tickets instantly, run checks on fingerprints and drivers’ licenses, and have access to data from the main office even when they’re not in their vehicles.

Automated field reporting, enabled by wireless broadband, will let officers submit reports electronically. Typically reports have been done on paper — paper that had to be dropped off at a physical location, then collected from that location and physically routed to the right supervisors and divisions. Automated field reporting will eliminate all that. “This wireless platform is very streamlined,” said Diane Urban, San Jose Police Department’s acting assistant chief of police. “It’s quick, and it allows us to maximize staffing, to utilize people for other roles, rather than picking up paper, making copies or carrying paper around.”

The department wants to do more work electronically. “We’re in the 21st century, and many of our officers are still taking police reports by pen and paper,” Urban said. “And we’re in the heart of Silicon Valley. It’s time for us to do things wirelessly.”

With integrated 3G and Wi-Fi communications in its vehicles, the department is giving officers instant connection to any Wi-Fi enabled device. The department is seeing substantial savings in records management since it’s much more efficient to handle electronic reports than paper ones.

Sprint’s robust network also continues to help the department utilize GPS tracking for dispatch, allowing dispatchers to always see where each squad car is located. The result is faster response times as dispatchers can always send the nearest vehicle to any incident.

With the ongoing advances in technology and the department’s desire to make use of that technology, the sky is the limit. “We almost don’t know what we don’t know,” said Urban. “I see that network as being a lifeline. It’ll be how we are able to survive in tough economic times with fewer resources. We are going to be much more efficient.”
The system works automatically, without the officer needing to do anything unless there’s an alert. Analytic software can “watch” surveillance video for police or homeland security, and automatically alert officials to suspicious behavior. Traffic sensors and other infrastructure-monitoring systems can also make police, fire and ambulance teams more effective. There is a huge upside to these automated processes, as more work gets done without increasing manpower.

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Network-connected vehicles, too, add productivity. Connected squad cars are essentially mobile wireless access points, with network routers in their trunks, giving a single robust connection for all of the vehicles’ and officers’ devices. The result is much greater exchange of data between officer and station.

Many of these new tools require greater bandwidth, and 4G provides that. With Sprint 4G, public safety agencies are seeing faster speeds, better security and greater reliability. And smartphones continue to work with the network to put greater amounts of data at public safety officials’ fingertips.

GPS is also becoming more widespread, as more agencies want to know the exact whereabouts of their people and vehicles. And dispatchers can get police to a scene faster, because GPS allows them to see which car is closest to any location at any time.

The technologies are so advanced now, they’re easy to deploy at all levels of government, not just federal and state. “You can take those technologies and apply them to a public safety environment, and do that securely,” said Wayne Ward, vice president of Emerging Solutions at Sprint. “It enables you to get economies of scale, which is why we’re seeing these applications at the local level.”

Whether it’s federal, state or local, any agency can gain much from today’s technologies. HD video, faster data speeds, new applications — they all provide powerful new tools for responders, and greater safety for citizens.

GRANTS STILL GOING STRONG
Even with tighter government budgets, grant money is available.

Communications for public safety, homeland security and justice are extremely important, so there are numerous sources for funding them,” said Michael Paddock, CEO of Grants Office, a Rochester, N.Y.-based company that helps grant seekers with fundability analysis, research and more. Paddock said funding opportunities are good these days, if agencies know where to look.

For example, federal funding from the Edward Byrne Memorial Justice Assistance Grant program has been growing in recent years. That’s good news for public safety agencies, which are constantly expanding their use of broadband.

“Law enforcement agencies and emergency management officials require a significant amount of data today when they’re responding to emergencies and other public safety issues,” said Paddock. “New communication systems are helping agencies achieve their missions more effectively, but they do require more robust bandwidth. That can be funded through homeland security and public safety funding sources.”

Paddock also said agencies should seek any type of funding that can be used for public safety communication, not just those grants specifically aimed at it. For example, funds can come from the Department of Education, the Department of Agriculture and others. He also suggests that agencies develop good relationships with their home states. “The role of the state administrative agencies in both justice and homeland security funding are still fairly prominent,” he said. “While the competitive national grants that local agencies can apply for are important, agencies also need to get to know their state administrative officials because they are the gatekeepers for the lion’s share of funding.”

For more information on Grants Office, visit www.grantsoffice.com.

For additional information, visit www.sprint.com/slg.