

The State-of-the-Art Police Agency:

INFORMATION TECHNOLOGY

Today's law enforcement personnel are on the front lines of public safety issues, responding to emergency situations, confronting criminals, and keeping the public safe. The situations that police, fire and EMS agencies face every day require the immediate access to critical information to ensure the safety of field personnel as well as the public. Officers need reliable, automated public safety solutions to capture, manage and share information efficiently.

New technology is emerging in the area of information technology (IT), which includes network management and security solutions. Departments nationwide are upgrading their existing facilities or building ultra-modern facilities to reflect this new technology. Deciding between the many IT integrators can be challenging for any department. Some solutions may be more ideal for the smaller size agency (50 to 100 officers) while others might fit a larger department (500 to 1,000 officers). However, some companies offer IT solutions that fit any department. The following is a look at some major IT companies and the products or solutions they recommend to create an ultra-modern agency.

CISCO SYSTEMS

Cisco Systems develops Internet Protocol (IP)-based networking technologies for the transition to a network-centric technology environment. By combining IP with intelligence, the company is creating a communications platform that will serve as the basis for the convergence of data, voice, video and mobile communications in a secure, integrated architecture.

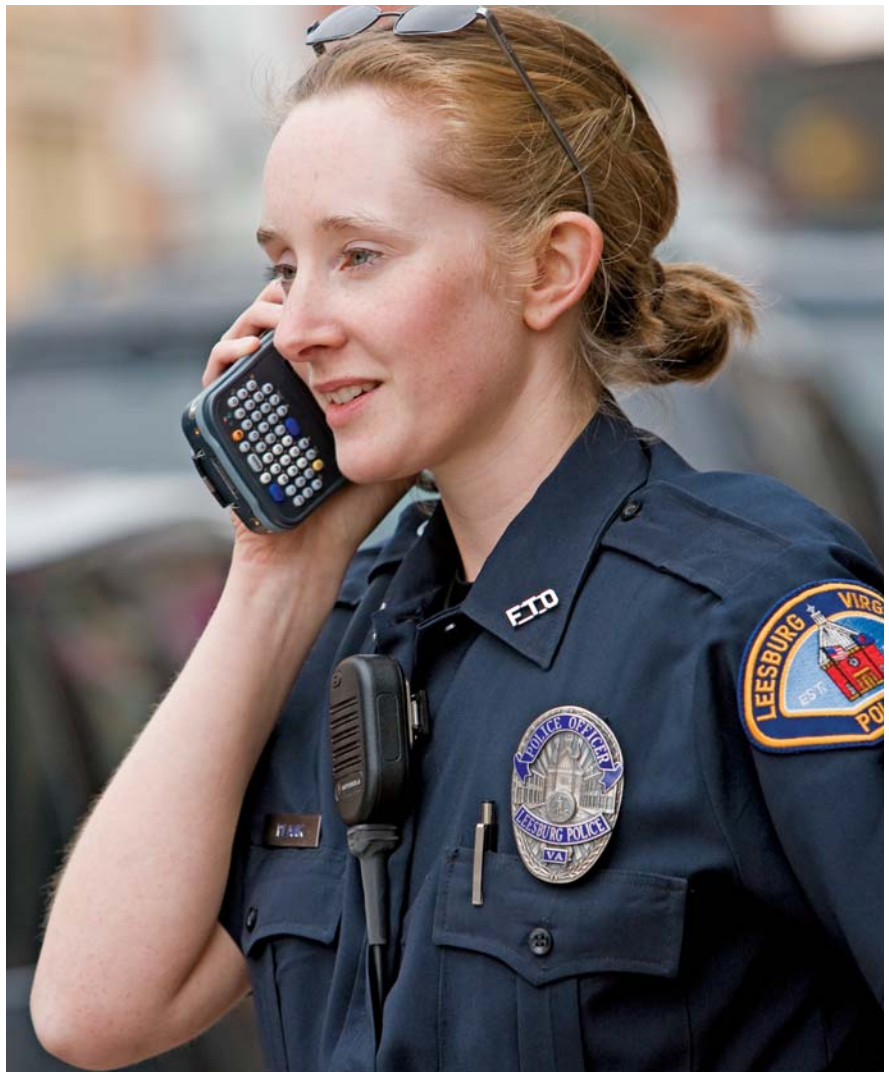


Photo courtesy of Cisco Systems

Cisco Systems develops IP-based technologies for the transition to a network-centric environment. An agency of any size can adopt Cisco's solutions.

Cisco offers products and solutions in the areas of routing and switching, as well as in technologies such as: Application Networking; Data Center; Digital Media; IPICS; Mobility; Security; Storage Networking; TelePresence; Unified Communications; Video; and Virtualization. *LAW and ORDER* spoke with Morgan Wright, the global industry solutions manager, about Cisco's public safety IT solutions.

According to Wright, an agency of any size can adopt Cisco's solutions. The company has worked with larger agencies, such as the L.A. County Sheriff and the London Police, as well as smaller agencies, with only 10 to 15 officers. Cisco enables the collaboration between all the functions of an agency, which include: headquarters, operations, emergency communications, incident command and response, and field operations.

When an agency wants to modernize, Wright recommends that the agency first understands where it is, what it has to work with, and where it wants to be in the end. In other words, what problems or issues is the agency trying to solve? According to Wright, agencies can access network capability that is often available in their own backyards, by reaching out to local school districts, the county and other agencies. Basically, before you start buying things, educate yourself so you are well informed.

New Technology

One of the biggest advancements in technology is Internet Protocol (IP), which allows the Internet to run and connect people. Ten years ago, Wright says there was an "unwillingness" to adopt newer technologies. In the past, some products were simply not afford-

able to everyone, so some agencies could not acquire new technology. Use of standards has driven down the costs, so today big or small agencies can compete with buying the same kind of equipment.

Voice

The Cisco IP Interoperability and Collaboration System (IPICS) 2.0 bridges radio, IP and non-IP networks, and enables multiple emergency responders to exchange important information on demand for better incident management and day-to-day operations across departments, agencies and jurisdictions. By sending radio traffic over an IP network, Cisco IPICS cost effectively enables first responders to exchange information when they are using incompatible radios. Cisco IPICS allows push-to-talk communications on radio handsets, networks, laptop and PC clients, telephones, and mobile phones, improving response times and resource collaboration.

Video

Cisco's TelePresence meetings solution is more than just video; it combines voice and video and data into one solution. New enhancements enable agencies to hold virtual meetings with multiple locations at one time. With TelePresence, there is no latency, no delay. It is face-to-face and life-size, so it looks like all the participants are in the same room. With TelePresence, you can see data, presentations, even hear voice inflection. TelePresence has been used in the

Defense Department as well as the NYPD.

Video surveillance is a big area of investment for agencies. Cisco Physical Security software and hardware facilitate the capture, transmission, viewing, recording, archiving, and management of analog and IP video sources and provide electronic access control. They use the IP network as a platform to deploy electronic access control, which provides scalability, reliability and availability at lower operational costs to the agency. Web-based software and broadcast-quality hardware integrate with existing analog and network-centric systems to facilitate faster incident response and resolution.

Costs / Grants

Expanding and augmenting with Cisco's system is as easy as switching out and replacing parts. For example, an agency can add more capacity to its voice system without adding new phones. Cisco is very focused on grants, with an office dedicated to just that. Cisco Capital & Leasing provides new business models for ways to acquire grant funding, leasing, and financing terms. Cisco, with PoliceOne, runs a Web site, www.policgrantshelp.com that provides free information and tips on grants, with helpful discussions, presentations, seminars and workshops.

DIMENSION DATA

Dimension Data is an IT services and solutions provider that helps agencies plan, build, support and manage their IT infrastructures. *LAW and ORDER* spoke with David Petri, the business development manager, and Matt Lindenbaum, the service delivery manager, about public safety solutions.

NOTE: A very much expanded version of this article is available online at www.lawandordermag.com.

According to Dimension Data, every department, large or small, should first assess its biggest problems and then see what technology is available to help. For example, a rural area might be concerned with public safety and evacuation, while a big city department might be more concerned with crime. Once priorities are determined, departments can look at communications, analytics or crime-fighting technologies.

New Technology

License plate recognition technology is one area that is relatively new and enables agencies to collect and analyze a variety of data. Since license plate technology utilizes a camera, officers can monitor numerous items. In a traffic situation, an officer can monitor an intersection and then do almost any-

thing with the data collected since it is stored in a database.

The creation of “fusion centers,” whereby information is shared among departments or jurisdictions, has also been a key initiative by many law enforcement agencies. Sometimes different states will work together to make a regional fusion center that shares information across different jurisdictional boundaries. The fusion center benefits everyone in certain geographical areas as it enables the sharing of information to better serve and protect the citizens living in the area.

Costs / Grants

In terms of costs, grant money is available from a variety of federal, state and local sources. Grant information is all public. According to Dimension Data, some grant companies (for a fee) will file a grant on your

behalf. Once you have made a determination that grant money is available, Dimension Data advises not to shy away from fee-based grants because the return on investment (ROI) can be huge. In the case of a small town, there may not be any IT people on staff, so the department might need to work with an outsourcer, like Dimension Data, for help with a needs analysis, implementation and/or ongoing support.

A department can easily do research on the Internet by going to www.grants.gov. Dimension Data recommends the Department of Homeland Security as a good place to look for grant money. There are grants by category: educational grants, disaster recovery and relief, transportation, etc. Dimension Data can help agencies determine the best grant for which to apply. Although the focus of grants changes somewhat each year, it's important to communicate with vendors and other departments who've leveraged grants.

As an IT solutions and systems integration company, Dimension Data looks at solutions that are scalable to help agencies determine their technology requirements, and leverage what's already in place. When looking at technology, it's important to work with partners, vendors, integrators or a group like the International Association of Chiefs of Police (IACP).

GTSI

GTSI® provides technology products, professional services and IT infrastructure solutions to federal, state and local government agencies. GTSI helps agencies meet the infrastructure demands and performance requirements of technology-enabled government from program inception to end-



Photo courtesy of Dimension Data

At the NYPD Real Time Crime Center, officials have implemented some of Dimension Data's solutions.

of-life. *LAW and ORDER* spoke with Michael St. Pierre, the security solutions manager, about GTSI's state-of-the-art IT technology.

GTSI leverages expertise in enterprise computing, security, networking, and mobility technologies into packaged IT infrastructure solutions that include: Unified Communications Solutions; Enterprise Computing Solutions; Enterprise Software Solutions; Storage Consolidation Solutions; Server Consolidation Solutions; Network Security Solutions; Physical Security Solutions; and Mobile Evidence Capture Solutions.

According to St. Pierre, GTSI is an integrator; it helps public safety agencies identify a problem and propose a solution by integrating a number of different products. Each solution is dependent on the agency and its needs. One of the first questions St. Pierre recommends an agency ask itself is, "What is our vulnerability? From a security perspective, what do we need to protect?"

Video

Lawsuits were prevalent before video because incidents were based on hearsay. Now, a patrol stop in the field is an IT-based application and stored on the back end. Mobile video is in the officer's car, and that video is accessible in the department, as well. For example, a fixed camera shows an officer getting a suspect out of the car and into a room. That video cannot be disputed or tampered with in court. Agencies used to budget millions of dollars to pay off false claims without even going to court. Today, if someone makes a false claim, an agency can prove it wrong.

GTSI's video solution is a single software application that manages both

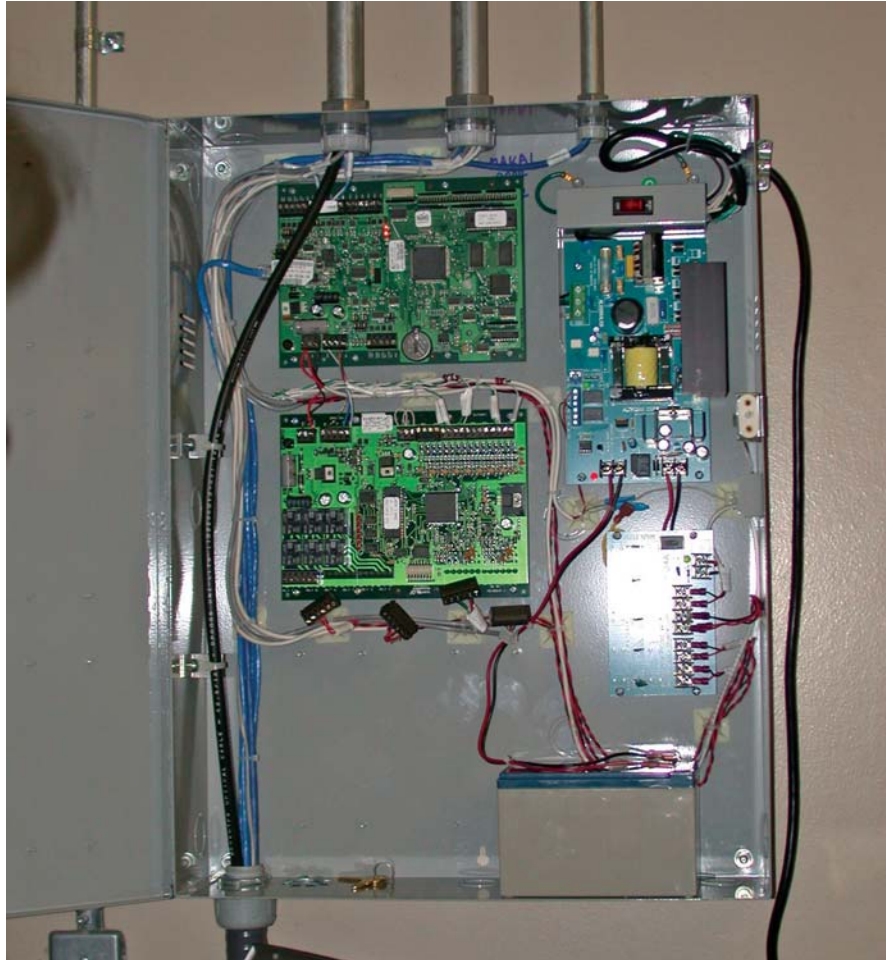


Photo courtesy of GTSI

GTSI helps agencies meet IT infrastructure demands and performance requirements of technology-enabled government.

mobile and fixed video. This gives the agency a complete case file and the ability to manage the video evidence in one location. It could be stored in one field location or stored in headquarters to be archived and retrieved at a later date. Officers don't waste time looking for VHS tapes, and critical data can be found in seconds. St. Pierre said the shift in technology single handedly took security from maintenance / operations personnel to IT personnel.

www.gtsi.com

Costs / Grants

In terms of costs, St. Pierre said that depends on what the agency has in place from an IT and security perspective. What is the scope? What is the budget? What is the time frame? Prices range anywhere from \$4,000 or less for the in-car video portion. That includes the camera, DVR, wireless microphone, removable cards to store the video. St. Pierre said the maintenance cost in security is often overlooked, and it is critical to consider up front.

An annual-based contract is better because it includes post-sales support.

Because security has made a rapid transition in law enforcement, "IT infrastructure is critical," St. Pierre stated. Agencies need expertise in security and IT backgrounds. Many features and benefits exist with agencies going from analog to IP-based or digital video. The ability to easily manage video saves money in storage costs and time to find it.

If an agency wants to expand or update its GTSI solution, it can. With the old analog system, once a depart-

ment bought into one manufacturer, it was stuck with the company. Now, open architecture allows for integration of different brands of software applications. It also allows for the expansion of the current cameras without adding new cameras. With GTSI, all security applications run on a single software application. There is one central location, so command decisions are made more easily.

The learning curve for GTSI's products is based on the software application. St. Pierre said software manufacturers are trying to make it easy and

simple to manage. Many companies are offering one-, two-, or three-day training seminars to learn the software. St. Pierre said GTSI does not assist in grant writing; it does, however, follow two grants very closely: COPS Technology grants and DHS grants.

When deciding between all the available options, St. Pierre said it ultimately depends on what the agency wants to do or achieve. An integrator like GTSI isn't tied to one manufacturer. GTSI's clients include both large and small departments. It has serviced 15-car departments to 1,300-car departments.

NORTHROP GRUMMAN CORP.

Northrop Grumman's Information Technology sector is a leading IT provider and integrator.

The company meets the infrastructure needs of federal, civilian, defense, intelligence, state and local government, commercial, and international clients.

CommandPoint

The CommandPoint™ Suite from Northrop Grumman includes the following public safety system applications: CommandPoint CAD; CommandPoint Mobile; CommandPoint AFR; CommandPoint Map; CommandPoint Law Enforcement RMS; CommandPoint Fire RMS; and CommandPoint Jail.

Northrop Grumman's CommandPoint Computer-Aided Dispatch (CAD) System is a mission-critical command and control system that enables communications center personnel to more appropriately manage calls for service and resources. CommandPoint CAD provides information when and where it is needed to



Photo courtesy of Northrop Grumman

The CommandPoint Suite from Northrop Grumman includes CAD, Mobile, AFR, Map, Law Enforcement RMS, Fire RMS and Jail.

efficiently support command and control operations of agencies. The system allows personnel to readily access information, make informed decisions, and meet demands for law enforcement, fire and emergency medical services.

CommandPoint Mobile is the application interface between the command center and the field units. It provides ease of use in accessing data and unit status. CommandPoint AFR is the field reporting package that enables law enforcement units to complete reports quickly and accurately and increase time in the field. CommandPoint Map

get information into and out of the system to assist in better decision making. CommandPoint Fire RMS is fire records management that provides ease of use in collecting, sorting and managing data for fire reports, inspection, etc. CommandPoint Jail is a jail system designed to meet the needs of the corrections community. It includes intake, booking, property and commissary.

LInX

Northrop Grumman's Law Enforcement Information Exchange solution (LInX) brings out hidden data

LInX quickly finds and visually displays links among people, property, addresses, dates, organizations, vehicles and more. This solution performs advanced link analysis on free text data that has been extracted from available documents as well as structured data. For example, users can link on an address and see all the people associated with the address, or they can link on property or a telephone number and see all associated people and addresses.

Northrop Grumman offers consulting experience to work with agencies to facilitate the removal of implementation hurdles. The staff members have decades of experience in public safety and have a clear understanding of criminal justice practices to bridge the gap between technical and law enforcement issues.

PIVOT3

Pivot3 provides clustered storage systems for public safety that supports data protection and eliminates hardware dependence. Pivot3's name comes from bringing together the three pivot points in the data center: servers, networking and storage. *LAW and ORDER* spoke with Lee Caswell, co-founder and chief marketing officer, about Pivot3's state-of-the-art technology.



Photo courtesy of Pivot3

Pivot3 provides clustered storage systems for public safety that eliminates hardware dependence.

is the mapping application designed for real-time command and control situations supporting automatic vehicle routing and recommendation (AVRR) / automatic vehicle location (AVL).

CommandPoint Law Enforcement RMS is a law enforcement records system that uses the latest in technology to

and links across multiple jurisdictions, bringing them front and center for authorized users to see. With LInX, users will retrieve and link more available data than ever before to support their investigative and tactical operations. LInX supports queries against both structured and free text documents.

RAIGE

The Pivot3 RAIGE™ Storage Cluster Solution is used to store video images used as evidence in criminal cases. With human resources stretched thin, video surveillance has become a critical tool in the war on crime. Video surveillance puts thousands of extra "eyes" on the street 24 hours a day, seven days a week. With RAIGE, all

Ethernet ports are pooled together. Additional storage or bandwidth capacity can be added without affecting performance. Pivot3's RAIGE is an open systems model, which is what IT is moving to. Partners and integrators pull together for support.

Caswell said it is best for an agency to consider three key elements: number of cameras; amount of time it will keep the information; and the resolution effect (high or low, zoom in or not). Caswell said smaller agencies' cameras are managed separately; they may have a server with 32 cameras. Conversely, the bigger agencies have one central unit or DVR. RAIGE protects the spinning components and cost effectively sustains a drive.

According to Caswell, having video storage be part of infrastructure can be 40% to 50% of the cost of installation. It must be highly reliable and available. Pivot3's solution is a shared storage model. A large-scale storage platform continues to operate even if other boxes go down. From a management aspect, multiple databanks can be put together so it looks like one big disk drive. These days, agencies aren't hiring separate storage managers. With Pivot3, the storage "boxes" are put together so the data is managed for the agency.

With the RAIGE architecture, Pivot3 offers an option to reallocate storage or "pay as you go." Agencies can try for 30 days and see how they like it, then buy additional storage while the cameras are still running so there's no downtime. When you want to change one camera, you don't have to change all of them.

Another important feature of the RAIGE architecture is the inherent redundancy at every level. Because the video images are distributed and replicated across multiple databanks, no data is ever lost if a databank fails. The

system dynamically rebuilds itself without missing a beat. This assures the stored video images will always be available if and when needed.

Agencies need longer retention times for video, and they now plan for that growth. RAIGE offers a lot of flexibility to make systems more dynamic than in the past. Pivot3 uses off-the-shelf, high-volume, inexpensive hardware combined with software. This reduces the cost for public funding tracts. Agencies must have high performance and a system that can keep up with that.

As shown, today's IT technology companies offer numerous solutions for public safety. Agencies must evaluate what their needs are when deciding between all the options. By determining what is right for them, they can create their very own state-of-the-art agency.

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