

Working together to weave a citywide security network.

The Atlanta Police Department draws on private and public cameras to combat crime and improve emergency preparedness.



Organization:
Atlanta Police Department

Location:
Atlanta, Georgia, USA

Industry segment:
City Surveillance

Application:
Safety and security,
remote monitoring

Axis partner:
Genetec

Mission

With nearly half a million people, the Atlanta Police Department (APD) needed an affordable way to augment its citywide surveillance efforts to better protect its citizens. Launching Operation Shield, a video integration initiative that pulls video resources from private and public entities into a single command center, would provide law enforcement with a more holistic real-time view of situations across the entire city. The challenge would be to devise a robust platform that could potentially scale to 10,000+ cameras employing a mix of camera brands, networks and video management systems.

Solution

APD initially deployed 17 surveillance cameras across the downtown area. That number has since grown to over 400 of which nearly 90% are from the AXIS Q60 PTZ (pan-tilt-zoom) Network Camera Series. Other city organizations like MARTA (Atlanta's rapid transit authority), Atlanta Public School System, as well as the departments of Public Works, Watershed Management, and Aviation contribute another 4,000 cameras to the surveillance network.

The biggest growth came through partnerships with other entities such as local businesses and multi-family housing properties. Using a combination of wireless mesh, fiber and 4G connections, the video streams to secure cloud storage where it can be pulled and disseminated as needed. The whole operation is integrated together through a PSIM (Physical Security Information Management System).

Result

APD now has access to 24/7 surveillance throughout the city without the prohibitive cost of owning and maintaining all those cameras themselves. Private businesses, shopping malls and housing complexes that share their live video with the police department get the benefit of a more rapid, better-prepared response from emergency responders.



It takes a village

Both the capital and the most populous city in the state, Atlanta, Georgia is home to nearly half a million people. It also contains the third largest concentration of Fortune 500 companies in the country and serves as the global headquarters for corporations such as Coca-Cola, Home Depot, Delta Airlines, AT&T and UPS. As the city's population grew, it became apparent that the Atlanta Police Department (APD) needed a force multiplier to assist its 2000 officers in protecting Atlanta's residents and businesses while also creating a safer environment for the millions of tourists visiting the area.

In 2007, then city mayor, Shirley Franklin, decided an effective way to address the challenge was to launch a new initiative called Operation Shield. A joint effort by the Atlanta Police Foundation and APD, Operation Shield was designed to enlist the cooperation of multiple public and private sectors to weave a more complete citywide security network to help prevent crime and enhance emergency preparedness.

Creating a 360° view

As the city began strategically deploying surveillance cameras throughout Atlanta, it also invested \$350,000 to create the cutting edge Loudermilk Operation Shield Video Integration Center (VIC). The VIC integrates video feeds from nearly 10,400 publicly and privately-owned surveillance cameras to give APD greater coverage of city streets. The VIC boasts a mosaic of video screens monitored by police officers across three shifts.

"The VIC gives APD the ability to have eyes across the city and pull video from participating stakeholders without having to own all the resources ourselves," said Senior Police Officer Thomas R. Sutton on the Operation Shield team. "By connecting with other entities that already have camera systems in place, we save the city a huge investment in equipment and ongoing maintenance."

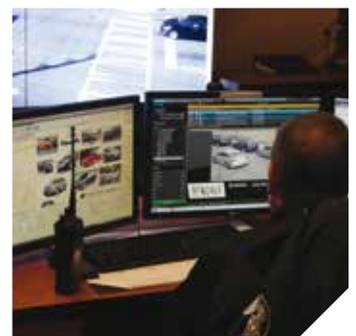
While APD has no control of what camera systems other entities deploy, most of the 400 cameras owned and operated by the department are HDTV-resolution AXIS Q60 Series PTZ Network Cameras. "With the PTZs we get excellent coverage with some models giving us full 360° views of the vicinity," said Sutton.

Most of APD's cameras are installed at busy intersections and on street poles. "Given that the places we deploy them don't necessarily have the best lighting, or they have changing lighting conditions, AXIS Q60 Series' extreme low light sensitivity is especially useful," said Sutton. "Plus, their optical zoom range has been phenomenal."

Working out the technical details

Integrating all the different video sources into the VIC had its challenges. Cellular companies complained that high concentrations of cameras in certain locations were draining bandwidth. Areas that relied on wireless mesh technology didn't stream very well. Recording all the video in-house consumed an enormous amount of 4G bandwidth. Furthermore, as the network expanded it quickly outgrew the capacity of APD's original video management system (VMS). Working out all these issues required some creative thinking.

When APD launched the collaborative initiative, the department chose to implement a dual management system: a VMS for APD-deployed cameras and a separate Physical Security Information Management (PSIM) to integrate camera feeds from the mixed technologies of other stakeholders' surveillance systems. The open application programming interface of the police department's Axis cameras has afforded APD the ability to continuously shop for best-of-breeds solutions as technologies and security system vendors innovate and change over time.





In 2016, the team decided to migrate to the Community Connect framework, built on Genetec™ Federation™ technology that links independent video systems back to the Atlanta Police Department. Today, most cameras in the system stream directly to the cloud using Genetec video-surveillance-as-a-service solution, Stratocast™. Officers can now access private video footage as needed. "This not only helps the VIC reduce bandwidth consumption but gives us the ability to share a particular piece of video in multiple directions such as out to other precincts or responder command posts without having to feed it through the VIC," explained Sutton.

Working together for a safer city

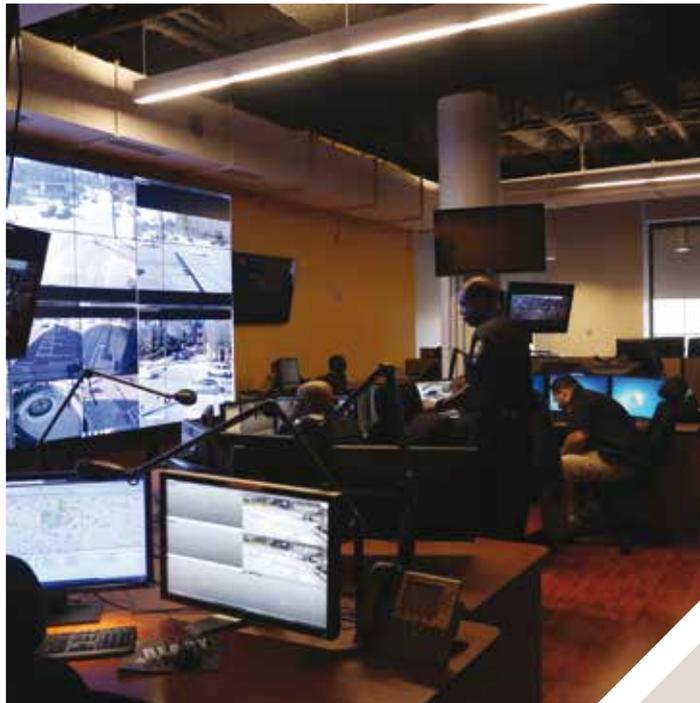
In most cases, APD only has permission from outside entities to view their video live, but not record it. Nor does APD have permission to manipulate a private entity's cameras, but there have been exceptions.

According to Major Neil Klotzer, there was an incident recently where an employee at a local business was panning the area with its company's PTZ camera and heard some gunshots. Startled by the sound, she accidentally tilted the camera in a not-so-useful direction. Since APD had been granted prior permission to control the camera remotely, an officer was able to redirect the camera to better survey the scene and capture important situational details.

"From our perspective, the more cameras we have in an area the better," said Major Klotzer. "Operation Shield demonstrates that working together we can build a safer, more secure city for everyone. And we can do it while respecting the right to individual privacy."

"Operation Shield is a two-way street. The police department gets eyes in a particular area they might not have had before, and at the same time, it gives businesses peace of mind that APD can see what's going on and respond faster should the need arise."

Thomas Sutton, Senior Police Officer of the Atlanta, Georgia Police Department



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Axis has more than 2,700 dedicated employees in more than 50 countries around the world, supported by a global network of over 90,000 partners. Founded in 1984, Axis is a Sweden-based company listed on NASDAQ Stockholm under the ticker AXIS.

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